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**FISCAL FEDERALISM AND EQUITY IN THE FINANCING OF
PRIMARY HEALTH CARE: THE CASE OF SOUTH AFRICA**

Thesis presented for the degree of

DOCTOR OF PHILOSOPHY

In the Health Economics Unit

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ABSTRACT

This thesis investigates the implications of fiscal federalism on the equitable distribution of primary health care resources in South Africa. The study evaluates the processes and criteria for intergovernmental and sector budgeting, the influence of key stakeholders, community involvement in PHC budgeting, and policy objectives of the health sector to assess how they impact on the realisation of an equitable distribution of PHC resources.

A combination of qualitative and quantitative analyses was employed in the study. Quantitative analysis of health expenditure and health need data was used to assess whether the distribution of PHC resources has become more or less equitable. Health districts were the units of analysis. Deprivation indices were generated using principal components analysis for each district from demographic and socio-economic variables. The deprivation index was used as a proxy for relative need at the level of districts, and was compared with non-hospital PHC per capita expenditure using regression analysis. This analysis was carried out for per capita PHC from 2001 to 2007. Data on the process for intergovernmental fiscal arrangements and budgeting for health was collected through review of government publications and interviews with government officials. These were analysed thematically.

Literature on the subject predicts that if lower levels of government have considerable autonomy in determining primary health care allocations, there is a greater scope for inequities in the distribution of primary health care resources. However, the results of the study are contrary to expectations. Although, the introduction of fiscal federalism in South Africa created an additional constraint to achieving a more equitable distribution of PHC resources, recent trends in primary health care allocations are more equitable than in previous years. A growing public sector budget, consistent increases in health sector allocations, and overwhelming political support for equity in South Africa have been the key reasons for the shifts towards a more equitable distribution of primary health care resources. These findings form the main contribution to the literature on the subject.

DECLARATION

I, hereby declare that this work has not been previously submitted in whole, or in part for the award of any degree. It is my work. Each significant contribution to, and quotation in this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

Signature:

Date:

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Abbreviations

AIDS: Acquired Immune Deficiency Syndrome

AIH: Autorização de Internação Hospitalar (Permission to Hospitalise)

ANC: African National Congress

BAS: Basic Accounting System

BOR: Basic Operating Rule

CFO: Chief Financial Officer

CHST: Canadian Health and Social Services Transfer

DHS: District Health System

DM: District Municipality

FCT: Federal Capital Territory

FFC: Financial and Fiscal Commission

FMOH: Federal Ministry of Health

GDP: Gross Domestic Product

GHS: General Household Survey

HIV: Human Immunodeficiency Virus

HOD: Head of Department

HPCU/DOH: Health Policy Coordinating Unit / Department of Health

HPDT: Health Professions Training and Development Grant

HRF: Health Reform Fund

HST: Health Systems Trust

ISRDP: Intergrated Sustainable Rural Development Programme

LGHD: Local Government Health Department

MEC: Members of Executive Council

MinComBud: Minister's Committee on the Budget

MTEF: Medium Term Expenditure Framework

NDoH: National Department of Health

NHA: National Health Act

OHCHR-UNOG: Office of the United Nations High Commissioner for Human Rights

PCA: Principal Components Analysis

PDoH: Provincial Department of Health

PHC: Primary Health Care

PSO: Public Sector Organisation
RAWP: Resource Allocation Working Party
RDP: Reconstruction and Development Programme
SASSA: South African Social Security Agency
SES: Socioeconomic Status
SMOH: State Ministry of Health
SNG: Sub-National Government
SPG: Specific Purpose Grant
SUS: Sistema Unico de Saude (Unified Health System)
TB: Tuberculosis
TFF: Territorial Formula Financing
URP: Urban Renewal Programme
VAT: Value Added Tax
ZAR: South African Rand

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CHAPTER 1

Introduction

The transfer of fiscal authority to lower levels of government has become a global trend. In many countries this move has been motivated by the potential for increased accountability and efficiency in public service delivery. In others, this has resulted more as a reflection of political evolution towards a more democratic society (Ter-Minassian, 1997, de Mello JR, 2000, Musgrave and Musgrave, 1989, Bird and Vaillancourt, 1997).

A key concern however, is that the introduction of fiscal federalism¹ is a reform not undertaken primarily with health sector considerations. A major concern for the health sector is that the transfer of expenditure responsibilities to lower levels of government can have adverse effects on the equitable distribution of financial distributions between local jurisdictions (Okorafor and Thomas, 2007, McIntyre et al., 1998). Where lower levels of government have considerable autonomy in determining resource allocation, there is less influence from the centre to ensure a more equitable (or at least uniform) distribution of resources for health sector programmes. This study investigates the impact of fiscal federalism on the equitable distribution of financial resources for primary health care (PHC). The study uses South Africa as a case.

¹ Fiscal federalism refers to a government system characterised by different levels of government, each with fiscal authority and functions. Fiscal federalism is a form of decentralisation that involves the transfer of fiscal authority from the centre to lower levels of government. Each level of government has some autonomy in revenue generation and expenditure of public funds. A full discussion of fiscal federalism is provided in the literature review chapter.

1.1. Background

South Africa has been referred to as one of the world's most unequal societies (Bloom and McIntyre, 1998). This is largely as a result of apartheid policies that were instituted in South Africa from 1948 to 1994. These policies advocated the provision of different levels of social services to each racial group (*ibid*). These policies also created unequal opportunities for different racial groups, resulting in large disparities in socio-economic status.

The first democratic government elected in 1994 in South Africa set out to reduce geographic inequities in the provision and financing of all public services entrenched by the apartheid regime. At that time, the public health sector was fragmented, and there were huge inequities in provision and access to public health services. This was alongside massive disparities in health status. The South African Government, as outlined in the White Paper for the Transformation of the Health System, was determined to pursue a unified health sector with the fundamental goal of equity (African National Congress, 1994; Gilson et al., 1999, Okorafor et al., 2003, Thomas et al., 2003).

Considerable progress was made in reallocating health budgets between provinces during the first two years after the 1994 elections when provincial budgets were determined by the national government through the Health Function Committee. The Health Function Committee was a national committee that allocated health care resources to different provinces within the country while provinces were administrative extensions of the national government.

In 1996, South Africa adopted a new constitution, and with it, a fiscal federal system. With the move to fiscal federalism, provinces were allocated global budgets using a population based formula and could themselves determine the allocation between different sectors/functions. Following this, there was less progress in addressing inter-provincial inequities in health budgets (McIntyre et al., 1998).

1.1.1 Fiscal Federalism in South Africa

Since 1996, South Africa has operated under a fiscal federal system with three levels of government – the national, provincial and local municipality levels. This fiscal federal system is characterised by significant decentralisation² of powers and functions, including budgeting, to provinces and municipalities. There are nine provinces, each with their own legislatures and executive committees, as well as administrative structures. These provinces are accountable to provincial legislatures and the 283 local governments (also referred to as local municipalities) are responsible to councils (National Treasury, 2001).

Local municipality functions involve services such as electricity, water and sanitation, but they also provide public goods such as municipal and household infrastructure, streets, street lights and refuse collection. Provincial governments are exclusively responsible for functions such as local economic development, provincial roads, ambulance services and abattoirs. The national government is responsible for functions such as defence, justice, correctional services and foreign affairs. The constitution stipulates certain functions that are the joint responsibility of the

² Decentralisation refers to the transfer of authority from the centre to peripheral units. Full discussion on the definition and types of decentralisation is provided in the Chapter on literature review.

provincial government and the national government. These include education, health services, agriculture, disaster management, road traffic regulation and tourism³ (National Treasury, 2001). In practice, national government's role in these areas of joint responsibility with provinces is primarily to determine policy, while provincial governments shape some policy and have a considerable role in implementation.

The South African fiscal system is based on a revenue-sharing model⁴. The national government collects most of the revenue, while lower levels of government are responsible for implementing most of the services. This results in a fiscal gap, because the revenue generated by provinces and local municipalities is less than the expenditure budget they require to deliver on the functions they are responsible for. This fiscal shortfall is addressed through financial transfers from the national government to the lower levels of government. These transfers are in the form of specific purpose grants and general purpose grants; referred to in South Africa as conditional grants⁵ and equitable shares grants respectively (National Treasury, 2001).

1.1.2 Fiscal Arrangements within the Health Sector

Provinces are largely responsible for the provision and financing of public health care services, and are heavily dependent on transfers from the national government. However, most of the transfers to provinces are in the form of general purpose grants, allowing the provinces significant autonomy in determining how much to spend on health sector programmes. Much of the operational decision-making in health care delivery, including the allocation of resources, is decentralised to the provincial level,

³ Full detail of the functions of the different tiers of government is described in Chapter 4

⁴ Full details of revenue sharing and expenditure responsibilities are presented in Chapter 4.

⁵ Conditional grants are grants from the national government to lower levels of government which are earmarked for specific activities and usually have conditions on how the money is spent.

with the National Department of Health (NDoH) retaining responsibility only for national policy making and the development of norms and standards to ensure equitable and affordable health care provision across provinces. The NDoH does have some power over resource allocation through conditional grants, which fund some health programmes (Doherty et al., 2002). Conditional grants are meant to support the delivery of services that are considered to be national priorities

Local municipalities have traditionally had the responsibility for providing preventive PHC services and infectious disease control. However, the 2003 National Health Act brought about significant changes in the provision of PHC. First, the National Health Act defined municipal health services⁶ to encompass only environmental health services. Secondly, the authority for providing PHC services was specified as the responsibility of provinces. And thirdly, the Act established a district health system (DHS) through which the provinces were to deliver PHC (Republic of South Africa, 2004).

By design, the district health system (DHS) is a lower level of provincial health authority. Essentially, the South African DHS is strictly an extension of the provincial governmental administration. This is a distinguishing feature of the South African DHS (Barron and Asia, 2001). International literature on the subject defines a DHS to include health care activities of non-governmental organisations, including self-care. See Box 1.1 for the definition of a district health system by the World Health Organisation.

⁶ Municipal health services refer to health services provided by the local government authorities.

Currently, there are 52 health districts in South Africa. Under the DHS system, there are three types of districts. The type **A** districts are metropolitan districts, while the rest are type **C** districts. Each of these district municipalities (A and C) are subdivided into type **B** municipalities (Barron and Asia, 2001), also referred to as sub-district municipalities.

Box 1.1 Definition of a District Health System

World Health Organisation's definition: "A district health system based on primary health care is a more or less self-contained segment of the national health system. It comprises first and foremost a well defined population living within a clearly delineated administrative and geographic area. It includes all the relevant health care activities in the area, whether government or otherwise. It therefore consists of a large variety of interrelated elements that contribute to health in homes, schools, workplaces, communities, the health sector, and related social economic sectors. It includes self-care and all health care personnel and facilities. Whether governmental or nongovernmental, up to and including the hospital at the first referral level, and appropriate support services, such as laboratory, diagnostic, and logistic support. It will be most effective if coordinated by an appropriately trained health officer working to ensure as comprehensive a range as possible of promotive, preventive, curative and rehabilitative health activities (Tarimo, 1991).

1.2. Inequities in Health Care Financing

Although the government has been committed to reducing disparities in provision and access to health services, previous research in the area has shown that there still exist gross inequities in the financing of health care across and within provinces (McIntyre, 1994, McIntyre et al., 1995, Doherty and van den Heever, 1997, Thomas et al., 2003, Brijlal et al., 1997, Daviaud et al., 2000). For example, in the fiscal year 2003/04, budgeted per capita provincial health care expenditure was R627 in Limpopo Province compared to R1,261 and R1,668 in the Western Cape and Gauteng Provinces respectively (National Treasury, 2003). Although, this is of great concern,

this study looks at a more specific aspect of health care: Primary Health Care. The reason for focusing on PHC⁷ is because it is identified by health policy in South Africa as critical in the transformation of the public health system (African National Congress, 1994). Also, communicable diseases, which contribute significantly to the burden of ill-health in South Africa (Bradshaw et al., 2003) are potentially preventable and could be effectively treated at a PHC level.

Table 1.1 below provides a snapshot of the level of inequities in PHC funding by provinces during the 2002/03 financial year. There is a wide variation of provincial PHC expenditure from the national average – ranging from R70 per capita in Limpopo province to R238 per capita in Gauteng. The problem with this distribution of PHC expenditure is that those provinces with the greatest burden of ill-health and the highest level of social and material deprivation have the lowest PHC expenditure per-capita (McIntyre and Okorafor, 2003). Research has shown that although the variation in per capita PHC expenditure has reduced consistently since the 1997/98 financial year, the rate of convergence appears to be too slow to achieve equity within an ‘acceptable’ time frame (Okorafor et al., 2003).

Table 1.1 Out-of-Hospital Primary Health Care Expenditure by Provinces (2002/03)*

Province	PHC expenditure per capita
Eastern Cape	91
Free State	183
Gauteng	238
KwaZulu Natal	163
Limpopo	70
Mpumalanga	122
Nothern Cape	199
North West	145
Western Cape	213
National Average	148

*Figures from Intergovernmental Fiscal Review 2003 and are based on 2003 prices.

⁷ The PHC approach is discussed in detail in Chapter 2

Within a fiscal federal context, where provinces have considerable autonomy in determining budget allocation to health services and within that, to PHC services, the question of how to influence provincial level decision-making to achieve equity is a key one. The South African Government had in the past proposed a nationwide PHC package (National Department of Health, 2002, National Department of Health, 2003), which outlined how much was required to provide comprehensive PHC services to each individual in the country. The PHC package has the potential to promote a more uniform level of PHC service provision across provinces. It is seen as an important tool for provincial Departments of Health to strengthen their negotiations in provincial budgetary forums for equitable allocations to the health sector and to PHC in particular. Whether this has been successful, is yet to be determined. This study will review the effectiveness of various initiatives employed within the South Africa context to promote the equitable distribution of PHC allocation.

1.3. Problem Statement and Objectives

Research has shown that the provinces with greater need for additional PHC resources have lower PHC expenditure per capita than provinces that have less need (Thomas et al., 2003). Such inequities also exist in PHC financing within the different provinces: districts with relatively higher health needs also receive less PHC funding per capita than districts with lower health needs (Thomas et al., 2003, McIntyre and Okorafor, 2003). This pattern of PHC financing is clearly inequitable and unfair; because the losers are the poorer households, who are supposed to be the targeted beneficiaries of public PHC provision. With the adoption of a new constitution and the move to fiscal

federalism, it appeared that there had been less progress in reducing the inequities in health budgets across provinces. This movement to fiscal federalism serves as a good point of reference to investigate the inequitable distribution of PHC resources.

The overall aim of this study is to investigate the implications of fiscal federalism in South Africa for the equitable distribution of PHC resources and how equity can be promoted in a fiscal federal context. More specifically, the study objectives are to undertake:

1. A critical evaluation of the processes of fiscal transfers and the autonomy of sub-national levels of government, and how they impact on equity in PHC expenditure. To achieve this, the study will critically evaluate the following transfer processes:
 - The vertical split of nationally collected revenue across the three tiers of government.
 - The horizontal split of revenue between provinces and the process of budget allocations to departments within provinces.
 - The process of transfers within the Provincial Department of Health to different health programmes, with special emphasis on PHC.

The evaluation of these processes will include identifying:

- Who is involved in the various processes and who has the most influence in decision-making, and why.
- (b) What criteria are used for allocating resources and to what extent equity is a consideration.

- (c) What information is utilised by decision-makers to identify areas of greatest need.

Such analyses will help investigate the level of autonomy enjoyed by provincial authorities in determining the budget for PHC and the effect this has on the equitable distribution of PHC resources. To assist this assessment, it will also be important to:

- a. Identify any guidelines or structures in place to ensure that provincial authorities adhere to national guidelines on resource allocation; and assess the extent to which such guidelines influence resource allocation at the provincial level.
 - b. Explore the likely impact of different types of centrally defined incentives (to achieve a more uniform PHC expenditure) on equity in PHC and autonomy of provincial authorities.
 - c. Investigate the mechanisms to ensure that the priorities of the communities within provinces and districts feed into decision-making on PHC resource allocation.
2. A review of the 'equity' objectives of the health sector, particularly as they relate to PHC and current PHC expenditure patterns. Such equity objectives and the current resource allocation criteria and patterns will be evaluated to assess the extent to which they target the geographic areas with higher health needs.

3. An analysis of the factors that constrain or facilitate the realisation of an equitable distribution of PHC resources.
4. Documentation of experiences of other countries operating a fiscal federal system in the equitable financing of health and PHC activities.
5. The study will then propose recommendations and strategies for addressing the identified problems.

1.4. Justification for the Study

Investigating the problem of inequities in resource allocation of PHC through the lens of fiscal federalism is critical as it not only looks at inequities that potentially could arise, but reviews the entire decision-making processes that may lead to such inequities. The research will prove particularly useful to countries operating fiscal federal systems (including those with decentralised health systems), as it will highlight the constraints and facilitating factors for equitable financing within any sector in a system with decentralised decision-making.

In most African countries, the transfer of power and authority to lower levels of the health sector has been motivated by the potential for increased efficiency, better quality of care and accountability (Gilson and Mills, 1995). Although it is recognised that decentralisation can have a positive influence on equity if it encourages the preferential allocation to remote, and usually rural areas, decentralisation can also have a negative influence on equity. Factors such as : (1) inappropriate organisational and institutional arrangements (e.g. in Ghana); (2) poor capacity at lower levels (e.g.

in Cote D'voire); and (3) inappropriate resource allocation to PHC activities (e.g. in Uganda) (Dugbatey, 1999) have rendered health systems unable to effectively establish a more effective and equitable distribution of health services. The problem of inappropriate resource allocation to PHC is common for most countries in sub-Saharan Africa. Inappropriate financing of PHC usually arises from: (1) resource allocation for PHC being based on existing capacity rather than need; and (2) continued centralised control of hospital funding, protecting this portion of the national health budget at the expense of PHC (ibid).

This is the first study to fully investigate the implications of intergovernmental fiscal arrangements on the equitable financing of a health care service such as PHC. The study therefore is a pioneer in literature on equitable financing of PHC within a fiscal federal context. In this regard, emphasis is placed in the advancement of the literature on fiscal federalism. This makes the study even more relevant internationally. The study does not aim to cover the implications of all aspects of fiscal federalism on equity in financing PHC; rather the study takes on a more precise approach. The core focus of the study is around expenditure responsibilities at the sub-national government level, and how such decision-making processes influence the distribution of PHC resources.

1.5. Structure of the Thesis

The thesis is organised into 8 chapters. A brief description of what is covered in subsequent chapters is presented:

The first chapter (current chapter) has provided a brief overview of the South African governance and health system. In this chapter, the objectives of the study have been outlined, including the justification of the study.

Chapter two presents a literature review. In this chapter, theoretical and empirical literature on key concepts used in the study such as primary health care, equity, need, resources allocation, fiscal federalism and decentralisation are reviewed and discussed. These are done with a view to come up with the most appropriate definitions of these concepts in the study. Also, in this chapter, the experience of selected countries (that operate under a fiscal federal system) in financing PHC is also reviewed. These provide the study with information on the how different intergovernmental arrangements have impacted on the equitable distribution of PHC allocations in other contexts. The review of these key concepts and the experiences of other countries form the basis for construction of a conceptual framework that will guide the methods and analysis used in the study.

In the third chapter a conceptual framework is constructed based on reviewed literature. This chapter outlines a framework that depicts the effects of different factors (such as different intergovernmental financial transfer options, levels of autonomy, local preferences and local capacity at sub-national governments) on

equity in PHC allocations. The conceptual framework is used as a guide for analysing collected data.

The fourth chapter provides a detailed description of the South African fiscal federal system, the health system and the nature of intergovernmental arrangements for the financing of PHC. The chapter also provides a brief history of fiscal federalism in South Africa.

Chapter five details the methods used in the study. These include data collection techniques and sources, study sites, description of quantitative and qualitative analysis, themes for the analysis of qualitative data, and the limitations of the study.

The sixth chapter focuses on the analysis of quantitative data. In this chapter, data on PHC expenditure at both province and district levels are compared to measures of need to assess the extent of equity in the distribution of finances for PHC.

The seventh chapter focuses on the analysis of qualitative data. The data are analysed according to seven broad themes. These are:

1. Processes and criteria for the vertical split of national collected revenue between government levels
2. Process and criteria for allocations to individual provinces and sectors within provinces
3. Influence of stakeholders
4. Community participation
5. Financing options for PHC

6. Expenditure capacity and sufficiency of funds for PHC
7. Understanding equity

Although this chapter focuses mainly on the analysis of qualitative data, where necessary, this is complimented by quantitative analysis.

Chapter 8 is the concluding chapter. This chapter includes discussions on the results of the study, the conceptual framework and the South African context. This section basically summarises the outcome of the study. Also, based on the study's results, recommendations are made to the South African government on how to promote equity within its fiscal federal system. This chapter includes discussions and recommendations of a broader nature that are relevant for other countries that are operating a fiscal federal system and countries with decentralised health systems. In addition, the conclusion identifies gaps in the literature on equity and fiscal federalism and makes recommendations regarding areas for future research.

CHAPTER 2

Literature Review

In this chapter, literature on the definition and conceptual understanding of key concepts such as equity, primary health care, and need are reviewed. This is to give the reader a clear perspective on the guiding principles of the research undertaken. Also reviewed are literature on fiscal federalism, intergovernmental relations and the experiences of selected fiscal federal systems in the financing of health and primary health care. In addition the literature review also provides the basis for the construction of a conceptual framework that guides the analysis of data collected for the study.

2.1 Primary Health Care

The origin of primary health care (PHC) can be traced back to 1920. This is when the term 'primary care' was first used in reference to the organisation of a health services system. Primary health care was used in this context to describe the functions of a level of health care in the United Kingdom by Lord Dawson (Starfield, 1992, Maeseneer et al., 2007). Since then, PHC only received international attention in the late 1970s.

PHC takes on different technical and political meanings for different health system settings and countries (World Health Organisation, 2000). Nevertheless, the World Health Organisation provides a description of what PHC should mean for each health system. This is based on the definition proposed at the 1978 International Conference on PHC in Alma-Ata, where most countries subscribed to the PHC approach to health

service delivery. PHC is defined by level of care, philosophy and the set of services it provides. In terms of level, PHC is the first point of contact between the health system and the population it serves. This first point of contact could be at the level of health clinics, health centres or hospital ambulatory care. However, the level at which PHC is delivered is determined by the set of services considered essential (World Health Organisation, 2003). The set of services provided by a health system that is based on PHC focuses on improvement of the overall health of the population rather than just the treatment of disease (*ibid*). The PHC approach was to provide promotive, preventive, curative and rehabilitative health services (World Health Organisation, 1978).

As a philosophy, PHC subscribes to equity, sustainability, efficiency, acceptability and the universal coverage of all citizens with some basic set of health care services – a comprehensive approach. The philosophy of PHC promotes the active participation of the community that is served; inter-sectoral collaboration (especially the social sectors); and the use of appropriate and effective technologies (*ibid*). PHC, at that time was seen as the key strategy for achieving “health for all” by the year 2000.

The PHC approach to health service delivery was promoted at that time as a result of a combination of factors experienced in many health systems, albeit to different degrees. In the late 1960s many health systems were experiencing high costs in providing health services. This was largely because the health systems were hospital based, and a large proportion of conditions treated in hospitals could have been managed by ambulatory care. Also, the hospital-based model used in most countries at the time resulted in the location of health facilities in more urban centres, leaving

the majority of the poor and rural dwellers without access to health care. These pressures necessitated a radical change in health systems to make them more cost-effective, equitable and accessible to populations they were to serve (World Health Organisation, 2000).

However, many of the PHC programmes adopted by various countries were unsuccessful in achieving their intended goals. Identified constraints to the successful implementation of the PHC approach include:

- Inadequate funding
- Insufficient training of health workers and lack of equipment
- Insufficient time for PHC workers to spend on prevention and community outreach
- The quality of care at the primary care level was often very poor (World Health Organisation, 2000)

In addition, the original model of PHC has been criticised for giving too little attention to peoples' actual health care needs and instead concentrating almost exclusively on their presumed needs (ibid). The concentration on presumed needs means that the PHC model was structured to provide a defined set of health interventions (across board) that did not directly stem from the actual demand for health care from the populations they served.

Shortly after the adoption of the comprehensive PHC approach, and in response to the constraints posed by the original comprehensive PHC approach, the selective PHC approach was proposed. The selective PHC approach was to serve as an interim strategy to begin the process of PHC implementation. Proponents of this model

contended that the scope of the original (comprehensive) model in the context of resource constraints made it unattainable. This approach proposed a selective attack on any region's most severe public health problem to maximise health improvement, thus promoting vertical programmes. Although the use of this cost-effectiveness approach has contributed to global improvements in health, it has several shortcomings. Some of these are that: (1) it ignores the broader social context of development, treating health simply as the absence of disease; (2) the top-down approach which is characteristic of vertical programmes limits community participation and is contrary to the ideals of the PHC approach; (3) poor coordination of vertical programmes leads to redundancy, duplication and wastage of resources (Magnussen et al., 2004).

This chapter does not attempt to compare the effectiveness of these two (comprehensive and selective) approaches. Nevertheless, a cursory overview of implementation of these approaches highlights the need for PHC initiatives to recognise the broader political, social, economic and health system infrastructure within which it is to function, while appreciating the importance of cost-effectiveness for maximisation of population health. In many cases, the PHC strategy has been adapted according to contextual health and socio-economic conditions. The understanding of PHC as the point of contact with the community and the population's gateway to the health system has been predominant in countries that have achieved adequate levels of basic health services (Kekki, 2003).

While the PHC approach has had mixed results over the past three decades, recent international advocacy has been initiated for the revitalisation of the PHC approach as

a central feature of health systems. PHC is advocated as being important for human development. For example, Bengoa et al (2003) state that PHC is critical for the promotion of good health in any country, and that a well functioning and organised PHC system is important for the achievement of the Millennium Development Goals (MDGs). Indeed it has been argued that the PHC approach is the appropriate approach to achieving the two fundamental goals of health systems. These are: (1) the optimisation of health of the population; and (2) the minimisation of health disparities across population groups (Starfield, 1992). The basis for these arguments is discussed in turn.

Evidence suggests that health systems that are oriented towards the PHC approach are more likely to deliver better health outcomes at lower costs (Macinko et al., 2003). In comparing PHC-oriented health systems and speciality-oriented health systems, Starfield (1992) argues that higher specialisation threatens the goals of equity. Specialised medical care is more expensive, and with limited resources and competing uses, it is more difficult to provide such services to the entire population. Also, specialised medical care is solely concerned with treating diseases and so cannot maximise population health as diseases rarely exist in isolation. The environments in which individuals live and work have a significant influence on their health status. The PHC approach requires less specialisation, and addresses the most common health problems through preventive, curative and rehabilitative services, while dealing with the context in which the illnesses exist.

Other arguments for the PHC approach are that PHC is characterised by continuous care to the population such that PHC providers and patients are usually known to each

other, fostering social cohesion within the communities. The organisation of PHC is less hierarchical and primary health care physicians are closer to the patient's milieu. The system is therefore inherently more adaptable to the changing needs of the community and the physicians are in a better position to appreciate social and environmental impacts on illness (Starfield, 1992, Maeseneer et al., 2007). These arguments suggest that a PHC-oriented health system is more effective in achieving the goals of a health system.

The potential of PHC in promoting equity⁸ within the broader socio-economic, political and health system context is gaining renewed appreciation. The work of the Commission on Social Determinants of Health (2007) draws attention to the influence of broader societal conditions on health status, and how PHC can play a central role in achieving a more equitable distribution of population health. In their interim statement, the commission states that: *'the condition in which people grow, live, work and age have a powerful influence on health ... inequalities in these conditions lead to inequalities in health'*. These differences in conditions are usually defined along socio-economic axes; and those who are of lower socio-economic status generally suffer a greater burden of ill-health. According to this view, PHC can address the broader social determinants of health through universal access to health care, empowering the vulnerable groups and through social cohesion. This is because, PHC requires continuous care for health problems in all patients groups, irrespective of race, social class, religion, etc (Maeseneer et al., 2007).

⁸ A full discussion on equity in the health sector follows in the next section

As a community oriented approach, it not only deals with individual health problems, but also with the identification of community health related problems and the implementation of systematic interventions to deal with such problems (such as life-style and improving living conditions). In order to effectively implement appropriate interventions, the PHC team works with other sectors such as education, housing, and labour. Inter-sectoral collaboration of this nature then fosters social cohesion in the community, which leads to empowerment of the people. This empowerment reduces the vulnerability of the population to factors that contribute to inequity in health (Commission on Social Determinants of Health, 2007, Maeseneer et al., 2007). Studies in the area have shown that primary health care (in contrast to specialty care) is associated with improvements in population health and a more equitable distribution of health within populations (Starfield et al., 2005, Engstrom et al., 2001).

However, as noted by Maeseneer et al (2007), certain policy measures should be put in place to enhance the impact of PHC on health equity and population health. In summary, these are:

- Guaranteeing universal access through an adequate health system
- Shifting away from vertical disease-oriented PHC programme to a horizontal community-oriented approach
- Education, recruitment and retention of adequate staff
- Providing PHC through a district health system
- Organising the health system in an inter-sectoral network, with links to environment, economy, work and education at different institutional levels.

In all, strengthening PHC to impact more effectively on population health and equity requires political and financial commitment from the government. PHC is traditionally funded and provided for by the state. The governance structure, the nature of the health system and the process of public financing within the government structure can have a significant effect on the nature of policies for PHC, the size of financial resources made available to PHC, and how these resources are used – hence the performance of PHC.

Fiscal federalism is a form of public governance structure that is characterised by the decentralisation of decision-making on revenue generation and expenditure responsibilities to lower levels of government. Intuitively, and understandably, one may presume that under this dispensation, PHC has a better chance of achieving its goals of promoting health and achieving equity as fiscal federalism brings public decision-making closer to the community. However, the nature of intergovernmental relations and the level of government charged with the responsibility of providing PHC can have a powerful influence on the performance of PHC (particularly in achieving equity). It is the effect of this form of government structure on the financing of PHC that this dissertation investigates in the South African context.

2.2 Equity Defined

In this section, literature on equity in health is reviewed. The objective here is to come up with a definition of equity that will be used in this dissertation to assess health system performance.

There are different perspectives on what equity means, and within the health system, what definition should guide the pursuit of equity and what should be distributed. This review has been limited to the distribution of resources, health, and rights. Literature on equity in the financing of health care was not covered. While this is a key aspect of equity in the area of health, this study focuses on equity in the distribution of health care resources across geographic areas. Equity in health care financing is concerned with the relative contribution of different socio-economic groups to the financing of health care. The study is not concerned with how finances are collected as this should not have any impact on the use of the finances. Equity definitions and perspectives reviewed are thus limited to those that are relevant to the allocation of health care resources across populations and geographic areas. Also, literature on procedural justice has been covered. This highlights the importance of processes of decision-making and the characteristics of fair processes.

Within the context of health and health care, equity has received much attention by policy makers and researchers (Culyer and Wagstaff, 1993). Despite the relatively high profile accorded to 'equity' in health policy, there is no consensus on what equity means (Williams and Cookson, 2000, Peter, 2001, Whitehead, 1992). What is generally accepted is that equity is about 'fairness' and 'justice' (Braveman and Gruskin, 2003, Mooney, 2004, Mooney, 1983, Culyer and Wagstaff, 1993, Donaldson and Gerard, 1993) in the distribution of something (good, service, right, etc) across different individuals and/or groups in society. However, it is because justice and fairness are subjective concepts, in that they can be interpreted differently by different people in different settings (Braveman and Gruskin, 2003), that makes it difficult to arrive at a consensus on what equity means. The different definitions of equity put

forward by different authors reflect the varied views around the concept. A brief review of theories of justice provides some insight into different perspectives of equity. The discussion of theories of justice will include literature on both distributive and procedural justice. Distributive justice refers to fairness in the allocation or distribution of resources, while procedural justice is concerned with fairness in the decision-making process (Lucas et al., 2007). The different theories of justice reviewed include the Rawl's theory of justice, the libertarian, egalitarian and utilitarian perspectives of justice.

First, and before reviewing the different perspectives on equity (including concepts of fairness and justice), it is important to distinguish between equity and equality. Equality is concerned with equal shares, which may not necessarily be a fair distribution. In health care for example, an equal distribution of access to services may not be a fair distribution of access as socio-economically disadvantaged groups should perhaps be given greater access in order to achieve a distribution that is considered equitable (Mooney, 1983). Equity is an ethical principle, such that the term 'inequity' can carry with it an accusatory or morally charged tone. Hence, the term inequity and inequality are not synonymous. Inequalities refer strictly to differences in the quantity of some phenomenon across different individuals or groups, while inequity refers to differences in the quantity of some phenomenon across individuals or groups that are considered unfair (Braveman and Gruskin, 2003). Subsequently, it is possible for inequality in the distribution of some phenomenon to be considered fair and therefore equitable. Equity is a major health policy focus in many countries because of consistent evidence that shows that those of lower socioeconomic status carry a heavier burden of ill-health, and are least able to

afford health care. They are therefore caught in a vicious circle: poverty breeding ill-health and ill-health maintaining or leading to poverty (Braveman, 2003; Wagstaff, 2002; Davey Smith et al, 1990; Phillimore et al, 1994; Goldblatt, 1990). This is considered unfair.

According to *Rawls'* theory of justice, there are two principles of justice (Gaertner, 1994, Williams and Cookson, 2000). The first is that basic principles such as the right to vote and eligibility for public office, the right to property and freedom of speech, should be distributed equally and at the maximum level that is compatible with everyone enjoying the same level. Secondly, social and economic inequalities are to be arranged such that they are to the greatest benefit of the least advantaged member of the society. These benefits are judged in terms of an index of primary goods, comprising basic liberties, opportunities and powers, income and wealth – to be satisfied sequentially (Gaertner, 1994, Williams and Cookson, 2000). It is the second principle that most holds interest for this study. In summary, the Rawlsian notion is that equity and justice is achieved if a society's arrangement (from any possible number of arrangements) maximises the benefits to the most disadvantaged (Olsen, 1997). Justice is seen as undermined if society's main economic, social and political institutions require sacrifices from the worst-off groups purely to benefit the better-off groups (Peter, 2001). This theory however, does not include health as a primary good, or other 'natural' goods such as intelligence and imagination. Goods included as primary goods are those that are distributed by societal structures and not by nature, such as freedom of association, income, wealth, and freedom of religion.

Nevertheless, interpreting the *Rawlsian* notion of equity within health requires that the worst-off in society are prioritised. This could be in the form of providing them with, for example, a decent basic minimum level of health care, and therefore a distribution of health care resources that promotes a minimum standard of health care is equitable (Gilson, 1998). This view allows for more consideration of the poor than the utilitarian perspective (discussed below) although it is also criticised (by egalitarians) on the basis that achieving an absolute minimum of health services for the poor is not enough. Richer members of the population still have the opportunity to maintain and even increase their relatively better access to and utilisation of health services, without sacrificing the health status of the worst-off. Another point of view on the theory is that the Rawlsian approach to health equity is an indirect approach, that identifies as unjust those class, race, gender or socio-geographic inequalities in health that originate in the basic structure of society and are the result of a social division of labour that benefits the better-off groups at the expense of the worse-off. Therefore, the basic objective is not to achieve a specific pattern of health outcomes, but a just basic structure of society. If the basic societal structure is just, then any (and all) distributions of health outcomes produced by this society are just.

The *libertarian* perspective emphasizes a respect for natural rights (the rights to life and possession), and consumer sovereignty and market forces in the distribution of health care resources and benefits (Donaldson and Gerard, 1993). As long as people acquire and transfer their holdings without violating the rights of others, their holdings are regarded as just. In the distribution of most economic goods, this view would receive support from most schools of thought. However, the distribution of health care resources on the basis of non-medical merits is regarded as repugnant by

most (Gilson, 1998). This is not surprising as health care is fundamentally necessary to good life. Essentially, an individual cannot flourish if s/he is dead or diseased. Care that postpones death, diminishes disease or eliminates destructive influences on the quality of life, improves the capacity for savouring all that life has to offer. If it is felt that all residents of a political jurisdiction ought to have equal opportunities for their lives to flourish, then it follows that health care is a good/service whose “right” distribution must be ensured (Culyer, 2001).

The *Utilitarian* perspective seeks to maximise the total sum of happiness or welfare (Wagstaff and van Doorslaer, 1993, Peter, 2001, Williams and Cookson, 2000). There are many brands of utilitarianism, but they all have three common features. First, *consequentialism*: things must be evaluated in terms of their consequences. Second, *welfarism*: consequences must be evaluated in terms of the welfare or utility of individual human beings; and third, *sum-ranking*: the overall evaluation must be based on the sum total of individual utilities in the relevant population (Williams and Cookson, 2000). Within health, this therefore suggests that if any pattern of distribution of, say, health care resources maximises overall health status within a population, it is equitable. The utilitarian perspective is criticised on the grounds that it ignores the distribution of utility across different individuals or groups (Peter, 2001). With respect to equity in health, the utilitarian view is criticised for not allowing for special consideration of the poorest and most vulnerable (Gilson, 1998). Overall increases in health status for any given population can be achieved with little or no improvement in the health status of the worst-off. Indeed, overall health gains can be experienced, even with declines in the health status of poorer members of the population. Also, when only consequences matter, then actions which may increase

overall utility but are considered unjust from a commonsense conception are ignored by this perspective (Olsen, 1997). Interestingly, utilitarianism yields a clear case for redistribution of a good or service if one assumes diminishing marginal utility of that good or service (Williams and Cookson, 2000). Maximisation of utility would then necessitate the redistribution of a good in favour of those with fewer of the good, as their marginal utility will be higher.

The *egalitarian* perspective advocates for distribution of health care resources according to need. In the egalitarian view, access to health care is the right of every citizen and the distribution of health care should not be influenced by income and wealth. Egalitarians would judge equity by assessing the extent to which health care in practice is distributed according to need and financed according to ability to pay (Gilson, 1998, Wagstaff and van Doorslaer, 1993). There is consistent evidence showing that socio-economically disadvantaged groups carry a heavier burden of ill-health, have poorer survival chances and have less access to good quality health care (Power et al., 1991, Phillimore et al., 1994, Davey and Bartley, 1990, Wilkinson, 1986, Townsend and Davidson, 1982, Braveman and Tarimo, 2002, Wagstaff, 2001). It is because of such evidence that the egalitarian perspective has gained popularity. Considering the huge socioeconomic inequalities within South Africa (McIntyre and Gilson, 2002, Bloom and McIntyre, 1998), this perspective is deemed most appropriate for assessing equity in the South African health system. It is this (egalitarian) perspective that therefore guides this research. Central to this perspective is that the distribution of health care resources should be done according to need. The definition of need within this context is also one that has received a lot of attention,

especially for guiding health care resource distribution. The concept of need thus requires further discussion, and this will be addressed in the next section.

Whether any of these perspectives or values forms the guiding principles for achieving equity within any health system, the problem of identifying an appropriate operational definition of equity based on measurable criteria remains (Braveman and Gruskin, 2003). In addressing this issue, a starting point would be to identify “what” is to be distributed fairly. Are health systems to be concerned with a fair or equal distribution of “health”, “health care”, or “opportunity” for maximising health status? Unfortunately, there is no agreement on “what” should be distributed equally (Culyer, 2001).

Amartya Sen’s (1993) capabilities approach provides an alternative view on this subject. He proposed that in policy evaluation for societal arrangements, the appropriate information to assess is not individual utility, well-being or resources that people have access to, but something in between. It is what people can ‘do’ and ‘be’ and the quality of their life (their capabilities) that matters (Peter, 2001, Robeyns, 2005). The various ‘doings’ and ‘beings’ are the ‘functionings’ that a person can achieve but may decide not to. According to this view, it is capabilities that should be distributed equally (Roemer, 1996). So, in health, what should be distributed equally is the capability to achieve different ‘functionings’ such as being able to move around, not being tired, etc (Peter, 2001).

This perspective on valuing the benefits of policy brings a new and relevant dimension to assessing and defining equity in health. However, Sen leaves it open as

to which functionings should be included when assessing a particular social situation, but stresses that each case will require a process of weighing the relative importance of relevant functionings. This essentially involves value judgements about the weighting given to any particular functioning (*ibid*), and a largely subjective measure of, say health benefits to any individual or group. What is clear is that this perspective advocates for greater freedom (available choices) to individuals who, based on their socio-economic status for example, have fewer choices or functionings than others in the society. Sen's contribution to the subject is important and recognises aspects of distribution of resources that have previously not been considered. Although these insights may be of great importance in informing decision-making around the distribution of resources, its obvious limitation lies in the difficulty in measuring 'capabilities' and 'functionings' for the purpose of practical allocation of resources.

The literature supports the view that a fair distribution of health care is a more realistic objective of health systems than a fair distribution of health. This is based on the argument that equity in health suggests equality in health outcomes, and there are numerous factors that affect health status that are outside the locus of control of health systems (Donaldson and Gerard, 1993, Whitehead, 1992). Some of these factors are listed below.

1. Genetically inherited conditions and natural deterioration of health over time
2. There is no clear definition of what is meant by "good health"
3. Freely chosen health damaging behaviour such as extreme sports, smoking etc
4. Exposure to unhealthy, stressful living and working conditions (*ibid*).

There is therefore some consensus in the literature that health differences determined by factors such as points 1 and 3 above should not be classified as inequities since such differences are unavoidable (Whitehead, 1992, Peter and Evans, 2001). Achieving equal health outcomes is potentially highly undesirable because this would require too many restrictions on how people choose to live their lives (Oliver and Mossialos, 2004). Also, pursuing equality in health seems unreasonable as this may necessitate a levelling down of everyone's health towards that of the most unhealthy (Williams and Cookson, 2000). On the other hand, Mooney and Jan (1997) argue that a fair distribution of health does not have to be an equal distribution of health; just as a fair distribution of income does not strictly imply an equal distribution of income. The consideration therefore should not be equal distribution of health, but rather to reduce disparities in health as much as possible such that differences in health outcomes are based on factors that the society considers as unavoidable and acceptable (Whitehead, 1992).

With regard to equity in health care, a number of definitions have been put forward for practical and operational purposes, particularly to guide the allocation of health care resources. Some of the more common definitions, as listed by Mooney (1983), are:

- a. *Equality of expenditure per capita*: An equitable allocation of health resources is achieved if the available budget is allocated to different regions pro rata with the size of the regional population. The major criticism of this definition of equity is that it does not consider differential need for health care across populations, and so will not be considered equitable by many (Whitehead, 1992, Culyer and

Wagstaff, 1993). However, it can still be considered a foundation for resource allocation formulae, and a reasonable point from which to start.

- b. *Equality of inputs (resources) per capita*: Equity in resource allocation to different regions is achieved if all resources (labour, land, capital, etc.) are distributed pro rata with the regional population. The major difference between this definition and the previous one is that this second definition takes into consideration the different prices of health care resources in different regions. However, it still does not take into consideration the possibility of different levels of need for health care that could be experienced in different population groups.
- c. *Equality of input for equal need*: This definition suggests going beyond population size as the basis for resource allocation. The health needs of the different regions (could be defined by health status, demographics, socio-economic levels etc) should be considered also. So, given equal population sizes, one region should receive more resources if it is deemed to be in greater need of health care.
- d. *Equality of (opportunity of) access for equal need*: Based on this definition, all individuals with similar need for health should face the same cost (transport, time, financial, etc.) of utilising health services.
- e. *Equality of utilisation for equal need*: This takes the definition of equity further than the previous one. If everyone had the same tastes and preferences for health and health care, then equality of access would automatically translate into equal utilisation. However, this is generally not the case. In practise therefore, this

definition advocates for positive discrimination in favour of those less willing to utilise health care.

- f. *Equality of marginal met need*: Assuming that regions rank their needs in order of priority to be met, and that the order of ranking is similar across all regions, equity is achieved if each region stops treating the same specific need if each of their budgets is cut by the same amount.

The first two definitions of equity as listed above are concerned with distributing health care resources equally across individuals. While these two definitions may be easier (compared to the others) to put into practice, they do not receive much support as they do not consider the needs of the population. So, operational definitions of equity that recognise the differential needs are preferred for this study.

For the purpose of determining financial allocations to geographic areas, the most appropriate operational definition of equity for the South African context, is the one that considers differential need and explicitly addresses how financial resources should be allocated. Based on these criteria, the operational definitions that do not take “need” into consideration are not appropriate. “Equality of input for equal need” and “equality of marginally met need” are the only two definitions that meet these criteria. The latter can be very difficult to implement, so the “Equality of input for equal need” is the most appropriate for the South African context. Given that the study focuses more on the financial allocations to different geographic areas, a modified operational definition of equity is used as the benchmark for assessing equity – “equal expenditure per capita for equal need”.

Literature on equity in health identifies two major principles of equity: horizontal equity and vertical equity (Mooney, 1983, Donaldson and Gerard, 1993). Horizontal equity refers to the “equal treatment of equals”, such that individuals with similar characteristics in all respects (including health status) are treated equally. On the other hand, vertical equity refers to the “unequal, but equitable treatment of unequals” (Mooney, 1983). This suggests that those with different health status should be treated differently. It may be extremely difficult to put the ‘horizontal equity’ definition into practice as this presents the problem of deciding what ‘equal treatment’ and ‘equals’ means. Vertical equity on the other hand appears to be easier to put into practice because it is easier to identify who has greater health needs than another, and therefore (hopefully) provide health care discriminately in favour of the person(s) with greater health needs⁹. A key problem in the application of vertical equity is to determine ‘how unequal health conditions (disease conditions for example) are’? Although it is beyond the scope of this review to attempt to answer this question, the question raises the issue of processes in decision-making for achieving equity.

The above discussion on theories of justice has focused on distributive justice – focusing more on the eventual distribution of resources, outcomes or utility. This consequentialist approach (a characteristic of standard economic welfare analysis) has for some time dominated the analysis of equity; and has been criticised for not acknowledging the importance of the process of decision-making that leads to the actual outcomes of interest. Procedures in this regard have often been viewed as

⁹ The concept of need in health is discussed in more detail in subsequent sections of the literature review

valuable only through their instrumental role in promoting better outcomes (Anand, 2001, Wailoo and Anand, 2004, Dolan et al., 2007).

However, it has become evident that procedures are not only important as an instrument in promoting fair outcomes, but that the nature of the processes for decision-making are in themselves utility generating. Thus procedures have both instrumental and inherent values (ibid). Indeed, there is empirical evidence that suggests that the ways in which decisions are made and their underlying rationales can affect people's reactions to, and the utility they derive from those decisions (Dolan et al., 2007). The argument here is that people enjoy some utility when their preferences concerning a process for decision-making are considered. So, utility enjoyed is not only from "what" a person receives (as a result of some decision), but the way in which the person gets it.

There are some other reasons why procedures and their fairness are important.

- In situations where there are opposing parties that have interests in outcomes that are diametrically opposed, a solution defined solely in terms of consequences (eventual distribution of the phenomenon) may be impossible. In this case, conflict resolution may only be achieved if a mutually acceptable procedure is implemented, even where this may lead to unfavourable outcomes to one of the two parties.
- Procedures have an inherent value where the causes of outcomes are uncertain. In such cases, an investigation of the process of decision-making can aid the identification of policy content or actors that are responsible for the observed

outcomes; and then corrective action taken where the desired outcomes are not achieved.

- Procedures used to distribute resources, for example, can provide substantial information on how decision-making bodies perceive those that are affected by the decisions they take.
- Outcome uncertainty may be so pervasive that processes are all that can be monitored or controlled.
- It may be necessary to impose limits on the discretion of those in positions of power. This promotes accountability of managers involved in decision-making (Anand, 2001, Wailoo and Anand, 2004).

Literature on procedural justice identifies six prominent characteristics of fair procedures. These are (Wailoo and Anand, 2004, Dolan et al., 2007):

1. *Voice*: individuals affected or potentially affected by a decision have the opportunity to contribute to the decision-making process
2. *Consistence*: the same decision-making criteria are applied across both a significant time period and across a range of comparable decision contexts
3. *Neutrality*: decision makers are able to separate themselves from preconceptions and vested interests
4. *Transparency*: information about the decision-making process is available and accessible
5. *Reversibility*: there should be mechanisms in place that allow decisions to be challenged and reversed if required
6. *Accuracy*: decision-making should be made based on accurate information

Within the health sector, and in the distribution of health care resources, fair processes are justifiably important. Health care is a fundamental input in raising the health status of those that are unwell. It is therefore a key resource for individuals to flourish and to contribute positively to society. Decisions around the distribution of health care resources potentially affect the lives of everyone. For reasons listed above, it is important that the process for making such life-impacting decisions be fair and just (embodying all the characteristics of a fair process).

Fiscal federalism is characterised by a tiered government system, such that each level of government has a defined set of roles and responsibilities with regards to the health sector. The nature of fiscal federalism and indeed the nature of intergovernmental relations within a fiscal federal system have implications for the process of decision-making that results in the distribution of health care resources. While assessing how equitable the outcomes of decisions that determine the distribution of health care resources is important, it is equally important to assess 'fairness' in the process for decision-making that yields (in)equitable distributions.

The fundamental contribution of PHC to the population's ability to flourish is a justifiable rationale for citizens to input into decision-making that determines the eventual distribution of PHC resources. Not surprisingly, this aspect (community participation) of 'fairness' in decision-making processes is a critical component of the PHC approach. So, in assessing equity in PHC allocations, it is necessary also to consider whether the processes for decision-making are fair. This study will therefore also evaluate the fairness of decision-making processes for determining PHC

allocations to different geographic regions in South Africa. The characteristics of a fair process as identified above will guide this analysis.

2.2.1 Summary and Discussion

The perspectives on equity that have been reviewed provide a good foundation from which to assess the most appropriate operational definition of equity, depending on the good and context. The Rawlsian and egalitarian perspectives favour distribution of goods such that the more disadvantaged members of the population receive more than the better-off. A similar conclusion can be reached for the utilitarian perspective if one assumes diminishing marginal utility of the good or service to be distributed.

The libertarian perspective of equity does not support the general view on the way a good/service such as health should be distributed. It is generally agreed that everyone has the right to enjoy the highest attainable level of health (OHCHR-UNOG, 1966), and that different individuals and population groups have different capacities to attain their highest level of health. It is therefore important that equity in health should be about ensuring that those who are disadvantaged (in their ability to attain their highest level of health) should receive more support in attaining their highest level of health, thereby equalising (or moving towards equal) opportunities in maximising health status. This is also in line with Sen's capabilities approach to valuing the impact of policies. Consequently, the perspective on equity that this study adopts is akin to the egalitarian perspective and is best described by Whitehead's (1989) definition of equity. According to Whitehead, "equity in health implies that ideally everyone should have a fair opportunity to attain their full health potential and, more

pragmatically, that none should be disadvantaged from achieving this potential, if it can be avoided”.

This section has also reviewed several operational definitions of equity. Working with an operational definition of equity is important as it provides clear and measurable criteria upon which policy can be practically evaluated. The study proposes to assess the extent of equity in the distribution of financial resources across geographic areas. To achieve this, it is important to define equity in such a way that allows for the identification and analysis of measurable equity criteria. Only the needs-based operational definitions of equity are in line with this study’s perspective on equity. Based on these definitions, those with higher health needs should get a greater proportion of health care resources. While this raises the question around what ‘need’ means, or how it is to be measured, another problem is how to determine “how much more” those experiencing greater need should receive, such that it is acceptable. Acceptability of how much more those in greater need should receive can be properly addressed through a ‘fair’ process of prioritisation and valuation of health needs, informed by those that are potentially affected by the distribution of health care resources.

The amount and distribution of health needs, among individuals or groups is critical to the application of any needs-based operational definition. However, as previously mentioned there is still the problem of how to define and measure health needs. This is discussed in the next section. Since the focus of this study is on the equitable distribution of primary health care resources, discussion and review of ‘need’ will be

centred on the definition and measurement of need for geographic health care resource allocation.

2.3 Need

The meaning and concept of “need” in health has been a subject of debate in many academic papers (Oliver and Mossialos, 2004), yet there remains considerable confusion and disagreement about the concept in the literature and in practice (James, 1999). Discussions around the meaning of ‘need’ date back to Bradshaw’s (1972) seminal work in which he defined need along four dimensions. First is *normative need*, in which an expert defines need by setting a desired standard and comparing it with the existing standard. The second is *felt need*, which is the same as ‘want’, and is assessed by asking a person or population if they feel they need a good or service. The third is *expressed need*, in the case where felt need is turned into action (effective demand). The fourth is *comparative need*, which describes the need of one population that does not receive a certain service compared to another population with similar characteristics that does (James, 1999, Oliver and Mossialos, 2004). These dimensions of need are still relevant to more recent discussions around the definition of need, especially in the health sector.

In the health sector, a common definition of need amongst clinicians is based on the state of an individual’s pre-treatment health. Under this premise, persons with the same health status have similar need, and in the same vein, those with greater ill-health have greater need (Culyer and Wagstaff, 1993, Oliver and Mossialos, 2004). This definition of need has received wide criticism on the basis that there are instances where an individual may be ill but the available medical technology is such

that health care cannot improve the health status of the individual. According to Culyer and Wagstaff (1993):

“The difficulty with this definition is that it is hard to see why someone who is sick can sensibly be said to need health care, irrespective of the latter’s ability to improve the person’s health”

They also argue that this definition is inappropriate, as a person may be in need of health care but not be ill, as in the case of preventive measures. Also health as a concept is difficult to grasp (Peter, 2001) and difficult to measure with precision (Waters, 2000). For example, if individual A and individual B are suffering from a sore-throat and back-ache respectively, how can people tell who is more ill and thus who is in greater need of health care. In fact, it may even be difficult to tell amongst two individuals suffering from the same illness if and who is more ill than the other. Their characteristics, such as age, previous health status, gender and socioeconomic status can affect the severity of the illness they are suffering from.

Need has also been defined as the ‘capacity to benefit’ from health care (Culyer and Wagstaff, 1993). This definition embodies the perspective on need as an instrumental concept – that the need for health care is not for health care as an end, but for the improvement of health as the ultimate objective. So, in instances where health care cannot result in the improvement of health (the ultimate objective), there is no need for health care (Culyer and Wagstaff, 1993). In the area of equity in health, one can argue that the importance of defining and understanding the concept of need for health care is not an end to itself but to quantify the levels of health care resources to be allocated to different individuals and populations. Simply defining need as the

capacity to benefit does not provide a basis for quantifying the amount of health care resources an individual or a population needs.

Hence, another definition of need, based on the principle of 'capacity to benefit' has been proposed. Need is defined as the expenditure required to exhaust capacity to benefit (ibid). This definition gives monetary value to the amount of need experienced by individuals. It allows for the financial quantification of need and therefore the assessment of marginal benefits yielded by competing health interventions. As resources are scarce and have competing uses, this definition may be more appealing to economists and health planners. However, Culyer (2001) cautions that capacity to benefit differs from need. He argues that it is possible for two individuals to have different capacities to benefit, even when their individual capacities to benefit can be exhausted by the same expenditure. Therefore their need for resources is the same even though they have different capacities to benefit.

According to McIntyre et al (2008), the concept of 'need' is value-laden and subjective and is therefore viewed from different perspectives depending on whose perception, interpretation and values are at play. Given the subjective nature of need, the relevant question for this study then is: how is need to be defined such that is useful for allocating resources equitably? Culyer (1995) proposes that if need is to be a practical idea that is useful for resource allocation, then the concept or definition of need should fulfil the following conditions:

1. The value-content of the definition should be explicit and easily interpretable
2. It should be directly derived from the objective(s) of the health care system

3. It should be capable of empirical application in issues of horizontal and vertical distribution
4. It should be service and person oriented
5. It should enable a straightforward link to be made to resources
6. If acted upon as a distributional principle it should not produce manifestly inequitable results.

He also goes on to comment that for most definitions of need, one or more of these conditions are absent. In the absence of a definition that satisfies all the conditions above, how then should health systems allocate resources according to need? In answering this question, a good place to start is to look at how different health systems have attempted to allocate health care resources based on need. A critical review citing the pros and cons of each approach to needs-based resource allocation will help in narrowing down the most appropriate measure or indicator of need for allocating PHC resources in South Africa.

2.3.1 Needs-Based Resource Allocation

In many countries, different measures of need have been constructed to guide the allocation of health care resources. The approach to allocating resources based on need could be done subjectively or based on more objective indicators of need and in some cases a combination of the two (Pearson, 2002). As previously indicated, it is the more objective approach to measuring population health needs that is of interest in this study.

The most widely used indicators in measuring relative need¹⁰ for health services are population size, demographic composition (e.g. the elderly tend have a greater need for health services), levels of ill-health (mortality and morbidity), and socioeconomic status. In some cases, countries have also taken into consideration the difference in the cost of providing health services in different areas (McIntyre et al., 1990) (McIntyre, 2007). Relative need refers to the need for health care for a person (or group of people) in comparison with the need for health care for another person (or groups of people).

The most famous application of a needs based formula is the Resource Allocation Working (RAWP) formula, which was used in the late 1970s in England to distribute the national health budget. Allocations to regions were based on the population size, as a base line. The population for each region was then adjusted or weighted by:

- Demographic distribution (age and gender) – by using the national average of utilisation of different services for each age and gender category.
- Standardised mortality ratios (as a proxy of levels of ill-health)
- Cross-border flows, special costs of teaching hospitals and market related costs in dense urban areas (Doherty and van den Heever, 1996)

Some of the criticisms of the RAWP formula were that it did not consider the presence of the private sector in the health system; it applied only to recurrent expenditure and did not include capital expenditure; and that it did not accommodate the impact on the need for health care of developments in other social sectors such as housing and welfare (ibid). Nevertheless, the RAWP formula remains a point of

¹⁰ Note that the use of the term 'relative' is because these indicators are used to compare the extent of need for health care resources in one geographic area with others.

reference for any discussion on needs-based resource allocation within the health sector. The RAWP formula used a combination of different indicators in measuring relative need, with a focus on population size, demographic composition, and mortality.

The original RAWP formula did not include measures of socio-economic status as a basis for resource allocation, but a later version of the RAWP formula did include this element (McIntyre, 2007, Asante, 2006). With such huge disparities in socio-economic status in South Africa, a proxy for need that does not reflect the impact of socioeconomic factors on the level of health care need has little relevance for guiding resource allocation. .

Measures of mortality such as infant mortality rates and under-5 mortality rates are considered to be very good indicators of health need. However, it has been documented that the use of mortality measures has the potential to pose problems as an indicator of need. It is suggested that using them alone as a guide for resource allocation can create perverse incentives. This is because effective care that reduces mortality is punished with declining budgets (Diderichsen 2004). Nevertheless, they remain an important indicator of health needs.

Morbidity is also considered to be a good indicator of need, although it also has some setbacks. Where morbidity data are collected from the health system, the information derivable from different regions are affected by variations in record-keeping efficiency. Also, even where morbidity data is collected through surveys, contextual factors influence the correspondence between self-reported morbidity and the more

objectively measured and medically defined morbidity. These problems associated with the direct use of epidemiological data as proxies for need have prompted most countries to use a list of demographic and socioeconomic indicators related to need. Although demographic and socio-economic variables have been shown to be poorer indicators of individual health needs, they are considered a much better indicator of variations across geographic areas (Diderichsen, 2004).

The use of indices of deprivation or socioeconomic status for allocating health care resources according to need has been developed as an alternative or addition to mortality based indicators (Newbold et al., 1998). These indicators focus on the broader socioeconomic determinants of health status, and this is its major appeal. This approach to assessing health needs holds particular interest for this study for two reasons. First, the study focuses on allocations to PHC and not higher levels of health care. As discussed in section 2.1, the broader societal condition under which people has a huge impact on their health status, and the PHC approach is arguably the most appropriate approach to address these societal-induced health outcomes. Second, those of higher socio-economic status have a greater ability to influence their immediate societal environment to improve their health status than those of lower socio-economic status (Behrman, 1993). Indeed, and as mentioned in earlier sections of this chapter, those of higher socio-economic status are usually healthier. So, an indicator of health needs such as a deprivation index, which includes immediate societal conditions as well as socio-economic status is an ideal way to determine PHC allocations. A further argument in favour of the use of deprivation index that is based on socio-economic status is the close relation between socio-economic status and

mortality. Research in different contexts show a consistent inverse relationship between socio-economic status and mortality (Stockwell, et al, 2005)

Different deprivation (or socioeconomic) indices have been developed over the years, and they have included different variables. For example, one of the first indicators of relative need by geographic areas based on social deprivation was constructed by Jarman (1983). He used social and economic variables such as age, employment status, housing, ethnicity, characteristics of the family, housing, crime rate, mobility and visiting difficulties. Other indices include Townsend's (1987) index of material deprivation that included four variables: unemployment, overcrowding, non-car ownership and non-home ownership.

Another index was developed by Carstairs which is based on four census indicators: low social class, lack of car ownership, overcrowding and male unemployment (Carstairs and Morris, 1991). More recently, McIntyre et al (2002) developed an index of deprivation that included demographic, socio-economic, and environmental variables for the analysis of equity in the allocation of health care resources. Similar variables were employed by Lozano et al (2001) in assessing health inequalities and inequity in health in Mexico. Table 2.1 lists variables that have frequently been used in calculating deprivation indices (the ordering of the variables has no significance).

The use of deprivation indices (or some composite index of socio-economic status) appears to be an appropriate option for this study. South Africa has been cited to be one of the most unequal societies in the world (Bloom and McIntyre, 1998, Canadian

International Development Agency, 2004), and it is worth noting that inequality in the country has been increasing in recent years (Ardington et al., 2006).

Table 2.1 Variables frequently used in deprivation indices in different contexts

Variables frequently included in deprivation indices in high-income countries	Variables frequently included in deprivation indices in middle-income countries
Unskilled worker/Low social class	Illiteracy/low educational attainment
Unemployment	Lack of access to running water
Over-crowding in housing	Lack of access to electricity
Socio-economic group	Lack of access to sanitation/sewerage facilities
Child under the age of 5	Low quality housing
Pensioner living alone	Overcrowding in housing
Belonging to minority group	Low income levels
Changed house/address in past year (Mobility)	Unemployment
Don't own a car	Extent of debt
Single parent	Lack of assets/durable household goods
Living in rented accommodation/don't own a house	Age (children and the elderly may be deprived)
Lack of amenities (shower and inside toilet)	Gender (women may be more deprived)
Lack of educational qualifications	Geographic area (rural dwellers)

Source: McIntyre and Okorafor (2003)

Considering the wide disparities in socio-economic status across the population, there are most probably, huge disparities in the opportunity levels of the best-off and the worst-off in achieving their full health potential.

2.3.2 Summary

In assessing the equitable distribution of health care resources in South Africa, this study views equity from an egalitarian perspective; the view that proposes a fair distribution of opportunity for all to achieve their highest health potential. This means that the distribution of health care resources will be assessed based on the extent to

which resource allocation patterns improve the lot of those who have less opportunity to attain their highest possible health status. These disadvantaged groups are identified by their socio-economic status and considered to have relatively higher health care needs than others of higher socio-economic status. This assumption is supported by the consistent international evidence that those of lower socio-economic status carry a heavier burden of ill-health (Lynch et al., 2000, Braveman and Tarimo, 2002, Whitehead et al., 2000, Wildman, 2003, Commission on Social Determinants of Health, 2005, van Doorslaer et al., 1997, Marmot et al., 1997), and that they are least able to afford health care. They are thus, caught in a vicious circle: poverty breeding ill-health and ill-health maintaining poverty (Braveman and Tarimo, 2002, Wagstaff, 2001). The study will therefore use variables that are indicators of socio-economic status in constructing an index of deprivation. This deprivation index is used as a proxy for relative need across geographic areas in South Africa. Other variables such as demographic and ethnic characteristics are included in this index to capture contextual indicators of relative need in South Africa¹¹.

2.4 Decentralisation, Fiscal Federalism and Equity in the Health Sector

Decentralisation refers to the transfer of authority in public planning, management and decision-making from higher levels of government to lower levels (Mills, 1990). In the literature on decentralisation of health systems, four forms of decentralisation can be identified.

¹¹ A full description of the criteria and process of selecting variables included in the deprivation index can be found in Chapter 5: Methods

- Deconcentration: shift in administrative responsibilities from the centre to lower levels of the system that does not involve the shifting of any political power
- Devolution: substantial shift in political responsibilities, often including tax-raising authority
- Delegation: relocation of a specific function to a quasi-autonomous organisation
- Privatisation: shift of specific functions away from the government. Some authors do not consider this a form of decentralisation (Jowett, 2000).

Fiscal federalism can be defined as the devolution of expenditure responsibilities to sub-national levels of government (Ter-Minassian, 1997, de Mello JR, 2000). Fiscal federalism thus involves decentralisation, specifically around the shift of expenditure responsibilities, but to lower levels of government and not just any administrative structure or entity. Henceforth, the term 'decentralisation' will be used in reference to shifts in authority from higher levels of government to lower levels of government.

Generations ago, federations were regarded as tiers of government, each with identifiable domains of power and responsibility, and little or no interaction between them. In modern federal structures, different levels of government have wide and varied interactions between them (Cameron, 1999, Opeskin, 1999). Such interactions are shaped by the functions allocated to the levels of government. Many countries have substantially devolved expenditure responsibilities to lower levels of government. However, the form of decentralisation, the nature of intergovernmental relations and the extent of responsibilities shifted to lower levels of government by

any country is a reflection of its particular context. Demographic, geographical, social, cultural, historical, political, constitutional and institutional factors all influence the structure and design of federal systems and the nature of intergovernmental relations (Bird and Vaillancourt, 1997, de Mello, 2000, Cameron, 1999). The amount of autonomy and the nature of responsibilities given to sub-national governments within federal systems therefore vary considerably across countries.

Fiscal federalism has become a global trend in recent years (Ter-Minassian, 1997, de Mello JR, 2000, de Mello, 2000). This is partly a reflection of the political evolution towards more democratic societies. In addition, the literature has presented the view that fiscal decentralisation can entail substantial gains in terms of both efficiency and welfare. According to this view, such gains are best achieved by assigning responsibility for each type of public expenditure to the level of government that most closely represents the beneficiaries of these outlays (Musgrave and Musgrave, 1989, de Mello, 2000, Bird and Vaillancourt, 1997, Ter-Minassian 1997). Fiscal decentralisation brings expenditure and budgeting decision-making closer to the communities, and therefore has the potential to increase the responsiveness of the public sector to differential needs of local jurisdictions (de Mello, 2000) and reduce information and transaction costs associated with the provision of public goods and services (World Bank, 1997). These are expected to increase the welfare of the various populations served.

However, the literature also indicates that efficiency gains from decentralisation can be significantly undermined by institutional constraints such as:

- Weak administrative capacity in sub-national governments (SNGs), poor technical skills at lower levels, and the existence of corruption;
- Sub-national governments may not have developed modern and transparent public expenditure management systems; and
- The size of the local jurisdiction (which is often a result of historical developments or political factors) is not always consistent with the full realisation of potential efficiency gains from decentralisation (Ter-Minassian, 1997).

These constraints outlined above all make reference to the capacity of SNGs to efficiently and adequately deliver on the responsibilities they have been entrusted with. It is important at this point to define what capacity means. The need for clarity is due to the common understanding that capacity refers only to the size and skills mix of human resources, however, as Brijlal et al (1997) explain, this definition of capacity is too narrow to be applied to a public sector organisation. Also, the term ‘capacity’ is used often in this thesis and it is important to get clarity on what is referred to when the term is used. For this thesis, capacity refers to the ability of a public sector organisation (PSO) to perform appropriate tasks effectively, efficiently and sustainably.

This definition is further qualified by acknowledging various dimensions of capacity that can affect the ability of a PSO to perform its tasks appropriately. These are:

1. *Human Resources*: This dimension refers to the mix and quantity of skills available in the PSO

2. *Organisation*: This refers to the organisation and administrative structures of the PSO, including financial system and skills and professionalisation of personnel.
3. *Task Networks*: This refers to the range of organisations that are jointly involved in accomplishing a particular task.
4. *Public Sector Institutional Environment*: This refers to the broader public sector environment
5. *External Environment*: This refers to the broader context in which the public sector operates such as economic conditions of the country and the political situation within the country (Brijlal and Gilson, 1997)¹².

Essentially, the term capacity as used in this thesis not only refers to human resources but to organisational structures and the broader context within which a government unit operates.

2.4.1 Sub-National Government Autonomy: Centralisation vs Decentralisation

A key issue in any federal structure concerns the amount of autonomy assigned to SNGs, in other words, the level of centralisation or decentralisation. This is of critical importance considering that most of the cited constraints to reaping the stated benefits to fiscal federalism concern the capacity of SNGs in adequately delivering on the responsibilities assigned to them.

In the literature there appears to be some consensus that there is no ‘best practice’ with regards to the structure of intergovernmental relations (Feld et al., 2007), but that

¹² This is an adaptation of the dimensions of capacity defined by: Hildebrand, M.E. & Grindle, M.S, Building Sustainable capacity: challenges for the public sector, Havard Institute for International Development, Havard University. 1994

political and historical contexts are key in defining such relations (Institute On Governance, 1998, Bahl and Linn, 1999). Bahl and Linn (1999) argue that theory cannot lead to firm conclusions about the optimal division of fiscal responsibilities between national, state and local governments. This view is shared by Oates (1999), who argues that intergovernmental fiscal arrangements may not necessarily conform to the traditional theoretical framework for the assignment of functions to different levels of government. The nature of the public service (or good), the context and the time within which the service is provided may result in differences in the pattern of goods and services provided by different levels of government.

With regard to developing countries, Bahl and Linn (1999), provide arguments for both fiscal centralisation and decentralisation¹³. According to them, fiscal centralisation may be the better option for developing countries. The reasons for this view are listed below:

- a. Growth policy – investment capital is scarce and must be controlled by central government in order to maximise profits.
- b. Income distribution – centralisation allows the national government more discretion in dealing with regional differences, for example rural-urban disparities in income and wealth.
- c. National governments have superior abilities in administering taxes and the management of public service delivery. With characteristic weak administration at local government levels, less local autonomy means that there is less possibility for mismanagement of finances by local governments.

¹³ Centralisation refers to greater concentration of fiscal authority at higher levels of government. Decentralisation refers to the shift of fiscal authority towards lower levels of government.

They add that arguments such as those listed below can also be made in favour of decentralisation:

- a. Local governments can adjust budgets in response to local preferences, resulting in a more efficient distribution of public resources
- b. Local governments may be able to tax some sectors of the urban economy more easily than the national government
- c. Cities would levy higher taxes and could thereby charge residents the full marginal cost of urbanisation. Based on this, a more efficient size distribution of cities could result.

Bahl and Lin (*ibid*) however raise concerns about the applicability of arguments in favour of decentralisation within developing countries. Theories on fiscal decentralisation were developed in industrialised countries, where voter preferences are translated into budget outcomes, and local councils are elected, not appointed. Local preferences in these countries drive local government fiscal operations and this is not necessarily the case in many developing countries.

Empirical work by Ugo Panizza (1999) using data from over 60 countries revealed that there is greater decentralisation in geographically large countries, rich countries, countries with many ethnic groups, and countries with a high level of democracy. Oates (1972) argues that decentralisation is appropriate in cases where there is heterogeneity in taste for public services between sub-federal jurisdictions and that in the absence of economies of scale and inter-jurisdictional externalities, decentralisation is preferable.

The level of decentralisation of overall fiscal responsibilities is a primary concern in this study. However, what is even more important for the study is the appreciation of the factors that determine the extent of decentralisation or centralisation in the financing and provision of a particular good or service and the arguments for either. These are crucial in making assertions about the appropriate level of decentralisation within the health sector and particularly for PHC. Literature reviewed on the subject does provide some valuable insights. What is clear is that while there is no consensus on the optimal level of (de)centralisation within a fiscal federal system, economic, social, political and historical factors have significant influence over how the system is structured. Also, the nature of the good/service to be provided and differences in taste between sub-national jurisdictions can sway the argument in favour of either centralisation or decentralisation. Therefore, understanding the nature of health, the values of primary health care and the South African context (socio-economic, historical, and political) are important in the assessment of the appropriate level of government that should be entrusted with fiscal responsibilities for PHC.

2.4.2 Decentralisation, the Health Sector and Primary Health Care

In this section, literature on decentralisation within the health sector is reviewed. Within fiscal federal systems and unified systems the issue of the extent of decentralisation/centralisation of health services still attracts a fair amount of debate. The review in this section is not limited to fiscal federal systems, as the concept of decentralisation as a form of health sector reform is not limited to federations.

Even where health services are decentralised to lower levels, the extent of authority granted to these lower administrative units¹⁴ vary. Bossert's (1998) "decision space" framework outlines different functions of administrative units that can be used to assess the level of autonomy they enjoy. They are finance, service organisation, human resources, access rules and governance rules. For example, the level of financial autonomy enjoyed by local units will depend on their revenue generating ability, the proportion of their health spending that is from intergovernmental transfers and the proportion of health spending that is ear-marked by higher authorities. The level of autonomy is determined by the extent to which service organisation at local units are defined by law or a higher authority. It is also determined by the extent to which local units have the authority to hire and fire staff.

In recent years, decentralisation has been promoted by advocates of health sector reform as a means of improving efficiency, quality of services, promoting democracy and accountability to the local population (Green, 1999, Bossert, 1998). They argue that decentralisation facilitates the design of the most effective mechanisms for coping with three crucial challenges to the health system. The first challenge is that it is common to find diversity in the epidemiological pattern of diseases across regions and populations within a country. This is accounted for by: characteristics of the health sector, geographical, ecological, environmental, economic, social, behavioural, demographic and cultural factors that may differ from population to population in regions within a country. The second challenge is the increased complexity of health care. The greater awareness of the important influence of non-medical factors on health status requires the mobilisation of complementary inter-sectoral action from

¹⁴ The term 'administrative units' is used as an all encompassing term that includes both distinct levels of government (as in federations) and administrative arms of government that have no legislative authority.

agriculture, education, waterworks, sanitation, labour and industry. Thirdly, the delivery of health care has to constantly respond to changes occurring in the health situation in local areas, especially as these changes do not occur uniformly nor at the same pace in all regions of the country (Adetokunbo, 1999). Other arguments in favour of decentralisation are that it brings decision-making closer to the communities served (yielding greater potential for community participation). It brings decision-making closer to the field-level providers of health care and it is also suggested that breaking down the large monolithic decision-making structures that are typical of centralised health systems increases the efficiency of service provision (Green, 1999).

There are also arguments against decentralisation of the health system. First, the lack of skilled staff in areas such as financial management at local levels, especially in developing countries, has the potential to counteract any efficiency gains from decentralisation. Secondly, where the process of decentralisation is not properly handled, it could result in enhancing the power of elite groups at the local levels, negating the prospect of community participation in the process of health care delivery (ibid). Thirdly, decentralisation has the potential to increase administrative costs if it removes the economies of scale associated with centralisation, and could encourage service duplication (Gilson and Mills, 1995). Perhaps the most serious argument against decentralisation (and fiscal federalism) is its possible impact on the equitable distribution of health care resource between local jurisdictions (Thomas et al., 2003, Green, 1999). This potential is even greater where local authorities have revenue-generating responsibilities and autonomy in spending their revenue. Differential capacity to generate and utilise resources coupled with different local preferences will most likely yield different levels of financing and provision of health

care services across local jurisdictions (Okorafor and Thomas, 2007). This suggests that if SNGs are responsible for financing health and PHC and the prevailing fiscal arrangements are such that they leave SNGs with substantial expenditure autonomy, it is likely that the levels of expenditure on and provision of PHC will differ for each local jurisdiction. Following this line of argument, it can then hypothesise that there is a positive relationship between the level of autonomy enjoyed by SNGs that are responsible for providing and financing PHC and the potential for inequity in country-wide distribution of PHC resources. In later sections of this chapter, the relationship between intergovernmental fiscal arrangements and autonomy are discussed.

It is clear that considerable emphasis should be placed on contextual factors in deciding on whether to decentralise the health system, and the extent to which authority should be given to lower levels of government in the provision of health care. Availability of requisite skills at lower levels, the size of the country and level of heterogeneity in disease profiles across geographic areas and how democratic the society is, are issues that need to be considered in arguments for and against decentralisation within any country.

For the provision of PHC, there is an even stronger argument for decentralisation. This is based on PHC's underlying values. The PHC approach advocates for community participation and greater responsiveness to the needs of the community (World Health Organisation, 1978), which implies that lower levels of government would be the appropriate level to manage expenditure responsibilities for PHC (influencing the determination of the budget for PHC and deciding on how to spend the budget). However, PHC services have strong merit good characteristics, which

may require uniform access across local jurisdictions, and therefore some regulation of their funding and provision across areas (Okorafor and Thomas, 2007). There is broad consensus in the literature that the responsibility for achieving equity and redistribution should lie with the central government (Shah, 1998, Buchanan and Wagner, 1971, Inman and Rubinfeld, 1997, Smith, 1985).

In general, the outcome of the health sector is of interest to central governments in most countries. Health is generally regarded as a merit good, such that all citizens within the country should have an “acceptable” level of access and utilisation. In this regard, central governments (in most countries operating a fiscal federal system) influence fiscal operations to achieve a desired distribution of resources, expenditure and provision of health services within the country. There are different ways in which central governments have influenced these within health systems. In some cases higher levels of government retain expenditure responsibilities for health services with the central government maintaining overall control of activities in health sector financing and provision, as in Australia and Canada (Craig, 1997, Krelove et al., 1997). In other cases, all tiers of government share the responsibilities for financing and delivery of health care, as in Argentina (Schwartz and Liuksila, 1997) and Nigeria (Ayodele, 2003). Also, where financing and provision of health services are decentralised to lower levels, the central government transfers funds for health as a specific purpose grant with conditions on how the funds are to be used. In other cases, specific purpose grants are used to finance only specific programmes within the health sector. For all options outlined, the central/national government still retains some control over expenditure responsibilities.

A major concern around the interference of central government in SNG fiscal arrangements is, that the more control the central government has over SNG fiscal affairs, the less autonomy SNGs have. Now, the less fiscal autonomy enjoyed by SNGs, the less decision-making space SNGs have to respond to the unique needs of the communities they serve.

Within fiscal federal systems, where expenditure responsibility for PHC rests with SNGs, the nature and size of intergovernmental transfers to SNGs can influence the amount of autonomy they enjoy. This in turn has implications for the equitable distribution of PHC resources. In the following sections, literature on different types of intergovernmental transfers, the reasons for their uses and their implications for autonomy of SNGs are reviewed.

2.4.3 Fiscal Imbalances

In most countries operating a fiscal federal system, large expenditure responsibilities are decentralised to sub-national levels of government while most of the major taxes are collected by the central government. Therefore, central governments usually have higher revenue-generating capacity compared to their expenditure needs, while the reverse is the case for sub-national governments. This mismatch (funding gaps) of expenditure responsibility and revenue generating capacity are referred to as vertical imbalances (Fjeldstad, 2001). In federal systems, horizontal imbalances also occur. These are instances where government units within the same tier of government (say, provincial governments) have different revenue raising capacity and therefore different abilities to fulfil similar expenditure responsibilities (*ibid*).

For example, in a given country, province A could be endowed with an abundance of minerals, and therefore has the ability to extract mining royalties over and above other sources of revenue, whereas provinces B and C do not have these minerals and so do not earn such royalties. Subsequently, the revenue generating capacity of province A will be higher than that of provinces B and C. Province A will have more resources available to fulfil similar expenditure responsibilities assigned to all provinces.

In the case of vertical imbalances, there are generally four solutions used by federations to deal with these imbalances:

- The first is to increase revenue at the sub-national level by transferring more revenue raising power to lower levels of government, so as to achieve a better match between their revenue raising capacity and their expenditure responsibilities.
- A second is to reduce local expenditure
- A third option is to transfer expenditure functions up to the government level with more revenue.
- The fourth option is to transfer some centrally collected revenues to lower levels of government; and this last option usually prevails (Bird and Vaillancourt, 1997, Opeskin, 1999).

These issues of size and type of expenditure responsibility assigned to SNGs, including the processes for achieving a match between expenditure responsibility and revenue are at the core of this study. In considering the equitable distribution of primary health care resources across geographic areas within South Africa, these four

“solutions” are possible options for financing public services such as PHC. In the next section, the implications of different types of “solutions” are reviewed.

2.4.4 Correcting Fiscal Imbalances

In most countries, these imbalances (vertical and horizontal) are addressed through inter-governmental transfers, which refer to the transfers of funds from the central government to lower levels of government such as provinces, states and local governments. However, the type of transfers utilised to correct both vertical and horizontal imbalances will have varying impacts. Consequently, the key issues in intergovernmental transfers are around deciding on the type of transfers and the criteria for the size of transfers made to sub-national governments. The results of such transfers, whether good or bad, will depend on the incentives (built into the transfer system) they create for central and local governments and, indirectly, for residents of the different regions of the country (Bird and Smart, 2002). Inter-government transfer mechanisms can be grouped into two broad categories: revenue sharing and grants (Fjeldstad, 2001). Whether transfers are of the nature of revenue sharing or grants, there are basically three ways to determine how much is to be distributed:

1. As a fixed proportion of government revenues;
2. On an ad hoc basis, in response to specific claims, and
3. On a formula-driven basis (Bird and Vaillancourt 1997).

Revenue sharing arrangements are usually geared towards correcting vertical imbalances. Sharing of tax revenues can be on a tax-by-tax basis, with different coefficients of distribution among levels of government for each tax or on the entire pool of central government tax revenues. Tax-by-tax sharing is practiced in countries

such as Argentina, Brazil, Hungary and Russia. However, a major disadvantage of such sharing is that it provides an incentive for tax administration at central government to concentrate its collection and enforcement on the taxes that are not shared or are shared to a lesser degree (Ter-Minassian 1997). Furthermore, tax-by-tax sharing provides the central government with incentives to concentrate increases in rates (for instance for stabilisation purposes) on the shared taxes. Therefore, revenue sharing based on the entire pool of government revenues may be preferable (Fjeldstad, 2001).

In general, **grants** can be grouped into two:

- **General purpose grants:** unconditional transfers aimed at addressing vertical and horizontal imbalances;
- **Specific purpose grants (or conditional grants):** grants that carry conditions regarding the use of the funds and/or the performance achieved in the programme(s) financed through them. Some conditional grants may require matching elements by recipient authorities.

Most countries use a combination of revenue sharing and grants. In general, the former forms the basic revenue for sub-national governments. Grants are additional transfers made to certain (or all) sectors of sub-national governments either to increase the overall expenditure capacity of certain jurisdictions to correct horizontal imbalances (usually in the form of general purpose grants) or to influence the level and distribution of particular services across all jurisdictions (usually in the form of specific purpose grants). Bahl and Linn (1999) state that grants are compromise solutions in the debate over the division of revenue raising authority and expenditure

responsibility. They argue that grants permit central governments to retain authority to tax productive resource bases, but guarantee SNGs a flow of resources.

The choice between conditional and unconditional transfers should be based on a number of considerations. On the one hand, the imposition of conditions clearly reduces the level of autonomy at lower levels with respect to decisions around “how much” to spend and on “what”. This is contrary to the welfare and efficiency arguments in support of decentralisation. Imposing conditions on the use of transfers to SNGs reduces their autonomy over the use of available resources, and hence their responsiveness to local needs. On the other hand, the imposition of conditions may be justified by other considerations. For example, it may be necessary to attach conditions to funds to realise uniform or minimum expenditure on issues of national concern (*ibid*), such as PHC¹⁵.

If any grants are used, some choices must be made:

- Whether the transfers should be made on a conditional or unconditional basis. It is to be noted that an unconditional grant simply increases the SNG’s income without altering their spending priorities (spending priorities which are assumed to be dictated by local preferences). The main justification for conditional grants over unconditional grants therefore must be that local decision-making fails to produce the socially optimal outcome. Conditional/specific purpose grants are more appropriate where SNGs lack the capacity to manage resources, as the conditions attached to the funds dictate the terms of how the money is to be spent. However, where the conditions for use (and performance) are such that they

¹⁵ Possibly also to support specific standards or levels of service provision.

require a high level of managerial capacity to fulfil stated criteria, managing conditional grants at lower levels could become very difficult. The use of conditionality and performance criteria for a special purpose grant may then generate confusion and pro forma fulfilment of the needed criteria¹⁶ (Ahmad and Craig, 1997). Therefore, unless SNGs possess the capacity to monitor and manage the conditionality for grants, it may be better if central governments simplify the design and conditionality of special purpose grants, and/or supplement these with lump-sum transfers, which could then be seen as ‘own’ resources by recipient governments (ibid).

- Second, within the category of conditional transfers, whether the central government should require sub-national governments to undertake some matching of funding of programmes. This might be done to ensure that SNGs spend resources on this priority activity, and not on other activities (‘matching’ means that SNGs cannot divert more of their funds to non-national priorities). It may also be done to pave the way for the transfer of responsibility for funding the activity to SNGs, by gradually decreasing the proportion of funding paid by central government.
- Third, whether there is to be some redistribution in the transfer mechanism or whether the transfers will be made based on efficiency (or other) criteria to the defined population in each region.

¹⁶ Pro-forma fulfilment refers to a situation where actual conditions are actually not adhered to, but this is not reflected in financial reports.

- Finally, within both conditional and unconditional transfer mechanisms, whether the grants should be open-ended or subject to caps i.e. limits placed on the amount of spending (Ahmad and Craig, 1997).

2.4.5 Intergovernmental transfers and Autonomy

Whether large expenditure responsibilities are devolved to SNGs or not, the correction of vertical and horizontal imbalances through transfers from the centre also have implications for the level of autonomy enjoyed by SNGs. The nature of intergovernmental transfers to SNGs may depend on the public good/service that they finance. For certain public services, the outcomes are of national interest and therefore the central government may see a need to intervene in fiscal operations at lower government levels to realise a more 'desired' outcome. This is in cases where the SNGs are responsible for providing the service. For example, in Australia, in pursuit of national policy objectives, sectors such as health, education, social welfare and housing are largely funded through specific purpose grants. In Canada, the major general purpose grants are transferred to provinces with below average tax capacity, while specific purpose grants are employed to fund health and, more broadly, the social sector. In Italy, conditional grants have been used to influence the level and distribution of sub-national expenditure on health and public transport, which are deemed to be of national concern. In Bulgaria, specific purpose grants are given to municipalities for capital expenditure purposes only, while general-purpose grants are the dominant form of transfers to municipalities (Bogetić, 1997).

The central government influences the expenditure and provision of services that are of national interest either by direct fiscal intervention (attaching conditions to

transfers) or by laying down norms, standards or other regulations for the financing and provision of services at the sub-national level. Whatever the mechanism employed by the central government, any intervention in SNG fiscal affairs effectively reduces the autonomy they enjoy. The extent of the erosion of autonomy for SNGs through these interventions will depend on the nature of central intervention and the proportion of SNG revenue that is funded through these transfers. Effectively, then there should be a positive relationship between the proportion of the expenditure budget raised by SNGs through own revenue and the level of autonomy they enjoy.

2.5 International Experience

As previously mentioned, many countries have adopted a fiscal federal system, albeit for varying reasons. The experiences of some of these countries in the financing of health and primary health care are now reviewed in more detail. The countries selected are Australia, Canada, India, Nigeria, and Brazil. Canada and Australia are selected because they are among the countries with the oldest fiscal federal systems. Nigeria, Brazil and India are selected because they are large (in size and population) developing countries, and therefore comparable in at least these respects to South Africa. Also, they are from different continents, thus providing information from varied contexts.

For each of these countries, I outline the nature of fiscal federalism in operation, the level of vertical imbalance, sub-national government autonomy, nature of intergovernmental transfers (in general and for health and PHC), the level of government responsible for health care provision and expenditure, and mechanisms in place to ensure the equitable financing and provision of health and PHC services.

Intergovernmental relations are defined by history and context, so what “works” in one country may not work in another. The objective is therefore not to base analysis of the South African system strictly on the performance of instruments of intergovernmental relations in other countries, but to achieve a better understanding of the likely implications of different structures of intergovernmental relations for the equitable distribution of PHC.

2.5.1 Australia

Australia has one of the oldest fiscal federal systems; lasting for over a century (Warren, 2006). Australia has three tiers of government, the Commonwealth, State and Local governments (Institute On Governance, 1998). The provision of health services is the joint responsibility of the Commonwealth and the States and is shared almost evenly (Warren, 2006). Australia has a centralised tax system, with the broadest tax bases such as personal income, corporate profits, and goods and services held by the Commonwealth (the national government). Subsequently, there is a large vertical fiscal imbalance, considering the expenditure responsibilities of the States¹⁷. The states are responsible for provision of services such as health, education, policing and transport. States’ own revenues account for only 40% of their expenditure outlay, and they are therefore substantially dependent on fiscal transfers from the Commonwealth (*ibid*). Total government health expenditure as a percentage of total government expenditure was at 17% in 2006 (WHO, 2009). Transfers to State governments are in two forms: Specific Purpose Payments (conditional grants) and General Purpose Grants. Over 50% of the transfers to States are in the form of

¹⁷ There are 6 States and 2 Territories that have similar expenditure responsibilities as the States.

specific purpose grants, while approximately 45% of the transfers are in the form of general purpose grants (Institute On Governance, 1998).

Responsibility for funding health services is shared almost evenly between the Commonwealth (52%) and the States (48%). Interestingly, the health system is the constitutional responsibility of the State, but the Commonwealth has significant overlapping responsibilities. The States and Territories have their own health authorities and are responsible for hospital services, mental health programmes, dental health services, home and community care, child, adolescent and family health services, women's health programmes, health promotion, rehabilitation systems, regulation, inspection, licensing, and monitoring of premises and personnel. The local governments are responsible for immunisation services, community based services for people with disabilities and a variety of environmental services that contribute to good health (Liu and Lee, 1998).. Transfers for the health sector from the Commonwealth to the States are in the form of specific purpose grants, allowing the Commonwealth to influence expenditure on health at the State level. The Commonwealth uses the specific purpose grants (SPGs) to steer the policies of sub-national governments. These SPGs are also used as a vehicle for the extension of the Commonwealth's policies into areas for which the States are held accountable. It has been noted that in some cases, SPGs are little more than a mechanism for directing funds towards the Commonwealth's areas of priority rather than permitting States to pursue their own priorities (Warren, 2006). The health system offers universal access to health care, regardless of ability to pay, through a government insurance system. Geographically, the distribution of health care resources is fairly equitable, although the government is committed to improving remaining inter-state differences. The major area of concern

for equity concerns the indigenous Australians, who have a considerably lower life expectancy than other population groups (Health Systems in Transition, 2006).

2.5.2 Canada

The Canadian Federal system is characterised by three tiers of government: the Federal, Provincial/Territorial¹⁸ and the Municipal governments (Henceforth, provincial government is used to include both provincial governments and territorial governments). The federal and provincial governments have concurrent jurisdiction on the same tax bases, and both tiers collect personal and corporate income taxes as well as taxes on goods and services (VAT). However, customs duties and some excise taxes are used exclusively by the central government. Provinces therefore have access to considerable financial resources (Rangarajan and Srivastava, 2004).

Provincial responsibilities include education, health, municipal institutions, social welfare, police, natural resources and highways. Other responsibilities handled by provinces jointly with the federal government are pensions, immigrations, agriculture and industry. Given that the majority of resource intensive expenditure responsibilities rest with the province, there is a vertical imbalance between revenue capacity and provincial expenditure responsibilities. In recent years however, provincial expenditure has been almost fully covered by provincial own revenue. Different revenue generating capacities across provinces results in horizontal imbalances. These imbalances are corrected through fiscal transfers from the federal government to the provinces. There are three main avenues of transfers to provinces: Equalisation grants, the Canadian Health and Social Services Transfer (CHST) and

¹⁸ There are ten provinces and three territories

Territorial Formula Financing (TFF). Recently a small facility called the Health Reform Fund (HRF) has been introduced. The equalisation grants are aimed at ensuring that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation. Equalisation grants are mandated by the constitution (*ibid*).

The federal and provincial governments are jointly involved in the financing universal publicly insured and administered health care to Canadians, while the provinces are responsible for providing health care. The federal government's primary role in health services has been in the provision of financial transfers to provincial governments. (Lazar et al., 2002). As at 2006, 17.8 of total government expenditure was spent on the health sector (WHO, 2009). Transfers from the federal government to the provinces for health services are done through the CHST (which includes the recently created Health Reform Fund). The CHST is the largest federal transfer to provincial governments (comprising about 72 – 74 percent of total transfers from the federal government to the provincial governments). The CHST is meant to support health care, boost education and support social assistance. It is a general purpose grant and therefore allows the provincial governments flexibility to allocate funds among the social programmes according to their own priorities (Rangarajan and Srivastava, 2004). However, for provinces to receive this transfer from the federal government, conditions as set out in the Canada Health Act must be adhered to. These conditions among others include:

- Accessibility of medically necessary services without being impeded by financial or other barriers,
- Universal coverage

- Comprehensive provision of all medically necessary services
- Provincial governments to provide the federal government with information about how the conditions set out in the Canada Health Act are met as well as how the federal government's financial contribution to health services has been used (Li, 2006).

Similar to Australia, the Canadian health system offers universal coverage for health care through the government. Indeed, research shows that there are no significant differences in access to primary care based on socio-economic differences (Allin, 2006).

2.5.3 India

India's federal system comprises a central government, 28 states, 7 union territories (two with legislatures), over 3,500 urban local bodies and 234,078 rural local bodies (Srivastava, 2003, Fjeldstad, 2001). The central government is responsible for functions required to maintain macroeconomic stability, international trade and relations. Responsibilities assigned to the states include public order, public health, agriculture, irrigation, land rights etc. The tax system in India is based on a principle of separation. Tax categories are exclusively assigned either to the centre or the states. Most broad based taxes have been assigned to the centre, including taxes on income and wealth from agricultural sources, corporation tax, taxes on production and customs duty. A long list of taxes is assigned to the states, however, only the tax on the sale and purchase of goods has been significant for state revenues. The tax assignment and expenditure assignment arrangements (between the central government and the states) in India have resulted in substantial vertical imbalances. In

2002-2003, the states on average raised about 38 percent of government revenues, but incurred about 58 percent of expenditures (Singh, 2004).

India has multiple channels for transfers from the central governments to the states to address vertical and horizontal imbalances. One channel of transfer is tax sharing: shares of personal income tax and union excise duty to states. The criteria for general tax sharing among the states are based on: population size, distance from the highest per-capita income state (equity), area and infrastructure deficiency, tax effort and fiscal discipline¹⁹. A second is a general purpose grant called the grants-in-aid. These are unconditional grants meant to fill the gap between assessed expenditures for each state and the sum of projected own revenue and shares in central taxes (Srivastava, 2003). Both are made under the recommendations of the Finance Commission. A third channel is the dispensation of funds (for development purposes) by the Planning Commission to states by way of grants and loans. In addition to these, various central ministries give specific purpose transfers with or without matching requirements (Rao, 2004). Government expenditure on health as a proportion of total government expenditure stood at 3.4% in 2006 (WHO, 2009)

Provision of primary health care is the responsibility of the states. The central government's role in the provision of health care has been to fund centrally sponsored programmes, to develop policies and guidelines and to provide statutory grants or general transfers to the states. The central government makes all the decisions regarding new investments and programmes, such as the financing of new primary health care facilities. States account for approximately three-quarters of total health

¹⁹ More detailed discussion of tax sharing in India can be found in: Srivastava D.K. (2003) India; In: Intergovernmental Fiscal Transfers in Asia: Current Practice and Challenges for the Future. Edited by Paul Smoke and Yun-Hwan Kim. Asian Development Bank

care expenditure, and this is generally dominated by recurrent expenditure. In practice, states' plans for the health sector in any one year are updates and revisions of the plans of the previous year (i.e. they use a historical incrementalist approach). It is therefore not surprising that the quality and quantity of health care provision varies widely across states, reflecting their varying levels of economic development, their health sector priorities and their current and past investments in health. Similarly, there are wide variations in health outcomes across states, socio-economic groups and across urban and rural areas.

States with the poorest health status tend to have the poorest health infrastructure in place. Even when additional funds are made available to address these gaps, the practice of the states have been to use the funds in a manner that does not address poor health care infrastructure and delivery. The launch of the centrally sponsored scheme for the universalization of elementary education has prompted Bajpai and Goyal (2005) to suggest a similar drive towards joint provision and financing of health by the central and state governments. Although states are heavily reliant on central transfers for the financing of primary health care, they appear to have significant autonomy in deciding how these funds are used.

2.5.4 Nigeria

Nigeria formally adopted a fiscal federal system in 1954. This decision was deemed suitable to accommodate Nigeria's diverse ethnic, religious, and linguistic groups under one politico-administrative entity (Adamolekun and Ayo, 1989). Nigeria operates a fiscal federal system with the assignment of government functions among three tiers of government: the federal, state and local governments. There are 36

states, a federal capital territory (FCT) and 774 local government areas (Federal Ministry of Health, 2007).

Expenditure responsibilities for matters of national interest such as defence, foreign affairs, currency, aviation, and price control are assigned to the federal government. The states are responsible for primary education (post-primary is shared with the federal government), health and social welfare, culture, commerce and industry. Local governments are responsible for land use, markets, primary health care, social welfare, sewage and refuse disposal (Ayodele, 2003). The provision of health care is the joint responsibility of the federal, state and local governments. The federal government is responsible for tertiary health services, the states are responsible for secondary health services (specialised services for patients referred from primary health care level) and the local governments are responsible for the provision of primary health care services, with the support of the state government (National Population Commission, 1999). Effectively, state and local governments are not accountable to the federal government with regard to how they spend the transfers made to them.

The federal government has the rights to revenue from import duties, excise duties, export duties, mining rents and royalties, petroleum profit tax, companies-income tax, etc. The states collect capital gains tax, personal income tax (other than personal income tax for armed forces, police and residents of the Federal Capital Territory (FCT), which are collected by federal government), motor vehicle licenses, etc. The local governments collect revenue from taxes such as market and trading license and fees. The federal government has chosen this mix of tax revenue to ensure that it

collects a significant share of tax revenue. More than 90 percent of total tax revenue is collected by the federal government. A small portion of the federally collected revenue is retained by the federal government as its independent revenues. The balance is paid into the federation account (Ayodele, 2003). Consequently, local (Khemani, 2004) and state governments are heavily dependent on transfers from the federation account. Vertical revenue sharing of funds from the federation account to the federal, state and local levels has been a controversial issue even in the pre-independence era. The formula for vertical allocations has been modified several times in the past. Currently, the revenue sharing formula gives the federal government 53%, States 27% and local governments 20% (Ekpo, 2004). The horizontal allocations to the states are based on criteria outlined in Table 2.2.

Table 2.2 Revenue sharing to states and local governments in Nigeria

Criterion	Percentage
Equality	40
Population	30
Social development	10
Land mass and terrain	10
Internal revenue effort	10
Total	100%

Source: Udeh J. (2002)

Nigeria operates a three-tier health system. The Federal Ministry of Health (FMOH), State Ministries of Health (SMOH) and Local Government Health Departments (LGHD) broadly have responsibilities for tertiary, secondary and primary health care respectively. In comparison to other countries reviewed, government spending on health as a proportion of total government expenditure is low. In 2006, this figure was 3.5% (WHO 2009). While the 1998 health policy lists the functions of the different government levels, there still exists no legal framework that articulates the roles and responsibilities of the tiers of government. All tiers of government are involved to

some extent in stewardship, financing and service provision (Federal Ministry of Health, 2007). Although the national health policy has been revised twice since 1998, these newer policies do not clearly outline in detail the roles and responsibilities of each tier of government in the provision of health care. This lack of clarity has resulted in overlaps and neglect in service delivery, and is identified as the major weakness of the Nigerian health system (Federal Ministry of Health, 2004).

Transfers to the federal, state and local governments are in the form of general purpose grants (not tied to any conditions). Each tier of government then decides how to allocate their budget to the various sectors under their jurisdiction. States and local governments are not required to provide budget and expenditure reports to the federal government, thus the federal government does not have any influence on the size of funds allocated to secondary and primary health care (Federal Ministry of Health, 2007).

In effect, the local governments have full autonomy in deciding PHC budgets, without any guidelines from the federal or state government. Theoretically, such high levels of autonomy should result in better responsiveness to the needs of the community. However, as literature on decentralisation of the health sector indicates, this may result in huge inequities in the public financing of PHC. Recent research conducted in Nigeria (Okorafor et al., 2007) revealed that equity is not considered as a priority at the state and local government level. In fact, the decision on how much (if any) is allocated to PHC is usually made unilaterally by the local government chairperson, and not based on any indicator of need. There is little or no community participation in decision-making for PHC provision. Not surprisingly the distribution of PHC

resources between local government areas is considered inequitable²⁰. Some local government officials concerned about the lack of accountability and insufficiency of PHC expenditure suggested that PHC be funded as a specific purpose grant from the federal government (Okorafor et al., 2007) indicating a need for intervention by the federal government.

2.5.5 Brazil

The Brazilian federation has a federal government, 27 state governments (including a federal district) and numerous local governments (municipalities). The history of federalism in Brazil has been characterised by cycles of decentralisation and centralisation of taxation in the amount of financial resources shared by each level of government. The Constitution of 1988 produced significant decentralisation of revenue and power to SNGs (Castanhar, 2003). Intergovernmental relations cannot be established or modified by the federal political and economic authorities according to their own arbitrary wishes. Under the national Constitution, the states and municipalities enjoy broad autonomy with regard to levying their taxes, deciding expenditure, hiring public employees and determining salaries (Afonso, 2004).

Tax assignment is defined by the federal Constitution, and the proceeds of most taxes are transferred to SNGs according to non-discretionary constitutional rules. The federal government is responsible for import, export and income taxes, tax on rural properties, tax on financial operations, a VAT on industrialised products and a tax on general wealth. The states are responsible for VAT on goods and services, tax on

²⁰ This is based on interview data and not actual data on PHC expenditure or allocations by local governments. Interview data was sourced from (Okorafor, et al 2007).

property transfers due to inheritance, legacy and donation and tax on vehicles. The municipalities are responsible for urban property tax, tax on real estate transactions and the tax on services (Guardia and Sonder, 2004). In 2002, own revenue generated by municipalities was approximately 35% of their total expenditure budget. This means that 65% of their total expenditure budget was due to transfers from the federal government. On average, states' own revenue covered three-quarters of their total expenditure. These figures vary significantly across units and the dependence of each unit on transfers from the federal government is directly related with its level of development (Afonso, 2004).

There are, in general, five types of intergovernmental transfers in Brazil. There are:

1. Tax Devolution
2. Tax Compensation
3. Intra-State Redistributive Transfers (from states to municipalities)
4. Inter-State Redistributive Transfers
5. Voluntary Transfers

Tax devolution and tax compensation have no horizontal redistributive effects. These simply transfer tax revenue that were centrally collected on behalf of lower levels. Therefore they are made strictly according to each SNG's tax base and reflect the spatial allocation of tax sources across the country. Intra-state redistributions are resources reallocated among municipalities within a state, based on criteria other than tax collection capacity. These resources are from a fixed portion of the state's revenue and the distribution among municipalities is based on formulae devised by each state legislature (World Bank, 2002). Inter-state redistributions are resources from richer

states to poorer states (with the federal government as an intermediary) and hence address horizontal imbalances. A proportion of the revenues from richer states' tax bases are sent to the federal government, and these are transferred to poorer states (with smaller tax bases) – thus reducing regional disparities in spending capacity. The central government also has the ability to do voluntary transfers to states, which fluctuate according to the yearly budget (Guardia and Sonder, 2004).

Brazil's health care system consists of a complex network of providers and purchasers of services, which are interrelated, complementary and competitive. The sections of this system are the public sector, which comprises publicly financed and provided services; the privately contracted sector, financed by the public sector through reimbursement systems; and free choice (private sector) financed by personal or corporate medical insurance schemes. The Unified Health System (Sistema Unico de Saude –SUS), created in 1990 integrates all public health care services and is supplemented by private facilities (Buss and Gadelha, 1996). The three levels of government are mandated by law to participate in the SUS. The federal government is responsible for formulating national health policies and guidelines, participates in financing the SUS, coordinates, monitors and evaluates the health system's operations, amongst other functions. It is also responsible for regulating health service delivery by the private health sector (Pan American Health Organisation, 2005).

The municipality is defined as the sole federal entity assigned the constitutional mission of providing health care services to the population. The federal and state governments are responsible for providing technical and financial cooperation necessary to accomplish this task. Decentralisation of health services has been

boosted and regulated through specific Basic Operating Norms. These are specific and negotiated guidelines, emanating from the Ministry of Health and approved by the national representatives of municipal and state health offices, which contemplate the budget share between the government levels and the assignments for the management and organisation of the health care model. These Basic Operational Norms were introduced in 1991 and were modified in 1993 and 1996. These guidelines were introduced to assess the managerial capacity of municipalities to effectively deliver health services, as a basis for assignment of health care provision. These requirements are that, municipalities are committed to:

- Amplify the management capacity to plan, evaluate and control health services
- Establish a Health Council
- Create a Health Fund
- Elaborate a Management Report for the auditor that should contain the balance sheets of the health fund, minutes of the Health Municipal Council's meetings, and data concerning appropriate fiscal expenditures allocated to health
- Provide information on local organisational resources for auditing expenditures on contracted out-patient and hospitalisation services

Municipalities that have the capacity to meet these requirements achieve autonomy in health care delivery. These municipalities obtain

- The entitlement to authorise, control and evaluate out-patient and hospital services (private or philanthropic)
- Permission to hospitalise (Autorização de Internação Hospitalar (AIH))
- The management of the out-patient network

- The incorporation of epidemiological and health inspection actions, to service networks, etc (Center for Public Policies Studies, 2004).

Based on these criteria, municipalities are able to apply for one of only two levels of management autonomy (Lobato and Burlandy, 2000). Municipalities with the higher grade (referred to as “full management of the municipal system”) possess full responsibility for municipal health services (which includes PHC). They receive periodic transfers from the National Health Fund and are fully responsible for contracting with a range of SUS private and public provider networks. Second grade municipalities (referred to as “full management of basic care”) have restricted responsibilities - responsibility for all primary health care. However, the SUS provider networks receive payment directly from the National Health Fund for other municipality health services. In essence, these second grade municipalities have less autonomy. Municipalities not able to do any of these remain SUS services providers under the control of the state government (Collins et al., 2000, Lobato and Burlandy, 2000).

There are three sources of income for health care expenditure. The first is from municipality own revenue. Municipalities are expected to allocate approximately 10% of the municipal budget to health. This is not obligatory, but recommended, and so is not always realised. The second source is federal transfers. These are made through SUS for payments to providers for care provided, and are done on a monthly basis (Collins et al., 2000). For hospital services, these reimbursements are based on average hospital costs and not based on actual medical costs of individual patients. Similarly, for out-patient and emergency treatment, reimbursement does not reflect

actual costs but is calculated on the basis of other criteria such as local population size and number of treatment facilities (Buss and Gadelha, 1996).

The recipients of the transfers depend on the “grade” of municipalities. In municipalities not registered under the BOR (Basic Operating Rule) of 1996, these transfers go directly to the provider institutions of outpatient and hospital care. For municipalities registered as “full management of basic care”, the funds are only transferred directly to the private provider institutions for hospital care. For municipalities classified as “full management of the municipal system”, their transfers are made to the Municipal Health Fund, and the municipalities have significant autonomy in terms of how the money is spent. For these municipalities, the sum of their transfer is calculated by the federal level by up-dating previous sums formerly transferred under the SUS payments.

The third source is through monthly transfers from the National Health Funds to the Municipal Health Funds. This transfer has a fixed and a variable component. The fixed component is based on a fixed per-capita value to cover basic care. The variable component is made up of five sub-programmes²¹ which establish their own specific areas of activity and criteria for allocation of funds. They are designed as an incentive for municipal action in the specific areas set out in the programmes. Both fixed and variable components come with conditions, and are deposited in special accounts to maintain transparency and ensure that the funds are not used for other purposes (Collins et al., 2000).

²¹ These are: (1) Community Health Worker Programme and Family Health Programme; (2) Basic Pharmaceutical Care; (3) Programme Against Nutritional Deficiencies; (4) Basic Actions of Public Health Control; and (5) Basic Actions of Epidemiological and Environmental Control.

Although the SUS emphasises universalism and equity, Collins et al (2000) observe that there are still concerns regarding the impact of the decentralisation of the health system on equity. First, the devolution of responsibility for health service provision could exacerbate inequities in the health system. Local revenue collection for financing municipal health services favours the well-off areas. Secondly, transfers through the SUS for hospital and out-patient care are made directly to the Municipal Health Fund for the first grade municipalities. These are calculated based on previous SUS transfers. This allocation tends to be based on where hospital and out-patient institutions are located, which historically tend to be the richer areas. This type of transfer potentially reinforces the unequal allocation of resources in the country.

On the other hand, the fixed element of the transfer of National Health Funds to Municipal Health Funds has meant that poorer municipalities have experienced an increase in funds for financing health care. The variable element is not specifically designed for correcting inequities, and the sub-programmes they fund are limited in the amount of funds and impact they have. Nevertheless, there are significant inequities in the services offered by the SUS. Access to health care in Brazil varies with income, irrespective of region; while there are also regional disparities in the availability of health services and utilisation thereof (Buss and Gadelha, 1996). In comparison with countries such as Australia and Canada, the Brazilian government's expenditure on health as a percentage of total government expenditure is low. As at 2006, only 7.2% of total government expenditure was spent on the health sector.

2.5.6 Summary of International Experience and Relevance to South Africa

Before summarising the key lessons from the review of international experience, a brief description of the South African context is introduced. This is to allow for some discussion and comparison with the experience of countries reviewed. A detailed discussion of the South African context is provided in Chapter 4. The provision of health and PHC services in South Africa rests with the provincial governments. Unconditional grants to the provinces comprise over 60% of total transfers (not only for the health sector) to provinces (National Treasury, 2005). So, although provincial own-revenue is less than 5% of their expenditure budget, they generally have substantial autonomy in deciding budgets for health programmes outside the few that are funded through conditional grants. Transfers to provinces in the form of conditional grants form a relatively high proportion of total provincial revenue. However, PHC is not one of the programmes financed through conditional grants. Previous research has shown that decision-making and criteria for allocations to PHC are largely done on a historical basis, therefore creating inertia in the move towards a more equitable distribution of PHC resources (Thomas et al., 2005).

In Australia, the state and the federal government share the responsibility of financing health services. Although the states raise approximately 40% of their resource requirements through own revenue, they are still dependent on federal transfers for expenditure on health. Transfers to the state for health are in the form of specific purpose grants, giving the federal government (commonwealth in Australia) significant control over the distribution of health care resources across all of Australia. In the Canadian system, the provinces' contributions to health care expenditure are even higher. Transfers from the federal government are in the form of

unconditional grants, potentially giving the provinces autonomy in prioritising health care expenditure as they see fit. With respect to autonomy, this is similar to the South African scenario. However, the set of horizontal equalisation transfers and constitutional mandates in Canada, ensure that each province provides health services that are reasonably comparable at reasonable levels of taxation.

The case of India is similar to that of South Africa. Primary health care is the responsibility of the state, and there is little intervention from the federal government in terms of determining the size of the budget for PHC. With the historical approach to budgeting, health service quality and quantity reflect the level of socioeconomic development of the states, as in South Africa. Similarly, in Nigeria, local government authorities are responsible for financing and providing PHC without any intervention from the state or federal government. Of all the countries reviewed, this is the most extreme case as the local governments have complete autonomy in deciding on the size of PHC budgets and, “how” and “what” to spend their PHC budget on. Brazil differs from all other countries reviewed. Health and PHC services are the responsibility of the municipalities. The level of autonomy in providing and managing these services depends on the managerial capacity of the municipalities. Although municipalities are encouraged to commit a percentage of their own revenue to health, this is not generally adhered to. As in India and South Africa, the quality and quantity of health services are better in richer states and poorer in poorer states.

Differences in levels of service delivery and expenditure on health and PHC have been attributed to the nature of transfers to the municipalities and states. Table 2.3

provides a summary of the key features of fiscal federal systems reviewed in this section.

Table 2.3 Summary of Country Experiences

Country	Key features
Australia	<ul style="list-style-type: none"> ▪ States and Territories generate about 40% of expenditure budget ▪ Transfers for the health sector from the national government to state and territories are in the form of specific purpose grants ▪ Commonwealth has substantial influence in amount of resources allocated to each state/territory ▪ Government health expenditure as percentage of total government expenditure is 17%
Canada	<ul style="list-style-type: none"> ▪ PHC is the responsibility of provinces ▪ Provinces generate most of their expenditure requirements ▪ National legislation ensures that the quality and quantity of services provided in each province is comparable ▪ Government health expenditure as percentage of total government expenditure is 17.8%
India	<ul style="list-style-type: none"> ▪ PHC is the responsibility of states ▪ States generate about 38% of their expenditure budget ▪ Transfers from central government to states are in the form of general purpose grants ▪ States have full autonomy in determine the amount of resources committed to PHC recurrent expenditure ▪ Inequities in the distribution of PHC resources ▪ Government health expenditure as percentage of total government expenditure is 3.4%
Nigeria	<ul style="list-style-type: none"> ▪ Local governments are responsible for PHC ▪ Local governments completely dependent on transfers from the central government ▪ Transfers to local governments are in the form of general purpose grants ▪ No accountability to states or the federal government ▪ Local governments have full autonomy in determining PHC expenditure ▪ Inequalities in distribution of PHC resources ▪ Government health expenditure as percentage of total government expenditure is 3.5%
Brazil	<ul style="list-style-type: none"> ▪ Municipality is responsible for the provision of PHC ▪ Municipalities generate about 35% of their expenditure budget ▪ Level of autonomy enjoyed by municipalities depends on their capacity to deliver on the functions they have been assigned ▪ Transfers from the federal government are of two types; <ul style="list-style-type: none"> - Reimbursement of services (exacerbates inequity) - Fixed transfer that ensures a certain level of funds for municipalities ▪ Transfers are not designed to deal with inequities ▪ Inequities in the distribution of PHC ▪ Government health expenditure as percentage of total government expenditure is 7.2%

Literature review of country experiences reinforces the perspective that greater autonomy in expenditure responsibilities for health care at local levels can exacerbate inequities in the distribution of health care resources. With regards to equity, South Africa may well be out of line in giving significant autonomy to provincial governments in the determination of PHC funds within their jurisdictions. Another apparent anomaly in South Africa (as will be discussed in chapter 4) is that it is the most expensive, tertiary health services that are “protected” by specific purpose grants (referred to as conditional grants in South Africa).

Evidence from the detailed review of country experiences (although comprising a small sample) also shows that in high-income countries, the federal government exerts more influence on the distribution of health care spending than in low- and middle-income countries. Central influence may therefore be a necessity in achieving country-wide equity oriented objectives, unless local and central objectives are the same. For example, with decentralised units enjoying moderate levels of autonomy, countries such as Chile and Colombia have achieved a more equitable distribution of public health resources as a result of centrally enforced resource allocation criteria for the services that decentralised units provide (Bossert et al., 2003).

Another important issue relates to the overall health policy and level of expenditure. For countries such as Canada, Brazil and Australia, universal access to care is part of the government’s policy. This is not the case in India and Nigeria. In addition, government expenditure on health in Canada and Australia as proportions of total government expenditure is far higher than in other countries. This points to the importance of level of funding for health care in promoting equity. Conceptually, it is

easier to promote equity in a resource rich environment than in one with severe resource constraints.

2.6 Summary of Fiscal Federalism and Equity in the Health Sector

Fiscal federalism involves the decentralisation of authority in expenditure responsibilities (and in some cases revenue generation) from the central government to lower levels of government. Arguments in favour of decentralisation of authority have cited efficiency and increase in welfare as key benefits of this form of decentralisation. On the other hand, it is also argued that decentralisation can exacerbate inequities in the financing and provision of public services across local jurisdictions. In addition, the lack of capacity to deliver on the functions assigned to lower levels of government and manage available financial resources to them can be a limiting factor in realising the ‘benefits’ of decentralisation.

The issue of how decentralised or centralised a system should be is still debatable. However, what is known is that the level of decentralisation and the type of functions assigned to lower levels of government varies across different fiscal federal systems. This is because the nature of fiscal federalism adopted by any country is usually dependent on the context of the country – its history, political context, and socio-economic and other characteristics. Empirical studies have shown that the level of decentralisation is positively associated with the size of the country, income per-capita, level of democracy and the number of ethnic groups within the country (Panizza, 1999). The level of decentralisation of a public function is also dependent on the nature of the good or service to be provided under that function.

The underlying principles such as community participation and increased responsiveness to local needs, which underpin the PHC approach, pose strong arguments for decentralisation of this service. On the other hand, the nature of PHC, as basic health care such that it is a right for everyone, invokes a very strong notion of equity. It is argued that the central government is in a better position to promote equity in the distribution of goods and services throughout a country.

Fiscal federalism is a system of governance and therefore affects the structure and design of all public sectors. In general, the adoption of a fiscal federal system is not done primarily with health sector concerns in mind (Okorafor and Thomas, 2007). The public health system is designed around the prevailing fiscal federal system and not vice versa. Consequently, the nature of fiscal federalism will have implications for the performance of the public health sector. Factors such as the level of government that is responsible for a health service, the level of autonomy enjoyed by that level of government and its capacity, differences in local preferences and needs, and the nature of intergovernmental transfers to that level of government can impact on the equitable distribution of the service across local jurisdictions. This is the focus of the.

The next chapter develops a conceptual framework that describes the linkages between intergovernmental fiscal arrangements and their implications for the equitable distribution of resources for services that are of national concern, such as PHC.

CHAPTER 3

Conceptual Framework

The conceptual framework developed in this chapter explores key issues pertaining to fiscal federalism and PHC and how these can impact on patterns of distribution of financial resources for PHC. The framework is introduced by first reviewing the key issues relevant to financing of services within a fiscal federal context. The next step introduces the PHC approach and how it fits into a fiscal federal context. These will then form the basis for the framework developed in the chapter.

Literature identifies at least two major reasons why countries that have moved to a fiscal federal system have done so (and these are not mutually exclusive). First is that fiscal federalism entails potential welfare and efficiency gains to the population. This is based on the premise that lower levels of government are better informed about the needs and preferences of the populations within their jurisdiction than the central government. These gains are said to be best achieved if responsibilities for each type of public expenditure are assigned to the level of government that most closely represents the beneficiaries of these services. The second is that fiscal federalism promotes democracy by promoting community participation in public decision-making. While these are the main arguments in favour of fiscal decentralisation, the reason for and type of fiscal federal system adopted in any country is significantly influenced by contextual factors within the country.

Literature also identifies potential problems with fiscal federalism. Decentralisation of responsibilities to SNGs requires more managers at lower levels of government and these are usually in short supply, especially in developing countries. This contributes to problems of managerial capacity for SNGs in delivering on their responsibilities. Secondly, fiscal federalism erodes the benefits from economies of scale in the financing and provision of services that are decentralised to lower levels of government. Also, literature is of the view that decentralisation can adversely affect the equitable distribution of financial resources across regions within the country. This is primarily due to SNG differences in all or some of the following: revenue generating capacity, ability to utilise resources, and differences in local preferences. These three factors form the core of the discussion on fiscal federalism and equity. Each is discussed in turn.

It is not surprising that fiscal federalism is deemed to have the potential to create inequities in resource distribution across SNG jurisdictions. Within most processes that have both equity and efficiency implications, there is often a trade-off between promoting equity and promoting efficiency. The main consideration for adopting a fiscal federal system (at least theoretically) is to improve efficiency in resource use. Moreover, equity is usually not a major consideration in decision-making to introduce fiscal federal systems.

Differential revenue generating capacity at SNG level results in differences in available financial resources that can be committed to the provision of any service by each SNG – resulting in inequalities. Given that SNGs that generate higher levels of

own revenue are invariably wealthier (with wealthier populations), this leads to inequities in financing of services such as health care.

Differences in ability to utilise available resources at SNG levels are due to differences in capacity across SNGs. Capacity here refers to SNG's ability to perform appropriate tasks effectively, efficiently and sustainably. These abilities (or lack thereof) are associated with the mix and quantity of human resources, organisational structure and management style, the level of coordination amongst units of government operating within and across SNGs, the broader institutional environment and the overall socio-economic and political environment of the country within which all government agencies operate. Of course the last two aspects of capacity can affect all local jurisdictions similarly and therefore are not as critical for this discussion.

Regions with greater capacity to utilise funds are better able to efficiently convert available resources to goods and services that are needed by the communities they serve. This can lead to inequities in the level and quality of health services provided in different localities; and even further exacerbates existing inequities if SNGs have differential capacity to generate their own revenue. This is especially true where regions with lower capacity are not able to fully utilise the funds available to them or absorb additional funds allocated to them. In addition, and as highlighted in earlier sections, fiscal federalism requires a greater number of managers, and in regions where managers are in short supply, managerial capacity is compromised.

The third factor refers to differences in local preferences. This factor is very critical to the discussion on equity and fiscal federalism. The efficiency argument in favour of

fiscal federalism is based on differential preferences at local levels. If the needs and preferences at all local levels are the same, then there is no need to decentralise decision-making as the centre can efficiently and effectively respond to the needs and preferences of the entire population within the country. If the responsibility for providing public services is transferred to the level of government that most closely represents the beneficiaries of the service (condition for maximising efficiency and welfare gains), then services such as PHC should be the responsibility of SNGs.

For SNGs to adequately respond to the preferences of their communities, the SNGs would need to have some decision-making authority around expenditure on services that they are responsible for. If SNGs have autonomy in deciding how to spend resources available to them, then there would most likely be differential spending on any public goods and services as the perceptions of need and preferences for any service will differ across geographic areas. Financial autonomy necessary to respond to the specific preferences of communities is therefore an important aspect of fiscal federalism's ability to produce efficiency and welfare gains, without which fiscal federalism may not be necessary. Interestingly, this means that differences in preferences for public services across regions (the basis for arguments in favour of fiscal decentralisation) promote differences in the amount of financial resources committed by SNGs to such services under a fiscal federal system. Of course, with competing services and differential preferences at SNG levels, there is a greater scope for inequities in expenditure on any one particular service across SNGs.

To make this last point clearer, consider two SNGs (A and B) under a fiscal federal system. Each of these SNGs is entrusted with the provision of two services: primary

health care and primary education. Suppose that the population size and available expenditure budget in both regions are the same, and also with similar PHC needs (as calculated by some uniform measure of need). However, local preferences under these two jurisdictions are such that region A has a greater preference for PHC, while region B has a greater preference for primary education. If local preferences drive resource allocation within these two regions, then region A will spend more of its budget on PHC, while region will spend more of its budget on primary education. While the two SNGs are indeed responding to the preferences of their jurisdictions, and hence acting in line with the tenets of fiscal federalism, this results in an inequitable distribution of PHC expenditure.

Based on the literature, intergovernmental relations within fiscal federal systems differ from country to country. However, each fiscal federal system must grapple with some key questions. How these are addressed in any system will determine to a large extent how revenue generating capacity, differences in ability to utilise funds and differences in local preferences will impact on equity in the distribution of finances; these are:

- What types of taxes are assigned to different levels of government?
- How much expenditure responsibilities are assigned to different levels of government?
- What types of transfers are employed to address any fiscal imbalances that may arise?

Ultimately, the way in which a fiscal federal system deals with these questions also determines the level of autonomy enjoyed by SNGs. If the nature of taxes assigned to

SNGs is such that they create large differentials in revenue generating capacity between SNGs, then there is greater scope for inequities in the financing of public services at SNG level. For example taxes based on natural minerals within SNGs can create differential revenue generating capacities because all regions would not have the same amount of natural mineral resources. However, differences in availability of resources to SNGs can be eliminated through transfers from the centre. If transfers are designed in such a way that SNGs with lower capacity to generate own revenue have the same amount of financial resources as those that have a greater capacity to generate own revenue, then the problem of differential capacity to generate own revenue is eliminated – as is the scope for inequities arising from differential capacity to generate own revenue.

The amount of expenditure responsibility assigned to SNGs in relation to their revenue generating capacity can create fiscal imbalances. If SNG's expenditure responsibilities require more resources than are available from own revenue, then SNGs will depend on transfers from the centre to offset this gap. The greater the fiscal gap, the greater the level of dependence of SNGs on transfers from the centre. In this scenario, SNGs may well become more accountable to the centre with regards to how they use these transfers. In this case the central government can gain influence over the expenditure behaviour of SNGs, thus reducing SNG autonomy. However, if the transfers to SNGs are largely in the form of general purpose grants, this effectively results in an increase in SNG revenue and less accountability of SNGs to the central government over the use of transferred funds. So, the level of vertical imbalance, and the type of transfers from the centre to offset vertical imbalances can determine the amount of autonomy enjoyed by SNGs in the use of resources available to them. The

greater the autonomy that is enjoyed by SNGs, the more adequately empowered they are to respond to the unique needs of their communities. If the needs and preferences of communities differ considerably (as they should if the country has adopted a fiscal federal system), then there is greater scope for inequities in spending on public goods and services across SNGs within the country.

Review of literature on equity within fiscal federal systems suggests that achieving equity in the distribution of resources is a responsibility that is best managed by the central government. This assertion is in line with predictions of the literature on fiscal federalism and equity. However, if intergovernmental arrangements are such that they allow for substantial interference by the central government in SNG fiscal matters²², then SNGs lose autonomy. The loss of fiscal autonomy at SNG level reduces their ability to adequately respond to the unique preferences of their communities and therefore negates the very reason for adopting a fiscal federal system.

In summary, literature on the subject leads to the prediction that fiscal federalism creates greater scope for the inequitable financing of services that are the responsibility of SNGs.

Literature on PHC supports the view that PHC should be managed by a lower administrative level of the health system, with substantial decision-making autonomy. This is to allow for effective responsiveness of the health system to unique needs of different communities. The PHC approach also encourages community participation. In this regard there is a parallel between the PHC approach and fiscal federalism; and

²² Such interferences could be in the form of the use of specific purpose grants, norms and standards etc.

PHC fits in very well within a fiscally decentralised government system. Based on the nature of PHC, it should be managed by a SNG level.

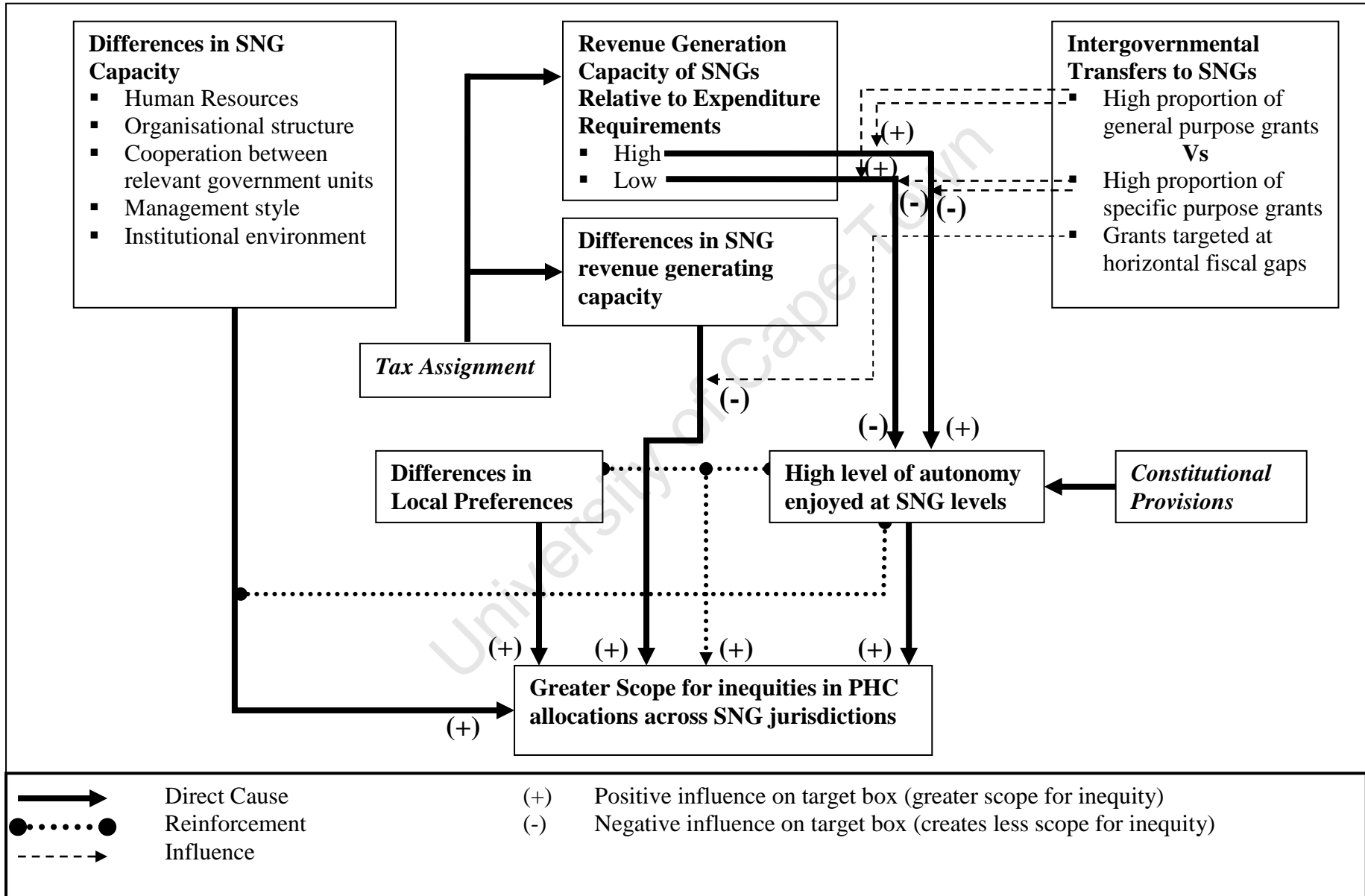
The discussions above provide sufficient material for constructing a conceptual framework that allows for the assessment of the likely implications of various intergovernmental fiscal arrangements on the equitable distribution of PHC resources.

The framework is developed on certain premises:

1. PHC is the responsibility of SNGs
2. The central government considers equity in expenditure on PHC as a priority
3. Differences exist in local needs and preferences between SNG jurisdictions, and these preferences determine the allocation of resources to competing services that SNGs are responsible for

Figure 3.1 provides a diagrammatic illustration of the implications of intergovernmental fiscal arrangements on equity in PHC expenditure across SNGs. The diagram shows that differences in SNG capacity create scope for inequities in PHC allocation. Differences in capacity result in varied abilities of SNGs to prioritise and allocate resources (accordingly) to PHC services. The effect of differences in SNG capacity on equity can be reinforced by high levels of fiscal autonomy at SNG levels, as this leaves less room for the central government to interfere in SNG shortcomings as a result of low capacity. As discussed earlier, the proportion of total expenditure requirements generated by SNGs determines their level of dependence on transfers from the central government and hence their level of autonomy.

Fig. 3.1 Intergovernmental Fiscal Arrangements and Equity in PHC Allocations



However, the effect of revenue generating capacity on autonomy is subject to the nature of transfers from the central government and more directly by the constitutional provisions on the responsibilities and authority of each tier of government. The nature of taxes assigned to SNGs obviously determines their revenue generating capacity.

Differences in local preferences, high levels of autonomy at SNG level and differences in SNG revenue generating capacity also directly create greater scope for inequities in allocations to PHC. Differences in local preferences between SNGs and high levels of autonomy at SNG levels reinforce each other to create greater scope for inequities. However, if grants from the central government have an equalisation component, then this will dampen the effect of different revenue generating capacity between SNGs on inequity in PHC allocations.

Based on this framework, it may be necessary for the central government to intervene in the financing of national priorities such as PHC to achieve a more equitable distribution of the services (such as health care and PHC). Whatever the case, SNGs in a fiscal federal context generally prefer to have greater autonomy in planning, financing and providing good/services under their jurisdiction. Subsequently, any intervention from the centre is likely to meet with some resistance from SNGs. Any form of intervention from the central government in fiscal arrangements, to promote equity in PHC financing will reduce SNG autonomy.

3.1 Predictions for the South African Context

Based on the conceptual framework developed, it is then possible to make predictions concerning the equitable distribution of PHC allocations for South Africa. In South Africa, there are three levels of government: the national, provincial and local governments. Provinces are responsible for financing and providing PHC, through a district health system. In general, provinces depend on transfers from nationally collected revenue for 95% of their expenditure budget. Under this scenario, there should be a significant level of accountability of provinces to the national government. However, most of the transfers to provinces are in the form of general purpose grants and this therefore restores the fiscal autonomy of provinces; and specific purpose grants to the health sector are not for PHC. Transfers to provincial governments are designed to ensure that all provinces are able to deliver on their responsibilities, irrespective of their individual revenue generating capacities. This therefore dampens any potentially adverse equity effect of differential revenue generating capacities amongst provincial governments.

Previous research has shown that the more rural provinces find it difficult to attract and retain the right mix of personnel, especially managers at provincial and district offices. Incidentally, these rural provinces are those that have greater needs for PHC. Therefore, differences in human resource capacity exist between SNGs. If it is assumed that local preferences for various services provided by provinces differ (and it is reasonable to do so), then considering the high level of autonomy enjoyed by provinces and the differences in provincial capacity, the distribution of PHC allocations will be inequitable. On the contrary, data on PHC expenditure shows that

PHC expenditure across provinces and districts has in recent years been moving towards a more equitable distribution.

Subsequent chapters will provide a more detailed review of the South African context and analysis of data collected for South Africa. The analysis of the data will provide answers to why the distribution of PHC resources in South Africa goes against the predictions of the literature and the conceptual framework.

The next chapter provides a more detailed overview of the South African context. In this next chapter, the history and nature of intergovernmental arrangements are discussed; this will also include a summary review of research on equity in the distribution of resources for health and PHC in South Africa. This chapter on the South African context precedes the chapter on methods because a good understanding of the South African context allows for better appreciation of the methods used for investigating the implications of fiscal federalism on the distribution of PHC in South Africa.

CHAPTER 4

The South African Context

This chapter provides more detailed information about the South African context. A brief history of South Africa's health system and general policy environment is described. The policy goals of the newly democratised South Africa, the political environment that shaped the nature of the fiscal federal system adopted and current intergovernmental arrangements are also described. In the literature review chapter, it was identified that contextual factors such as historical, political, economic, social and cultural (to name a few) factors are important determinants of the nature of fiscal federalism adopted. They are therefore important issues to consider in assessing the performance of a fiscal federal system.

4.1. Pre-1994 South Africa

As early as the 1930s, it was recognised that the haphazard growth of entrepreneurial medical services could not adequately provide for the diverse and growing South African population. However, suggestions for the institution of a national health service to address this problem by the Medical Association of South Africa in 1931, and the National Health Service Commission in 1944 were rejected. In 1948, a Nationalist government was elected and with it, the institution of apartheid policies (Benatar, 1997). Under this regime, and contrary to suggestions of a national health service, there was a strong emphasis on privatisation of the health system. Also, a policy of racial segregation and discrimination was systematically implemented. The country's political and administrative system was structured along racial lines into ten 'homelands' where the majority of Black Africans lived, and four provinces for

'white' South Africa. Most of the 'whites' lived in cities that had modern infrastructure, with well funded schools and modern hospitals. Most urban African (Black) localities had much poorer services, and large numbers lived in informal squatter settlements. Although there were approximately 800 local governments across the country and administrative structures at the province level, South Africa remained in practice a highly centralised state. Major decisions on policy, planning, budgeting and resource allocation were controlled by the central government (Gilson et al., 1999, National Treasury, 1999). These policies were associated with a health system characterised by racial discrimination, fragmentation, poor coordination, duplication of services, and a predominant focus on hospital-based services, rather than primary care. Within this era, the private health sector flourished; providing excellent health care services for predominantly white patients who had health insurance (Benatar, 1997, Chetty, 2007). The apartheid policies of the pre-1994 era left a legacy of severe socio-economic disparities in South Africa (Yemek, 2005). This was the situation that the newly elected democratic government inherited.

4.2. Post-1994 South Africa and Fiscal Federalism

The first democratic election in 1994 was characterised by an overwhelming victory by the African National Congress (ANC) (Chetty, 2007). This first democratic government faced the immense task of resource redistribution and ensuring the provision of a range of social services to meet prevailing socio-economic challenges within resource constraints (Okorafor et al., 2003, Yemek, 2005). The ANC, in preparation to govern the country had prepared a Reconstruction and Development Programme (RDP) (ANC, 1994) and a National Health Plan (ANC, 1994). The RDP proposed ways of addressing the huge socio-economic problems facing the country as

a result of the apartheid era. The ANC Health Plan advocated for a single well coordinated, unified and comprehensive national health system, with a strong emphasis on equity and the primary health care approach. The main objective was to reduce inequities and improve access to better health services for the poor, underserved and vulnerable. Subsequently, the new government used these plans as the basis for drafting the “White Paper for the Transformation of the National Health System for South Africa” (McIntyre and Klugman, 2003, African National Congress, 1994, Chetty, 2007). In 1994 a resource allocation formula was introduced by the Department of Health, aimed specifically at addressing the geographic inequities in public health care spending. At that time, the Department of Health was given a national budget for health, and through the Function Committee for health, determined provincial allocations based on a formula. The formula supported major shifts in resources to areas formerly under-funded, with the aim of meeting a five-year plan for achieving equity. However, the significant reduction in allocations to some provinces and large increases in others raised concerns around financial instability and provinces’ capacity to cope with the changes. Subsequently, in 1996/97, this process of achieving equity within 5 years was slowed down (Chetty, 2007).

This slow down in the redistribution of health care resources coincided with the adoption of a new constitution in South Africa. In 1996, South Africa adopted a new constitution that established three separate, independent and interrelated spheres of government: a national government, nine provincial governments and local governments²³. The adopted constitution and level of autonomy assigned to the national and regional governments was a result of a compromise reached between the

²³ At that time, the geographic demarcation of local governments had not been completed. Also, the provisions of this constitution differed from the interim constitution in place.

different political parties. When the constitution and the blueprint for fiscal federalism was being developed, the outgoing white minority National Party, and the Zulu nationalist Inkatha Freedom Party advocated for a strong form of federalism. However, the alliance of the ANC, the South African Communist party and Council of South African trade Unions, preferred strong central government structures. The ANC feared that autonomous regional government structures would decrease its ability to govern and also would entrench existing disparities. The result was a compromise, with the constitution describing the country as one sovereign democratic state, and at the same time establishing three spheres of government that are distinct, interdependent and interrelated. In essence, the constitution calls for unity of the country and at the same time provides for decentralisation of the government (Dollery, 1998, Wehner, 2000).

In the new South Africa, each sphere of government was assigned its own powers, functions and responsibilities, with the national government responsible for managing the country's affairs while sharing the responsibility for providing basic social services with the sub-national governments. The provinces were mandated to deliver most basic services including education, health and welfare. Local governments are responsible for certain local services and infrastructure such as water, sanitation, municipal health services²⁴ and electricity. The national government's intervention in provincial and local government decisions was and is still defined and limited by the constitution (National Treasury, 1999). The constitution allows the national executive to intervene when a province cannot or does not fulfil an executive obligation, by taking any appropriate steps to ensure the fulfilment of that obligation. This could be

²⁴ Municipal health services have recently been defined very narrowly to include only environmental health services, leaving the provinces with the responsibility of providing PHC services. A more detailed explanation is given in later sections of this chapter.

in the form of issuing a directive or assuming direct responsibility for the relevant obligation (Republic of South Africa, 1996). In the 1997/98 financial year, provinces for the first time (since they were created in 1994) were responsible for independently drafting and implementing their own budgets (Wehner, 2000). This has continued to date.

South Africa's fiscal system is based on a revenue-sharing model, with provinces largely dependent on transfers from the national government, while local governments are only partially dependent (National Treasury, 2001). The constitution stipulates that nationally raised revenue be distributed equitably between the three spheres of government, and the provincial share must be divided equitably between the nine provinces, and that other allocations may be made from the national share with or without conditions. Despite their significant expenditure responsibilities, provinces have limited sources of own revenue. While the constitution confers significant decision-making autonomy on provincial governments, it creates a monitoring and coordination role for the national government to ensure macroeconomic stability, achievement of national policy goals and obligations, and a consistent standard of services so that citizens are not prejudiced based on their place of residence. These are to be achieved through framework legislation or setting norms and standards (National Treasury, 1999). Promoting a consistent standard of services across the country by the national government through norms and standards is a policy objective in the right direction, considering the geographic inequalities in the country. However, it is not clear what mechanisms are in place to ensure that nationally defined norms and standards are adhered to by the provincial governments. As will be fully appreciated in later sections of this chapter, the amount of fiscal autonomy enjoyed by

provinces is such that the national government can do very little to influence fiscal operations at the provincial levels. This is a disjoint between policy statements and the institutional structure.

Provinces are responsible for implementing national policies affecting concurrent functions (National Treasury, 1999). The Financial and Fiscal Commission (FFC)²⁵ originally established in the 1993 Interim Constitution is to play a key role in the development and maintenance of inter-governmental fiscal and financial relations in South Africa (Financial and Fiscal Commission, 1999). Since then, and also based on recommendations of the FFC, intergovernmental fiscal relations in South Africa have evolved over the years, although still maintaining the general framework adopted by the 1996 constitution.

4.3. Revenue Generation

Based on the constitution, revenue raising powers still remain highly centralised in the national government. The most productive taxes such as the value added tax (VAT) and personal and corporate income tax are reserved for the national government. This is because collection is easier to administer at the national level. Also this avoids duplication associated with a more decentralised system (Ajam, 2005). Provincial own revenue is from road traffic fees, hospital patient fees, gambling levies, and other once-off revenues, which amount to less than 5% of their total expenditure budgets (National Treasury, 2001, Ajam, 2005). Local governments have a higher revenue

²⁵ The Financial and Fiscal Commission is an independent constitutional institution. It is required to give advice and make recommendations to matters affecting intergovernmental fiscal relations, mainly regarding the equitable sharing of nationally collected revenues between the national, provincial and local spheres of government.

generating capacity. They are entitled to impose rates on property and surcharges on fees for services provided by or on behalf of the municipality (e.g. electricity or sewage). For example, in 2007/2008, only about 22% of total local government operating revenue was due to national transfers (National Treasury, 2008).

4.4. Expenditure Responsibilities

The functions allocated to the national government include expenditures related to defence, tertiary education, justice, correctional services, water affairs and foreign affairs. Pensions and unemployment compensation are also the responsibility of the national government (Yemek, 2005).

The constitution assigns certain responsibilities for the delivery of goods and services to provinces and local governments with or without concurrent national government responsibility. Schedule 4 of the constitution lists the functional areas with concurrent national and provincial legislative competence (complete list in Appendix A). These include agriculture, disaster management, education at all levels (excluding tertiary education), environment, health services, housing, road traffic regulation and tourism. Part B of schedule 4 lists concurrent national and local government responsibilities, including air pollution, building regulations, local tourism, municipal health services, trading regulations etc (complete list also in Appendix A).

Schedule 5 (Part A) of the constitution lists functional areas of exclusive provincial legislative competence, such as abattoirs, ambulance services, liquor licensing, etc; while Part B lists exclusive local government matters such as beaches, cemeteries, markets, noise pollution etc.

4.4.1 Responsibilities for Health

Currently, and based on the National Health Act (NHA) of 2003, the responsibility for health lies with the National Government, the Provincial Governments and every Local Government²⁶. Each of these spheres plays a different role in the health sector. Local Governments were previously responsible for the provision of preventive primary health care services and infectious diseases control (McIntyre and Klugman, 2003). The 2003 NHA narrowed the roles of Local Government in health to environmental health services; which comprise of:

1. Monitoring water quality
2. Food control
3. Waste management
4. Health surveillance of premises
5. Surveillance and prevention of communicable diseases (excluding immunisations)
6. Vector control
7. Environmental pollution control
8. Disposal of the dead
9. Chemical safety (Republic of South Africa, 2004)

Provincial Governments have the greatest responsibility for the provision of health care services. They are currently responsible for the provision of both hospital services and the full range of PHC services. The NHA of 2003 also established a district health system. The districts are administrative arms of the provinces and are responsible for the provision of PHC services. In total there are 53 health districts in

²⁶ There is still a lack of clarity on the official roles of different categories of Local Municipalities

South Africa. The National Government is primarily responsible for health policy development and overall coordination of the health sector (*ibid*).

In the following section the process for financial allocations to provinces and local governments is detailed. The section focuses heavily on transfers to provinces, as these are the transfers that finance the health sector and therefore PHC.

4.5. Revenue Sharing

Nationally collected revenue is divided between the national, province and local government in what is termed the “vertical split” of revenue. Before the vertical split, a certain proportion of nationally collected revenue is reserved (unallocated to any sphere of government) for unforeseen expenditure and new policy priorities in future years. Currently, the national government receives 49.5% of nationally collected revenue, while provinces and local government spheres receive 43% and 7.6% of nationally collected revenue respectively (National Treasury, 2008). The total amount of funds available to provinces and local governments through the vertical split is by a combination of specific purpose and general purpose grants (National Treasury, 2003). Within the South African context, the specific purpose grants are referred to as conditional grants, while the general purpose grants are referred to as equitable shares. A detailed discussion on these transfers follows in the next section.

The constitution entitles provincial governments to an equitable share of the revenue collected nationally, in line with their expenditure responsibilities and functions (Ajam, 2005). Conditional grants are meant to support national priorities, particularly in the social sectors. These grants are used in order to:

- Enable national priorities to be provided for in the budgets of other spheres of government
- Promote national norms and standards
- Compensate provinces for cross border flows and inter-provincial benefits
- Effect transition by supporting capacity-building and structural adjustments
- Address backlogs and regional disparities in social infrastructure (National Treasury, 2003).

Both provinces and local governments receive funds through conditional grants and equitable shares. The FFC makes recommendations on the size of conditional grants and equitable shares, and services that are funded through conditional grants, but the ultimate responsibility for deciding on these allocations rests with the National Treasury.

4.5.1 Conditional Grants to Provinces

Conditional grants were first introduced in the 1998 budget. Interestingly, the health sector was the only sector that received a conditional grant at that time. Conditional grants to provinces included a supplementary component to augment provincial funding of social services and assist in improved financial management. The third component was to assist in the transfer of functions and staff to local government and to ease local government adjustment to the formula distribution of the equitable shares. The conditional grants for the health sector were to support medical training, provision of specialised health services, hospital rehabilitation and construction, and the Primary School Nutrition Programme (National Treasury, 1998, National Treasury, 1999).

Since then, more sectors have received conditional grants, and health sector programmes funded through conditional grants have also increased. For example in the 2006/07 financial year there were conditional grants in the following sectors: Agriculture, Arts and Culture, Education, Health, Housing, Land Affairs, National Treasury, Provincial and Local Government, Sport and Recreation South Africa, Trade and Industry, and Transport. Conditional grants to provinces for the health sector were:

- Comprehensive HIV and Aids Grant
- Forensic Pathology Services Grant
- Health Professionals Training and Development Grant
- Hospital Revitalisation Grant
- National Tertiary Services Grant (National Treasury, 2006)

Conditional grants to the health sector in recent years have funded approximately 20% of overall health expenditure²⁷. Table 4.1 shows the amount allocated to each conditional grant within the health sector in the 2006/07 financial year.

Table 4.1 Conditional Grants in the Health Sector – 2006/07

Conditional Grant	ZAR Million
Comprehensive HIV and AIDS grant	1,616
Forensic pathology services grant	562
Health professionals training and development grant	1,520
Hospital revitalisation grant	1,527
National tertiary services grant	4,981

Source: 2007 National Budget Review (National Treasury, 2007)

²⁷ Data on the proportion of health expenditure funded through conditional grants are presented in Chapter 6.

By far the national tertiary services grant receives the highest amount of resources in comparison to other programmes funded through conditional grants.

The Comprehensive HIV and AIDS Grant is to enable the health sector to develop a specific response to the HIV and AIDS epidemic. The grant also supports (in addition to other HIV and AIDS prevention programmes) specific interventions such as voluntary counselling and testing, prevention of mother to child transmission, post exposure prophylaxis and home based care.

The Health Professions Training and Development Grant (HPTD) compensates provinces for their role in supporting teaching and training of health science students. It enables the shifting of teaching activities from central to regional and district hospitals. The largest portion is distributed to provinces according to a formula based on the number of current medical students. A further component provides for a phased increase in the number of medical specialists and registrars in historically under-served provinces to address inter-provincial inequities in post-graduate training capacity.

The Hospital Revitalisation Grant is meant for transforming and modernising infrastructure and equipment in hospitals. It focuses on projects in which an entire hospital is upgraded. The Hospital Management and Quality Improvement Grant which facilitates management development initiatives including personnel, procurement delegations and financial management capacity has been phased into the Hospital Revitalisation Grant (See review of previous conditional grants to health sector in Table 4.2).

The National Tertiary Services Grant is to fund national tertiary services delivered in 27 hospitals across the nine provinces and ensure the equitable access to basic tertiary services in the country. Given the specialised nature of the services, they are currently concentrated in large cities such as Cape Town, Johannesburg, Pretoria, Durban and Bloemfontein (National Treasury, 2005).

Programmes in the health sector funded by conditional grants have changed in the past years. Table 4.2 provides a list of conditional grants to health in the past 5 years. Over time, the number of conditional grants to the health sector has reduced, as has the overall number of conditional grants to provinces (National Treasury, 2002, 2003, 2004, 2005, 2006).

Conditional grants to provinces form a small proportion of the transfer from nationally collected revenue. For example, in the 2007/08 financial year, conditional grants form about 15% of total transfers to provinces (National Treasury, 2007). This value has reduced over the years. In the 2005/06 financial year conditional grants formed about 35% of total provincial budgets (National Treasury, 2005). The proportion of health expenditure funded through conditional grants is similarly low. For example in the 2006/07 financial year about 19% of total provincial health expenditure was from conditional grants (National Treasury, 2007).

It is puzzling that PHC has never been funded through conditional grants. Since 1994, national health policies have advocated for a unified health system with a strong emphasis on equity and the PHC approach. So, PHC is a key national priority.

Table 4.2 Conditional grants to the health sector in South Africa: 2000 - 2008

Financial Year	Conditional Grants to the health sector
2007/08 (National Treasury, 2008)	<ol style="list-style-type: none"> 1. Comprehensive HIV and AIDS 2. Forensic Pathology Services 3. Health Professionals Training and Development 4. Hospital Revitalisation 5. National Tertiary Services
2006/07 (National Treasury, 2007)	<ol style="list-style-type: none"> 1. Comprehensive HIV and AIDS 2. Forensic Pathology Services 3. Health Professionals Training and Development 4. Hospital Revitalisation 5. National Tertiary Services
2005/06 (National Treasury, 2006)	<ol style="list-style-type: none"> 1. Comprehensive HIV and AIDS 2. Forensic Pathology Services 3. Health Professionals Training and Development 4. Hospital Revitalisation 5. National Tertiary Services
2004/05 (National Treasury, 2005)	<ol style="list-style-type: none"> 1. Comprehensive HIV and AIDS 2. Health Professionals Training and Development 3. Hospital Management and Quality Improvement 4. Hospital Revitalisation 5. Integrated Nutrition Programme 6. National Tertiary Services
2003/04 (National Treasury, 2004)	<ol style="list-style-type: none"> 1. Comprehensive HIV and AIDS 2. Health Professional Training and Development 3. Hospital Revitalisation 4. Integrated Nutrition Programme 5. National Tertiary Services 6. Hospital Construction – Academic Hospitals 7. Medico-legal
2002/03 (National Treasury, 2003)	<ol style="list-style-type: none"> 1. HIV/AIDS 2. Health Professionals Training and Development 3. Hospital Management and Quality Improvement 4. Hospital Revitalisation 5. Integrated Nutrition Programme 6. National Tertiary Services 7. Cholera Epidemic – KwaZulu Natal 8. Pretoria Academic Hospital
2001/02 (National Treasury, 2002)	<ol style="list-style-type: none"> 1. HIV/AIDS 2. Health Professionals Training and Development 3. Hospital Revitalisation 4. Integrated Nutrition Programme 5. National Tertiary Services 6. Nkosi Luthuli Academic Hospital 7. Pretoria Academic Hospital
2000/01 (National Treasury, 2001)	<ol style="list-style-type: none"> 1. HIV/AIDS 2. Integrated Nutrition Programme 3. Professional Training and Research 4. Hospital Rehabilitation 5. Central Hospital 6. Redistribution of Specialised Health Service 7. Construction

Conditional grants are used in order to enable national priorities to be provided for in the budget of other spheres of government and to promote national norms and standards. Given the emphasis on the PHC approach and equity, it would appear that PHC services should have been funded through conditional grants. Prior to the formulation of conditional grants, the FFC proposed strict conditionality on grants for supporting PHC and the district health system (Financial and Fiscal Commission, 1996). This proposal was rejected by government; instead higher levels of hospital services were protected through conditional grants as can be seen in Table 4.1 and Table 4.2.

4.5.2 Equitable Shares

The second type of transfer to provinces is the “equitable shares”. The equitable shares are general purpose grants and therefore can be viewed as additional provincial revenue. This transfer allows the provinces to provide services and perform functions assigned to them (i.e. targets the problem of vertical imbalances). Equitable shares to provinces are determined by an equitable shares formula that is updated annually, taking into account the recommendations of the Financial and Fiscal Commission (FFC). For example, in the 2007 budget, the equitable shares formula has three main components and three smaller components. The components of the formula are designed to capture the relative demand for services between provinces, while taking into account particular provincial circumstances. The weights and components of this formula are not indicative budgets or guidelines to provinces as to how much is to be spent on these functions (National Treasury, 2007).

If it is assumed that the equitable shares formula allocates resources to provinces in a way that allows each province to provide the same quantity and quality of services in each sector, then they should be used as indicative budgets for different sectors at the level of the province. However, under South Africa's intergovernmental fiscal arrangements, provinces are supposed to have some fiscal autonomy in order to respond to the unique preferences of their constituencies. This being the case, the use of the equitable share formula can only be viewed as a process for ensuring that no province is relatively financially disadvantaged in meeting the functions it has been assigned. This raises two key issues. First, is whether the equitable shares formula actually distributes resources equitably? This will be discussed in a later section. The second issue has already been raised in the Chapter 3. Allowing provinces fiscal autonomy to respond to local preferences will inevitably lead to differences in the amount of financial resources committed to any sector or programme within a sector across provinces. This is because the preferences of different local communities will invariably be different. So, based on this line of reasoning, the per capita health budgets for each province will be different and the per capita PHC budget will also be different. Considering that PHC is such an important aspect of national health policy within the broader objective of achieving equity in health, it is surprising that the process for determining its budget is left to budgetary processes within provinces that by "default" have a high probability of leading to inequity²⁸.

Table 4.3 provides a summary of the components of the equitable shares formula for 2007/08, and the resulting proportion of total funds for equitable shares that are

²⁸ Indeed, the same arguments could be made for other national development priorities dependent on provincial budgetary negotiations

distributed across provinces. A more detailed explanation of each component is given in Box 4.1.

Table 4.3 Equitable shares formula in South Africa: 2007 Budget

Percentage	Education	Health	Basic share	Poverty	Economic activity	Institutional	Target shares
Weighting	51.0 %	26.0%	14.0%	3.0%	1.0%	5.0%	100.0%
Eastern Cape	16.9	15.1	14.5	21.2	8.1	11.1	15.8
Free State	5.7	6.3	6.2	7.4	5.5	11.1	6.3
Gauteng	14.8	18.8	20.1	11.4	33.3	11.1	16.5
KwaZulu Natal	22.9	21.5	20.9	23.2	16.7	11.1	21.6
Limpopo	14.1	12.1	11.3	16.5	6.7	11.1	13.1
Mpumalanga	8.6	7.6	7.4	7.0	6.8	11.1	8.2
Northern Cape	2.2	2.4	2.3	2.6	2.2	11.1	2.7
North West	6.5	7.0	7.1	7.0	6.3	11.1	7.0
Western Cape	8.2	9.2	10.0	3.8	14.4	11.1	8.8
Total	100	100	100	100	100	100	100

Source: Budget Review 2008, National Treasury, Republic of South Africa

*Note that all figures are in percentages

The “equitable share” transfer is designed to have a strong equity bias, taking into consideration the different demographic and economic profiles of provinces and local governments. Besides ensuring that SNGs are able to provide the services assigned to them, the equitable shares is also designed to promote redistribution of wealth among regions and dealing with regional backlogs (Yemek, 2005, National Treasury, 1999).

Box 4.1 Components of the Equitable Shares formula

- The **education share** (51%) is based on the size of the school-age population (ages 5-17) and the average number of learners (Grade R to 12) enrolled in public ordinary schools for the past three years.
- The **health share** (26%) is based on the proportion of the population with and without access to medical aid
- A basic share (14%) derived from each province’s share of the national population
- An institutional component (5%) divided equally between provinces
- A poverty component (3%) reinforcing the redistributive bias of the formula
- An economic output component (1%) based on GDP by region

Source: Budget Review 2006, National Treasury, Republic of South Africa

The weighting for the education share and health share are derived from average provincial expenditure on the respective sectors (in total provincial expenditure) for the past three years excluding conditional grants. Within the health component, people without medical scheme cover are assigned a weight four times the weight of those with medical scheme cover. This is on the grounds that those without medical scheme cover are more likely to use public health care facilities. The poverty component provides for some redistribution within the formula. This component is allocated based on the proportion of each province's population that is considered poor. The poor is defined as those whose incomes fall within quintiles 1 and 2 (quintiles with lowest income groups) based on the 2000 Income and Expenditure Survey. The economic activity component is a proxy for provincial tax capacity. The institutional component is distributed equally across all provinces on the grounds that there are costs associated with running a provincial government and providing services that are not directly related to the size of the population (National Treasury, 2006).

Equitable shares were first introduced in the 1998 budget and have been updated every year. The formula for the horizontal division of revenue included consideration of the recommendations and submissions of the FFC. In its first submission (Financial and Fiscal Commission, 1996), the FFC recommended that the provincial grants formula should have 5 components:

1. A **Minimum National Standards Grant**: to ensure that each province can provide a minimum national standard of basic human capital. This is specifically to provide primary and secondary education; and primary and district health-care to their residents

2. **Spillover Grant:** which provides for the financing of services that have inter-provincial spillover effects
3. **Fiscal Capacity Equalisation Grant:** to ensure that provincial functions are financed from an equitable provincial taxing capacity and to encourage accountability and democratic institutions associated with the establishment of a provincial legislature
4. **Institutional Grant:** for each province to finance the core of its legislature as required by the Constitution
5. **Basic Grant:** to support provincial functions; establishing and maintaining institutions necessary for the fulfilment of their constitutional obligations according to their own priorities.

The FFC proposed that the value of the health care component be determined by calculating the costs of providing within 10 years, an average of 3.5 visits per year to a primary health care clinic by people who do not have access to medical schemes, and 0.5 visits by those with access to medical schemes. Also this component includes the cost of providing services by district hospitals (*ibid*). This formula as presented by the FFC was to be phased in over a 5 year period (National Treasury, 1998). The Government amended the equitable share formula as proposed by the FFC; the first equitable shares formula to provinces (for the 1998/99 financial year) had 6 components:

1. An education share based on average size of school age population and number of learners enrolled
2. A health share based on proportion of the population without private health insurance, weighted in favour of women, children and the elderly

3. A social security component, based on the estimated number of people entitled to social security grants
4. A basic share, based on total population with a 50% weighting in favour of rural communities
5. An economic output share based on the estimated distribution of gross domestic product (GDP)
6. An institutional grant divided equally among provinces (National Treasury, 1998).

The components and their respective weightings have generally remained at the same levels over the years until the 2005/06 financial year. Table 4.4 shows a summary of the components of equitable shares to provinces from 1998 to 2006.

Table 4.4 Weighting of the Equitable Shares 1998 - 2006

Components	Weights of Components by Financial Years							
	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
Education	39.0	40.0	41.0	41.0	41.0	41.0	41.0	51.0
Health	18.0	18.0	19.0	19.0	19.0	19.0	19.0	26.0
Social Welfare	16.0	17.0	17.0	17.0	18.0	18.0	18.0	-
Basic	15.0	9.0	7.0	7.0	7.0	7.0	7.0	14.0
Economic Activity	8.0	8.0	8.0	8.0	7.0	7.0	7.0	1.0
Institutional	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Backlogs	-	3.0	3.0	3.0	3.0	3.0	3.0	-
Poverty	-	-	-	-	-	-	-	3.0
Total	100	100	100	100	100	100	100	100

Figures sources from the National Treasury's Budget reviews of 1998 to 2006

For the 1999/00 financial year, weightings for some of the components were revised; also, an additional component was included in the equitable share formula. The weightings for education and social welfare were increased to reflect actual expenditure trends. The institutional component was increased by one percentage point. The basic share component was split into a basic share and a backlog component. The combined weighting was reduced to make allowance for increases in

other components. The backlogs component was introduced to address criticisms of the previous formula (failing to account for significant backlogs faced by some provinces). The backlogs component was to finance capital spending on rural infrastructure and facilities in the health and education sectors (National Treasury, 1999). Only minor changes to the weightings of the formula were made until 2005.

For the 2005/06 financial year, the education and health components were increased substantially to 51% and 26% respectively. These revisions are based on expenditure patterns and indications of relative need for the purpose of allocating funds. This increase in the education and health components is largely because the 'social welfare' component was removed and the 'economic activity' component was significantly reduced; therefore strengthening redistribution. The responsibility for social welfare was transferred upwards to the national government, and is now managed by the South African Social Security Agency (SASSA). The transfer of this responsibility to the national government was because of concerns that other areas of provincial service delivery were being squeezed by the statutory obligation to pay social security grants (National Treasury, 2006).

The welfare and backlog components were removed from the formula, but a poverty component was introduced to retain some degree of redistribution within the formula. This is the current formula in use. The new formula does produce changes in the proportions of the equitable shares received by each province. Table 4.5 shows the proportions of the equitable shares that are targeted for each province based on the 2004/05 and 2006/07 equitable share formulae. Provinces such as Eastern Cape, Free

State, Limpopo, North West and the Western Cape now receive a smaller proportion of the entire equitable shares resource envelope.

Table 4.5 Target shares based on Equitable Shares formula

Percentage	Target shares based on Equitable Shares Formula for 2004/05	Target shares based on Equitable Shares Formula for 2006/07
Eastern Cape	16.6	15.8
Free State	6.5	6.3
Gauteng	15.3	16.5
KwaZulu Natal	20.9	21.6
Limpopo	13.7	13.1
Mpumalanga	7.4	8.2
Northern Cape	2.3	2.7
North West	8.3	7.0
Western Cape	9.0	8.8
Total	100	100

There have concerns around the equity implications of the equitable shares formula, especially concerning the components that have the highest weights (health and education). The education component is based on the school age population (5 – 17 years) within each province and actual enrolment. These two measures are weighted equally (National Treasury, 2008). However it is argued that although the use of “school age population” in the formula is a good measure of potential need it can be disadvantageous to provinces that have a high occurrence of repetitions. In such provinces, there would be many children beyond the age restriction that are accessing primary and secondary education. On the positive side, the use of actual enrolment alone can create incentives for provinces to increase school enrolment in order to access more of the equitable share on education (Rao and Khumalo, 2004).

The health component of the equitable shares formula is calculated using the proportion of provincial population that are covered by medical aid and the proportion that are not. The latter group is given a weight four times that of the former.

Arguments around the appropriateness of this component are that the formula does not consider the possibility of economies of scale or input cost differences among the provinces. Also, the weighting of the two groups is based on the assumption that the population without medical aid is likely to use public health facilities four times as much as those with medical aid support. The weights are based on subjective judgement rather than on any survey data. Lastly, the formula does not capture differences in the use of health services based on demographic characteristics such as women of child bearing age, the elderly and infants (Rao and Khumalo, 2004).

These criticisms of the equitable share formula raise concerns about the ability of the formula to equitably distribute resources among provinces. A detailed analysis of the equity implications of the current equitable share formula is beyond the scope of this study. Nevertheless, these points are taken into consideration in analysis of differences in PHC expenditure across geographic areas in South Africa.

4.6. The Budgeting Process and Health Budgets

Since the 1998/99 financial year, the South African Government prepares its budgets according to three-year cycles, called a Medium Term Expenditure Framework (MTEF). The MTEF consists of a top-down estimate of aggregate resources available for public expenditure that is consistent with macroeconomic stability; and bottom-up estimates of the costs of carrying out existing and new policies. The MTEF is a rolling process that is repeated every year. The rationale and objectives for adopting this process has been to:

- Improve predictability of funding of public services
- Improve efficiency and service delivery

- Strengthen cooperative governance
- Promote accountability
- Improve the prioritisation process within budgeting (Ministry of Finance, 2000)

So, at each point in time, each government sphere has an idea about how much money would be available to it in the next three years, and therefore can plan its present and future expenditure accordingly.

From 1997/98, the National Department of Finance (now the National Treasury) has allocated block grants (equitable shares) to provinces on the basis of differential need. Total provincial budgets comprise of conditional grants, equitable shares and own revenue (forms a very small portion). Conditional grants are tied to specific programmes and therefore outside negotiations for budgets for the various sectors at the level of the province. The remaining funds (equitable shares plus own revenue) are divided up amongst various sectors through negotiations involving the provincial legislature and the provincial treasuries. This is based on provincial priorities, provincial spending pressures and the capacity of each provincial department to motivate for funding. Thus, provincial Departments of Health have to negotiate their budget in competition with other departments. This means that provincial governments, through this budgeting process have the freedom to determine spending on health care, with little influence from the national Department of Health. In fact, the budgeting process does not allow for the national Department of Health to directly influence a provincial function allocation (Chetty, 2007, Doherty and van den Heever, 1997).

Health programmes currently funded through conditional grants are listed in Table 4.1. Funds for PHC activities are not funded through conditional grants and so are at the mercy of budgetary negotiations at the provincial level (for the health sector budget). Since the NDoH has little influence over resource allocation within provincial Departments of Health, resulting funds available for PHC activities are further dependent on decisions made by the provincial Department of Health.

4.7 Summary: Intergovernmental Arrangements and PHC

The South African fiscal federal system is a result of a compromise reached by political parties with opposing views on the degree of autonomy that different levels of governmental structure should have. As is common with most fiscal federal systems, the national government collects most of the lucrative taxes, while substantial expenditure responsibilities are assigned to SNGs. The resulting vertical imbalance is addressed by a combination of specific purpose and general purpose grants –referred to as conditional and equitable shares grants respectively in the South African context.

The intergovernmental arrangements for South Africa presented in this chapter raise some issues with respect to achieving equity in the financing of PHC. The first issue refers to the extent of autonomy enjoyed by provinces. Considering the amount of revenue generated by provinces and the proportion of transfers to provinces in the form of equitable shares, provinces have autonomy in deciding how to spend approximately 80% of financial resources available to them. Also, PHC is not funded through conditional grants. Based on the conceptual framework developed for this study, the level of autonomy in deciding PHC allocations enjoyed by provinces creates greater scope for the inequitable distribution of PHC resources between

provinces. Some form of influence from the national government in determining PHC allocations at the province level is required. The roles assigned to the National Department of Health by the constitution include overall policy development and a monitoring and evaluation role which includes the promotion of uniform standards of service. In 2000, the National Department of Health published a set of norms and standards to guide the level of quality and quantity of services necessary to provide a uniform but comprehensive package of PHC services (Department of Health, 2000). However, it is not clear what mechanisms are in place to ensure that any norms and standards developed by the national government are adhered to by the provinces. An obvious option for promoting equity in the distribution of PHC resources is to fund PHC through a conditional grant.

It is indeed surprising that the range of services funded as conditional grants does not fully reflect the policy thrust of the government on the health sector. Conditional grants are designed to fund national priorities and to promote national norms and standards. On this basis and considering South Africa's history, PHC services should be a strong candidate for financing through conditional grants or at least funded in a way that allows for greater influence from the national government.

A second issue arising from the description of South Africa's fiscal federal system refers to the appropriateness of the equitable shares formula that is used to transfer general purpose grants to provinces. The equitable shares grant to a very large extent determines the resource envelope available to each province. However, there are concerns that important indicators of need are not included in the formula, especially around the health component. These omissions potentially reduce the equitable share

formula's ability to distribute resources equitably. On a positive note, the equitable shares formula is by definition designed to acknowledge the differential needs of provinces – a reflection of intent in the right direction. This is critical considering how unequal the South African society is. Also, it is encouraging to see that education and health care comprise a large proportion of the total equitable shares grant.

A third issue refers to the responsibilities of the national government in the health sector. The national government plays a monitoring and coordinating role, without any authority to influence allocations to health care priorities funded outside conditional grants. PHC and equity in the health sector are key priorities for the national government, but current fiscal and constitutional arrangements limits national government's ability to influence the amount of resources committed to PHC.

Equity in the distribution and provision of public goods and services has been a priority for the country since the end of apartheid. Literature on equity, redistribution and fiscal federalism suggests that the goals of equity and redistribution are best achieved where the responsibility lies with the central government. The nature of intergovernmental fiscal relations in South Africa gives significant fiscal autonomy to provinces around major areas of social services such as health and education. It was not designed solely for the purpose of achieving equity. The design of the South African fiscal federal system is a result of its history and mainly political pressures from different interest groups.

This preliminary analysis as presented in this chapter highlights some key issues that could have constrained the achievement of equity in the distribution of PHC resources

between geographic areas in South Africa. In subsequent chapters, more in-depth analysis based on recently collected data will be conducted; these are preceded by a description of the methods used in the study.

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CHAPTER 5

Methods

This chapter describes the methods used in carrying out this study. The process for data collection, sources of data, sampling technique, identification of study sites, and analysis are outlined in detail. A combination of quantitative and qualitative analyses was used in this study. The mixed methods approach was used as it is considered to be the most appropriate approach for the study. A quantitative approach is weak in understanding the context in which study observations operate, and the voice of participants of the study is not directly heard. On the other hand a qualitative approach is considered deficient because of the potential bias arising from personal interpretations made by the researcher, and the difficulty in generalising findings to a large group because of the often limited number of participants studied. A mixed methods approach therefore offsets the weaknesses of each individual approach, and provides more comprehensive evidence for studying a research problem (Creswell and Clark, 2007).

Another justification for the mixed methods approach is based on the nature of the study. Assessing the impact of fiscal federalism on the equitable distribution of PHC resources requires analysis of expenditure data. This necessitates the use of quantitative analysis. The process of resource allocation is an inherently political process and so any investigation into the process will require a good understanding of the context in which policy is made and the influences of stakeholders and their interest. A qualitative approach is thus necessary to elicit the voices and perspectives of participants on these issues.

Quantitative analysis was used in assessing the trend in intergovernmental transfers, allocations to the health sector and to PHC. Also, it was used in assessing equity in the distribution of PHC finances, using data on PHC expenditure and levels of deprivation. Qualitative analysis was applied to data collected through interviews with government officials. This section of the analysis focused on answering research questions around: “who” is involved in determining PHC allocations? How much influence do these stakeholders wield? What criteria are used in allocating PHC finances across geographic areas? What level of autonomy do provinces and health districts enjoy? What are the constraints to achieving equity in PHC financing? What mechanisms are in place to promote equity in PHC financing PHC? How well do community preferences and priorities feed into decision-making for PHC budgeting?

Most of the data used in this study was collected through a research project (Okorafor et al, 2007) in which the author was the principal investigator. The research project was carried out in collaboration with the National Department of Health, South Africa, although the NDoH’s involvement was restricted to data collection support and feedback on the project’s analysis. The project investigated the implication of fiscal federalism on the equitable distribution of PHC finances in South Africa and Nigeria. For the research project, the author conducted all the literature review, developed the conceptual framework for the study, undertook most of the data collection and analysed the data. Input from other research members of the research team involved reviewing the data collection tools and review of the research report.

A key difference between the research project and this thesis is that the research project focused on a comparative analysis between the South African and Nigeria experience in financing PHC. However, this thesis has much more detailed and expansive research into the impact of fiscal federalism in South Africa on the distribution of PHC finances. This thesis builds on the work done on the research project.

5.1. Data Collection

The main sources of information for this study were document reviews, primary data from interviews with government officials, and secondary data from national household surveys and public health expenditure data bases.

5.1.1 Document Reviews

An extensive review of documents and literature was carried out for this study. The review focused on three broad areas: government publications, theoretical and empirical literature on relevant concepts used in the study and literature on the experiences of other countries that operate a fiscal federal system in the financing of health and PHC. In more detail, the following documents were reviewed:

- Government publications on the nature and history of fiscal federalism and intergovernmental fiscal arrangements in South Africa. These included budget reviews, intergovernmental fiscal reviews, health bills, the South African Constitution, health acts, and other government publications on budgeting and resource allocation guidelines. Government publications such as budget reviews and intergovernmental fiscal reviews provided information on the process and

criteria for intergovernmental transfers. The constitution, health bills and various health acts provided information on the roles and responsibilities of each level of government. A review of these documents provided an understanding of the nature of intergovernmental relations in South Africa, the basis for intergovernmental transfers to provinces and resource allocation to health and PHC in South Africa.

- Theoretical and empirical literature on equity, PHC, need, resource allocation and fiscal federalism. These provided the study with a clear understanding of concepts used in the study. A review of literature on fiscal federalism provided the study with a good understanding of the tenets of fiscal federalism, including the nature and effect of intergovernmental transfers on SNG autonomy and equity in the financing and provision of services.
- International literature on the experiences of other countries operating a fiscal federal system in financing PHC and other health services. A review of international experience provided a valuable reference point for exploring the equity implications of different intergovernmental arrangements, including forms of transfers for funding PHC activities.

Information from reviewed documents and literature was used in designing the conceptual framework that guides this study. The conceptual framework was the basis for the design of interview guides used in collecting primary data.

5.1.2 Primary Data from Interviews with Government Officials

The study collected primary data from interviews with government officials at national, provincial and health district levels. In summary, the interviews were designed to collect information around:

- Processes for resource allocation and budgeting for health care and PHC,
- Stakeholders involved in the process, their interests and their influence on the budgeting and resource allocation processes,
- Information on guidelines, mechanisms or criteria within the budgeting and resource allocation process at all levels of government that influence the amount of resources allocated to PHC
- Level and nature of community participation in decision-making around the financing of PHC
- Views on the meaning of equity and how equity can be achieved
- Level of management capacity available at district, province and national levels
- Working relations between different levels of government and government agencies involved in determining PHC allocations
- Relative importance of PHC and equity for different levels of government and government agencies
- Financing options for PHC to achieve equity

Semi-structured interview guides were used to collect primary data, as it allowed for flexibility to probe for details on issues that needed further clarification (Miles and Huberman, 1994, Bowling, 1997). The interview guides were designed according to the level of government the interviewee worked for and the sector. For example, all

provincial health officials were interviewed with the same interview guide, but officials at National Department of Health had a different interview guide. This was because officials at different levels of government are involved in different ways in decision-making for PHC allocations. In total, there were five sets of interview guides for officials from the following offices:

- National Department of Health
- Provincial Departments of Health
- National Treasury
- Provincial Treasury
- Health Districts

In total, 35 officials were interviewed. In all, 13 officials from health districts were interviewed, 5 officials from Provincial Treasuries, 2 from National Treasury, 11 from Provincial Departments of Health and 4 from the National Department of Health. All interview data was transcribed to allow for more detailed analysis and better coding of qualitative data. Copies of the interview guides are included in Appendix B.

Government officials interviewed were identified through purposive sampling. Government officials eligible for interview were those that were involved in decision-making around budgeting and resource allocation for PHC. The researcher worked with a representative of the National Department of Health in identifying government officials at the national, provincial and district levels who met the above criterion. The representative's other contributions to primary data collection was in setting up interview appointments and in the design of the questionnaires. The representative

from the NDoH also participated in interviewing the subjects. The use of a representative from the NDoH proved to be very helpful as government officials were more receptive to requests for appointments once they were aware that the NDoH was involved in the research. Also, the representative's knowledge of the public health system proved useful in framing interview questions.

The study also employed a "snowball" technique in identifying additional interview subjects. At the end of each interview, interviewees were asked if they were aware of someone else who had a good understanding of the subject area. In total, 6 out of the 34 interviewees were identified through this technique.

Before interviews were carried out, the author obtained ethics approval for the study from the University of Cape Town, Ethics Committee. Also, the author obtained written permission from the Department of Health allowing the author to interview the departments' officials for the project. All interviewees were contacted and informed about the project before they were interviewed. Subsequently, their consent to participate in the interviews was obtained. Although the author had obtained permission to interview Department of Health Officials, interviewees only participated of their own free will. Also, it was made clear to the interviewees that they had the right to terminate the interview session at any point, and that all information from the interviews would be treated in confidence. Hence, no names or characteristics of interviewed officials that could reveal their identities will be mentioned in this thesis. Anonymity granted to each interviewee was to allow for richer data, as it was assumed that individuals would speak more freely if they could not be identified. Most respondents only agreed to participate in the interviews if they

would be completely anonymous. For most of the quotations, including the province or the office of the respondent makes it easy for most people familiar with the governmental structures and offices to identify the respondent. So, this has been done to protect the respondent

The interviews were recorded (with the permission of interviewees) and transcribed by an independent private transcribing company. All transcripts were thereafter checked for errors by the author. Interviews were carried out between January 2007 and August 2007. Follow up interviews were conducted by the author where clarification was necessary. These were done in November 2008, at the point of data analysis. It is important to note at this point that based on responses given by some interviewees, an interview was carried out with a member of a non-governmental organisation. The non-governmental organisation works with the government to promote equity and strengthen the public health sector. This interview was done to corroborate claims made by some government officials.

5.1.3 Study Sites for Interviews and Sampling Technique

Interviews were conducted with government officials from four out of the nine provinces. The researcher could not interview officials from all the nine provinces because of financial resource constraints. Provinces visited for interviews were Gauteng, Western Cape, Limpopo and Eastern Cape provinces. These provinces were chosen because they provide the study with an even split between provinces that historically have had relatively high PHC per capita expenditure and those with relatively low PHC per capita expenditure. Gauteng and Western Cape have relatively higher per capita PHC expenditure. For example, in the 2002/03 financial year their

per capita PHC expenditure was R238 and R213 respectively. In the same year per capita PHC expenditure for Limpopo and Eastern Cape were the lowest: R70 and R91 respectively²⁹. In each of these provinces, two districts were selected for district-level interviews.

Districts selected for site visits are based on nominal changes in non-hospital PHC expenditure from 2001/02 to 2005/06 financial years. Within each of the selected provinces, districts with the highest and lowest nominal increases³⁰ in non-hospital PHC expenditure were selected. The rationale behind this selection criterion is that since the study investigates the impact of fiscal federalism on equity in PHC allocations, it is important to find out what factors prevent or facilitate changes in PHC expenditure across districts. Based on this criterion, the districts presented in Table 5.1 were selected for site visits.

Table 5.1 Districts selected for site visits

Province	District	PHC per capita 2001/02 (Rand)*	PHC per capita 2005/06 (Rand)*	Difference (Rand)
W. Cape	West Coast DM	275	307	32
	Overberg DM	240	201	-39
Gauteng	Sedibeng DM	151	225	74
	Ekurhuleni MM [†]	389	270	-119
Limpopo	Vhembe DM	124	237	113
	Gr. Sekhukhune DM	87	115	28
E.Cape	Ukhahlamba DM	48	207	159
	Nelson Mandela MM	129	201	72

Source: Health Systems Trust - (Day and Gray, 2008)

* Note that PHC per capita refers to “per capita non-hospital PHC expenditure” calculated using the population within districts without access to any form of medical scheme cover. All are measured in South Africa Rands (ZAR).

[†]MM refers to metropolitan Municipality. These are metropolitan cities.

DM refers to District Municipality

²⁹ Note that these figures are from the National Treasury’s Intergovernmental Fiscal Review of 2003.

³⁰ In some provinces, some districts experienced a decrease in nominal PHC expenditure per capita. The district that experienced the largest decrease in PHC expenditure per capita was then chosen. This applies to Overberg DM and Ekurhuleni MM

5.1.4 National Household Survey Data Sets and PHC Expenditure Data

One of the objectives of this study is to assess the extent of equity in the distribution of PHC allocations between geographic areas in South Africa - district and provincial levels. In order to achieve this, the study compared levels of health care needs with PHC expenditure. A measure of need (deprivation index) was generated using information from national household survey data sets. A full description of the process of generating the deprivation index is discussed in a later section of this chapter. PHC expenditure per capita was used as a measure of the level of expenditure on PHC for each geographic area.

The study used data on district level PHC expenditure per capita from the Basic Accounting System (BAS) data base of the National Treasury, which was obtained through the 2008 District Health Barometer (Day and Gray, 2008). Data on district PHC expenditure per capita was available for the 2001/02, 2005/06, 2006/07 and 2007/08 financial years. There was no data on district PHC expenditure for the years in-between. Unfortunately, PHC data for these years were not disaggregated to the district level. Primary health care expenditure comprises expenditure on the following programmes:

1. District Management
2. Community Health Clinic services
3. Community Health Centres
4. Community Based services
5. Other Community services

Data on per capita expenditure calculations are based on the population within each district that do not have access to private health insurance (called medical schemes in South Africa). This adjustment is made to capture the population within each district or province that are dependent on publicly funded PHC services³¹.

The data on PHC expenditure per capita was checked against other data sources in order to confirm its validity. The data for the 2001/02 PHC expenditure per capita was compared with data on PHC expenditure per capita compiled by Thomas et al (2003) for the same financial year. Thomas et al (2003) compiled PHC expenditure by collecting information on direct provincial spending on PHC (sourced from Provincial Departments of Health and Provincial Treasuries) and adding them to local government contribution to PHC (sourced from National Department of Provincial and Local Government). The data compiled by Thomas et al (2003), calculated per capita PHC expenditure by using the entire population in each district. Direct comparison of this study's data set and that of Thomas et al (2003) revealed that per capita PHC expenditure figures for this study are slightly but consistently higher. This is because the Thomas et al (2003) study used the entire population of the district as the denominator in calculating PHC per capita expenditure. This study uses the population without access to medical aid as the denominator in calculating per capita PHC expenditure.

A test of correlation between the two sets of expenditure data (data used in this study and data from Thomas et al (2003)) revealed that the correlation coefficient is 0.97.

³¹ This is a different weighting from the equitable shares formula. However, this is how district-level PHC expenditure per-capita is recorded in the data base from which the information was sourced. While medical scheme members may use a public hospital, they are very unlikely to use a public PHC facility.

The variation in PHC per capita expenditure at district and provincial levels is of much more importance for this study than the actual amounts spent on PHC. Based on this consideration, a 0.97 correlation coefficient is good enough for this study. No other data source of per capita PHC expenditure could be found for 2005/06, 2006/07 and 2007/08 financial years. However, given that the data source for the 2005/06 to 2007/08 PHC per capita expenditure data is the same as the data for 2001/02 it is assumed that the data sets are equally reliable. Also, the methodology for data collection was the same.

To measure levels of need at district levels, the study made use of national household surveys that collected information on variables identified as indicators of social and material deprivation. Data sets used for this analysis are summarised in table 5.2 (section 5.4). Household surveys used were selected on the basis of the following criteria:

1. The surveys should correspond to the years that PHC expenditure at district level is available
2. The surveys should be nationally representative and the data can be disaggregated to the health district level
3. The variables in the surveys that are indicators of social and material deprivation should be collected and measured in a similar way; allowing for the same composition of “need” measure from all surveys.

5.2. Qualitative Analysis

Data from interviews were coded according to broad themes. These themes formed the basic outline for the framework for analysis. The themes were developed from key

issues identified in the literature review, conceptual framework and the South African context. In addition, the data collected from the respondents influenced the definition of the themes. Also, the analysis considered differences in results between the relatively well funded provinces and those that were not very well funded. The themes are:

1. *Process and criteria for vertical split of revenue between the three levels of government:* This is important as the size of the resources available for the equitable shares to provinces places some limit on how much a province can commit to health care and therefore PHC. Also, the process for the split of revenue across government levels defines the level of autonomy each of the spheres of government can enjoy.
2. *The process and criteria for budget allocations to provinces and sectors within provincial governments:* This explores issues such as criteria for budget allocations to various provinces and provincial sectors, and allows for analytical investigation of the implications of current allocation processes for equity. Also, this allows for identification of alternative allocation processes and criteria that may have a better impact on the equitable distribution of PHC resources.
3. *Influence of key stakeholders:* This focuses on identifying key players in determining equitable shares to provinces, budgetary allocations to sectors within provinces and allocations to PHC. Identifying the major players and the level of influence they have is key to effecting changes in any of the processes listed above.

4. *Community participation and health policy*: one of the major reasons (both in theory and in practice) for decentralisation either of the entire governing system or the health sector is to bring the government closer to the people, and for communities to have a greater influence in decision-making that affects their lives. The PHC approach also subscribes to this philosophy. This theme assesses the extent to which community voices influence health policy for PHC within the South African context. The intention is to find out whether fiscal federalism and the decentralisation of health care provision to provinces and districts have encouraged community participation.
5. *Financing options for PHC*: This allows for the identification and discussion of possibilities and implications of alternative financing options (conditional grants, norms and standards) for SNG autonomy and equity in PHC resource allocation.
6. *Expenditure capacity and sufficiency of funds for PHC*: managerial capacity³² at lower levels of government is a frequently cited problem in decentralised health systems. Managerial capacity is necessary for the appropriate utilisation of health care resources at lower levels. In the South African case, this is particularly important for the motivation of funds for health and PHC, and more especially where health and PHC budgets are driven by historical expenditure.

³² Managerial capacity refers to the ability of an administrative unit to efficiently utilise available resources to achieve a specific set of objectives.

7. *Understanding equity*: this focuses on assessing the views of officials on what an equitable distribution means, their views on the current distribution of PHC funds and what definition of equity should guide resource allocation to PHC. Equity as we have seen is a subjective concept, and different views of what is equitable amongst officials involved in decision-making for health and PHC budgets could undermine or promote the achievement of equity.

Although the analysis is structured around the themes listed above, a common thread running through the analysis is the assessment of the impact of processes, actors, systems and regulations on the achievement of equity in the financing of PHC. Also, accountability and transparency in governance is evaluated.

5.3. Quantitative Analysis

This part of the analysis focused on assessing the extent of equity in the distribution of PHC finances between provinces and districts. Also, the trend in allocations to districts and provinces with respect to equity is assessed. These analyses are done at the district and province levels. Health districts are the administrative structures charged with the provision of PHC, so it follows that any analysis around the equitable funding of PHC should be disaggregated to the district level. Analysis at the level of provinces provides valuable information around the level of commitment to PHC by the different provincial governments.

Deprivation indices were used as measures of health needs. These indices were constructed from socio-economic and demographic variables, using principal components analysis (PCA). This is in line with the definition of equity and the

measurement of need as proposed in Chapter 2. Basic characteristics of the data sets used are listed below in table 5.2. These data sets correspond to the years in which per capita PHC expenditure at district levels is available.

Table 5.2 Survey Data

Survey	Sample Size	
	Households	Individuals
2001 Census data [†]	948,592	3,725,655
2005 General household survey data	28,129	107,987
2006 General household survey data	28,002	105,727
2007 Community Survey	246,618	949,105

[†]This is a 10% sample of the census

5.3.1 Variables Included as Indicators of Social and Material Deprivation

The variables included in the PCA are listed in Table 5.3. These variables were chosen based on criteria discussed in sections 2.3.1 and 2.3.2 in the second chapter. The variables included in the development of deprivation indices for this study were based on two criteria. Variables included were those identified in the literature review as indicators of social and material deprivation, and those that are indicators of greater health care needs.

Deprivation refers to the material and social conditions that are experienced by households and individuals, where these conditions are inadequate relative to what is usually available or experienced in society (McIntyre and Okorafor, 2003). Material deprivation refers to the lack of food, clothing, housing, sanitation, water etc; including living in a deprived environment where there may be air and noise pollution, no recreation facilities, no shops etc. Social deprivation on the other hand

includes no or low levels of education and employment opportunities, lack of recreation, lack of integration into the community etc (ibid).

Some variables were also included based on their contextual (for South Africa) relevance as indicators of deprivation. A full description of the variables included and the rationale for their inclusion is described below. The variables used in generating a deprivation index are listed in Table 5.3. The second column of the table lists the variable names used in analysing the data.

It is important to note that the variables included in constructing the deprivation index were also limited by the data sets. For example, variables such as the levels of gender discrimination, mortality, level of access to recreation facilities and level of community integration are good measures of social deprivation (McIntyre and Okorafor, 2003), but these were not captured by the data sets used. They are therefore not included in the analysis.

Table 5.3 Variables for Constructing the Deprivation Index

	Variable Name	Definition
1	<i>p_child</i>	The proportion of the population below the age of 5
2	<i>p_black</i>	The proportion of the population that are black Africans
3	<i>p_unemp</i>	The proportion of the population between 25yrs and 59yrs old not working and looking for work or not working and not looking for work
4	<i>p_shacktrad</i>	The proportion of the population living in traditional (informal) dwelling or shacks
5	<i>p_nocloseaccess</i>	The proportion of the population that do not have piped water in the house or on site
6	<i>p_pitbucketnone</i>	The proportion of the population that use a pit latrine, bucket latrine or have no toilet facility
7	<i>p_headnoeduc</i>	The proportion of the population that are from households headed by an uneducated individual
8	<i>p_femhhhead</i>	The proportion of the population that are from households headed by a female
9	<i>p_noenergy</i>	The proportion of the population that do not use either electricity or solar energy as their main source of energy.

Children that are below the age of 5 are particularly vulnerable to many illnesses and require more health care services. Indeed, this population groups is also targeted as a vulnerable groups by the South African health system for improved health service provision (McIntyre and Gilson, 2002). As a result of racial discrimination during the apartheid era, the black African population are still the most socio-economically disadvantaged group (Woolard, 2002). They are therefore the racial group least able to maximise their health status. Also, based on the definition of need in chapter 2, black Africans are most likely to be in greater need of health care services. For similar reasons, unemployment status of the working age population and gender of the household head have been included. Female headed households are often families that have a single parent. Such families depend on the income of only one parent, instead of income from two parents as is often the case for male headed households.

The proportion of the population living in informal dwellings, have no access to piped water within the house or on site, have no access to good toilet facilities and depend on unclean energy sources have also been included. The variables identify households that live in conditions that make them more vulnerable to ill-health. They are also indicators of poor living conditions and material deprivation.

The proportion of the population that are from households headed by an uneducated individual is a measure of social deprivation. Household heads are responsible for household decision-making that determine behaviours and practices within the household. An uneducated household head is more likely to have a lower capacity to appreciate health information on say, nutrition, benefits of utilising formal health care services and implications of different lifestyle behaviours on health status. In addition,

the lack of formal education of a household head limits his/her earning potential in the labour market.

It is important to note that a deprivation index based on socio-economic and demographic variables is not the only appropriate approach to measuring need. Other indicators such as burden disease (morbidity) and mortality could also be used. The choice of a deprivation index is in part as a result of the huge socio-economic inequalities in South Africa, and also because it has a close relationship with mortality (as elaborated in the literature review).

5.3.2 Principal Components Analysis and the Deprivation Index

Principal components analysis (PCA) is a statistical technique that reduces the information contained in a large number of variables to a smaller number of variables, by summarising the patterns of correlation among observed variables. PCA aims to explain the total variance in the set of variables and creates a set of mutually uncorrelated components of the data (Filmer and Pritchett, 1999). In essence, PCA can be used to estimate the variation in an un-observed (latent) variable(s), using a set of variables for which their outcomes are partially determined by the unobserved variable. The variations in each of the observed variables are assumed to be influenced by different factors (processes), and that these different processes cause a unique dimension of variation in each of the observed variables. PCA isolates the different dimensions of variations (caused by the different processes or factors) as components. These components are supposed to reflect different and uncorrelated dimensions of variations caused by the different underlying processes. In the case where PCA is used to estimate the variation in one unobserved variable, it estimates the unique dimension of variation that has created the correlations among observed variables (Tabachnick and Fidell, 2001). PCA has been used to construct asset indices

(Gwatkin et al., 2000) in measuring household economic welfare, and in constructing deprivation indices (McIntyre et al., 2002, Havard et al., 2008, Salmond et al., 2006) to measure social and material deprivation.

To construct a deprivation index, PCA is applied to the set of variables listed above that are indicators of material and social deprivation. There is general consensus that variables included in the construction of a deprivation index should be additive; and that the weight assigned to each variable should reflect the relative contribution of the variable to deprivation (McIntyre et al., 2000). The concept of an additive set of variables can be illustrated with the variables used in this study. If two of the variables are considered only, say, the proportion of the population living in informal dwellings and the proportion of the population without access to clean sources of energy, then they are additive if: A district with high values for proportion of the population living in informal dwellings and high values for the proportion of the population without access to a clean source of energy is worse off than a district with a high value for population of the population living in informal dwellings and a low value for the proportion of the population without access to a clean source of energy. For this study, the primary unit of analysis is the health district. PCA assigns weights to each variable based on the level of correlation (contribution) of the variable with the generated components (the underlying process driving observed variation in the variable), thus meeting the second condition.

As previously mentioned, PCA produces several components that are mutually uncorrelated. These are linear combinations of observed variables (Tabachnick and Fidell, 2001). The first principal component is the linear index of variables with the

highest amount of information common to all of the variables (Filmer and Pritchett, 1998); and therefore explains the most variation in the set of observed variables. Based on the selection criteria for the variables used, the first component, which explains the most variation in the set of observed variables, will be used to construct the index. PCA also generates coefficients for each variable, and these are the weights assigned to each variable. The coefficients show the strength and direction of the relationship between each variable and the generated component (index). The signs of the coefficients for each component will also be used as criteria for determining which component is to be used as an index of deprivation. The result of the principal component should be an index, which is a linear combination of the observed variables that reflects the underlying process responsible for correlations among the variables – deprivation. The index for each health district (D_j) is calculated based on the formula below (O'Donnell et al., 2008):

$$D_j = f_1 \times \left(\frac{d_{j1} - d_1}{s_1} \right) + \dots + f_n \times \left(\frac{d_{jn} - d_n}{s_n} \right)$$

Equation 5.1

Where f_1 is the 'scoring coefficient' assigned to the first observed variable, d_{j1} is the district's value for the first variable, d_1 and s_1 are the mean and standard deviation of the first variable over all observations respectively. This operation is repeated for all n observed variables, and then summed up to give the deprivation index for the district.

Although PCA has been used in the construction of indices for measuring socio-economic status (SES) in many instances, such as asset indices and deprivation indices, it does have its drawbacks. For example, in the construction of an asset index, PCA suffers from an underlying lack of theory to support the choice of variables

included and the appropriateness of weights attached to each variable (O'Donnell et al., 2008). However, for this study, PCA is not used to generate an asset index, but a deprivation index, and the variables included in the study are selected based on theory and context. Nonetheless, there is still the possibility of bias due to non-inclusion of relevant variables. This is particularly relevant for this study as the variables included in constructing the index are limited by availability in the survey data used.

Another potential drawback of using PCA is that there is no objective way of determining whether the generated component is significantly related to the actual phenomenon that it is intended to estimate, i.e. there is no criterion variable against which to test the solution (Tabachnick and Fidell). There have been several studies in South Africa that have used similar variables in constructing a deprivation index for geographic areas in South Africa (McIntyre et al., 2002, Barron et al., 2005, Barron et al., 2006, McIntyre and Okorafor, 2003, Thomas et al., 2003, Noble et al., 2006) and the results have been generally accepted as a good reflection of deprivation across geographic areas in South Africa.

5.3.3 Assessing Equity in PHC Allocations across Districts

The deprivation indices generated for each district using the 2001 census data was compared with PHC per capita allocations in each district, for the different years. So, the index from the 2001 census data was compared with the 2001/02, 2005/06, 2006/07 and 2007/08 PHC per capita expenditure. The analysis was done this way because the distribution of deprivation indices for different years are sample specific, therefore making trend analysis with regression analysis impossible. This method is used under the assumption that levels of deprivation have not changed significantly

over the period of analysis. Correlation analysis of the deprivation indices for the different years show that the correlation coefficients between deprivation indices from later data sets and the 2001 index are all above 0.96.

This comparison was done with the aid of regression analysis. In each case, the deprivation index was used as the independent variable and PHC per capita expenditure was the dependent variable. The model is specified this way as it is assumed that the amount of resources committed to PHC should be a reflection of the level of health needs in the district; and this study has used the level of social and material deprivation in districts as a proxy for the level of health needs. All expenditure data was converted to 2007/08 real prices based on the consumer price index for South Africa. So references to expenditure and changes in expenditure are real expenditure and real changes in expenditure.

The unit of analysis was the district level. The analysis was carried out using STATA 9. Each data set included sampling weights to make the data more representative of the South African population. These weights were considered in generating the 'proportions' of district or province populations that have the characteristics for which we are interested in. So, for example, the proportion of the population in a district that has access to piped water in the house or on site is calculated based on the weighted number of households without access to piped water in the house or on site as a proportion of the total weighted population of the district.

5.4. Limitations of the Study

A limitation of the study is that all nine provinces were not visited for qualitative data collection. This was a result of both time and resource constraints. Four out of the nine provinces and two districts in each of these four provinces were included as study sites for interviews with government officials. Nevertheless, the basis for selecting provinces and districts, and the inclusion of officials from the National Department of Health and National Treasury should increase the reliability of the results for generalisation about the practice of South African intergovernmental relations.

Unfortunately, the study could not access data on per capita PHC expenditure at the district level for the years between 2001 and 2005. Had these data sets been available, the study would have been able to provide a much more detailed trend analysis of PHC expenditure over the years. The accuracy of the data could not be fully confirmed. The data set on PHC expenditure is from one source only. Comparisons with PHC data from one previous research (based on other data sources) show some differences in the value of PHC per capita expenditure. The data used for this study is the most reliable data available. It is possible that the data may not be very accurate.

The definition of PHC expenditure for analysis (quantitative) is a narrow definition as it does not account for PHC activities carried out in district hospitals. Discussions with government officials revealed that district hospitals in some provinces also provide PHC services. The implication of this is that in some provinces, PHC expenditure may be underestimated. Previous research (Okorafor et al., 2003) identified these provinces as KwaZulu Natal and Eastern Cape. Unfortunately, the

actual proportion of district hospital expenditure that is dedicated to PHC activities in these provinces could not be determined.

The study considers that there is potential for bias in the response from interviews in the primary data collection process due to factors such as the presence of a staff of the NDoH in all interviews, different agendas of the respondents, ignorance on the part of the respondent or responses based on hearsay. The presence of a staff of the NDoH could influence the responses of interviewees, especially those that are from the provincial health department (head office or district offices). They may not be as forthcoming with information and their perspectives on issues for fear of some repercussion from the NDoH. The presence of the staff of the NDoH was unavoidable as the NDoH insisted on having their staff member present in all interviews.

The deprivation index used as a proxy for need is widely accepted as a good indicator of need for allocating resources between geographic areas. In the case of this study, a potentially important variable could not be included in the index. This refers to differences in the cost of providing health care services across the different geographic regions.

CHAPTER 6

Results of Quantitative Data Analysis

In this chapter, results of the quantitative analysis of survey data sets and PHC expenditure are presented. The first section of this chapter provides a summary of the outcome of PCA on the survey data sets and a description of the deprivation indices generated from the various data sets. This is followed by a presentation of regression analysis that estimates the relationship between PHC expenditure per capita and the deprivation index. The results of further analysis such as trends in the distribution of PHC per capita expenditure are also presented. Lastly, the chapter is concluded by a brief discussion on the results.

6.1. Results of the Principal Components Analysis

Principal components analysis was applied to the variables listed in the methods section for the four household survey data sets. For the Census data, the sample size of the data was 21,094. Each sample observation represents a sub-place, which is a combination of a few coterminous enumerator areas, and is a geographic area that is small enough for the population to be homogeneous, yet large enough to allow for statistical analysis. The average number of observations per sub-place was 2,121 observations. These sub-places can be and were aggregated up to health districts level – the basic unit for our analysis. Data from the GHS and Community Surveys were already defined by districts.

The results of the PCA on all the variables for the 2001 Census data, the 2005 and 2006 General household Survey data and the 2007 Community Survey data are all

presented in Tables 6.1, 6.2, 6.3 and 6.4. Each table is in two parts. The first part of each table shows the various uncorrelated components generated by the PCA exercise and the proportion of total variation captured by each component. The second part of each table lists the scoring coefficients associated with each variable that is used to calculate the deprivation index. Scoring coefficients are the weights attached to each variable in the calculation of the deprivation index. They are denoted as f_1, \dots, f_n in equation 5.1 in Chapter 5.

Table 6.1 Principal Components Analysis on 2001 Census Data

Component	Eigenvalue*	Difference	Proportion	Cumulative
1	5.511	4.661	0.612	0.612
2	0.851	0.250	0.095	0.707
3	0.601	0.100	0.067	0.774
4	0.501	0.063	0.056	0.829
5	0.438	0.079	0.049	0.878
6	0.359	0.042	0.040	0.918
7	0.317	0.031	0.035	0.953
8	0.286	0.150	0.032	0.985
9	0.136	-	0.015	1.000

Variable	Component 1
Proportion of the population that are children below the age of 5	0.2973
Proportion of the population that are Africans (Black)	0.3523
Proportion of the working age population that are unemployed	0.2738
Proportion of the population that live in a shack or traditional dwelling	0.3340
Proportion of the population with no close access to safe water	0.3807
Proportion of the population that use a pit latrine, bucket latrine or have no toilet facility	0.3808
Proportion of the population that are from households headed by a female	0.3251
Proportion of the population that do not use either electricity or solar energy as their main energy source	0.3285
Proportion of the population that are from households headed by an uneducated individual	0.3122

*All eigenvalues have been rounded to three decimal places

For the first part of Table 6.1, the first column lists the various components derivable based on the variation of all 9 variables. They are ordered from the component that accounts for the most variance from the nine variables, to the component that

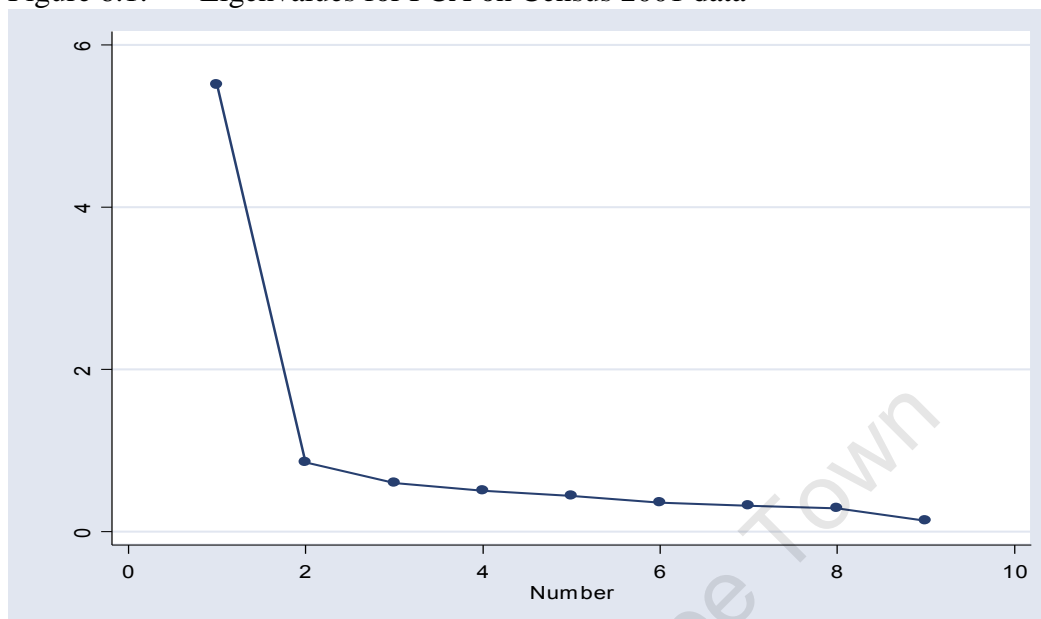
accounts for the least variance. The second column shows the eigenvalues³³ of each component. The third column shows the difference between the eigenvalue of each component and the eigenvalue of the next component. A sharp drop in eigenvalues suggests that subsequent eigenvalues are just sampling noise (StataCorp, 1999). There is a sharp drop from the eigenvalue of the first component to the eigenvalue of the second component. This value is equal to 4.661, whereas the differences in eigenvalues for the rest of the components are all below 0.26. This therefore suggests that only one identifiable underlying process influences the values of these variables, and this is captured by the first component. Also, the eigenvalues for components 2 to 9 are all below 1. Which means that their explanatory power are all individually less than the explanatory power of one variable. Following the criteria for selecting the variables, this underlying process is deprivation. Figure 6.1 provides a scree plot of the eigenvalues for the various components. The fourth column of Table 6.1 shows the proportion of total variance of the variables accounted for by each component. As can be seen, the first component accounts for just over 61% of total variance of all variables. The last column shows the cumulative value of variance accounted for by the components. The first component is retained for construction of the deprivation index.

For the second part of Table 6.1, the first column lists the variables, while the second column displays the scoring coefficients associated with each variable that is used to calculate the deprivation index. The results show that all variables included in the PCA have weights that are of similar value. This means that the contribution of each of the nine variables in calculating the deprivation index is similar. The weights range

³³ This is a standardized measure of the proportion of total variation explained by each component. The sum of all eigenvalues should be equal to the number of variables included in PCA; in this case this value should be equal to 9.

from 0.27 (proportion unemployed) to 0.38 (proportion with no access to safe water and no access to proper toilet facilities).

Figure 6.1: Eigenvalues for PCA on Census 2001 data



Also, the sign of each scoring coefficient is consistent with expectations for a deprivation index. They are all positive, which means that an increase in any of the values of the variables reflects greater deprivation within any district. The calculated deprivation index ranged from -3.129 to 1.824. Lower deprivation index scores represent lower levels of deprivation and vice versa. Tables 6.2, 6.3 and 6.4 below show the corresponding results for PCA on the 2005 and 2006 General Household Survey and the 2007 Community Survey respectively.

The results for the 2005 data are similar to those of the 2001 census data, however in this case, the first component explains just over 66% of the total variation of the nine variables. This first component is retained for construction of the deprivation index. Scoring coefficients range between 0.249 (proportion of the population that live in a shack or traditional dwelling) and 0.3791 (Proportion of the population that do not use either electricity or solar energy as their main energy source). For the GHS

2005 data, the deprivation index ranged from -4.3397 to 4.6037. The complete result of the PCA analysis including the deprivation indices for all districts using the various data sets are presented in Appendix C.

Table 6.2 Principal Components Analysis on 2005 GHS Data

Component	Eigenvalue*	Difference	Proportion	Cumulative
1	5.966	5.059	0.663	0.663
2	0.907	0.226	0.101	0.764
3	0.681	0.217	0.076	0.839
4	0.465	0.079	0.052	0.891
5	0.386	0.149	0.043	0.934
6	0.237	0.055	0.026	0.960
7	0.182	0.070	0.020	0.980
8	0.112	0.048	0.012	0.993
9	0.641	-	0.007	1.000

Variable	Component 1
Proportion of the population that are children below the age of 5	0.3011
Proportion of the population that are Africans (Black)	0.3148
Proportion of the working age population that are unemployed	0.3673
Proportion of the population that live in a shack or traditional dwelling	0.2490
Proportion of the population with no close access to safe water	0.3753
Proportion of the population that use a pit latrine, bucket latrine or have no toilet facility	0.2758
Proportion of the population that are from households headed by a female	0.3780
Proportion of the population that do not use either electricity or solar energy as their main energy source	0.3791
Proportion of the population that are from households headed by an uneducated individual	0.3315

*All eigenvalues have been rounded to three decimal places

From the analysis of the 2006 GHS data (presented in Table 6.3), the first component explains approximately 57% of the total variation of all the 9 variables. As in the results of PCA on 2001 and 2005 data, there is a sudden drop in the eigenvalues after the first component. However, the eigenvalues of components 2 and 3 are above 1. A closer examination of the signs of the variables for components 2 and 3 (see Appendix C) shows that the first component is most likely to represent deprivation.. The range of the scoring coefficients is similar to those for 2001 and 2005 data. However, the scoring coefficient for the “proportion of the working age population that are

unemployed” is very low compared to its value in previous analyses. This implies that this variable has become a weaker indicator of deprivation, with time. The deprivation index generated from the 2006 GHS data ranged from -3.833 to 4.586.

Table 6.3 Principal Components Analysis on 2006 GHS Data

Component	Eigenvalue*	Difference	Proportion	Cumulative
1	5.149	3.912	0.572	0.572
2	1.237	0.135	0.138	0.710
3	1.102	0.542	0.123	0.832
4	0.560	0.121	0.062	0.894
5	0.439	0.199	0.049	0.943
6	0.240	0.094	0.027	0.970
7	0.147	0.076	0.016	0.986
8	0.070	0.015	0.008	0.994
9	0.055	-	0.006	1.000

Variable	Component 1
Proportion of the population that are children below the age of 5	0.2618
Proportion of the population that are Africans (Black)	0.3436
Proportion of the working age population that are unemployed	0.0315
Proportion of the population that live in a shack or traditional dwelling	0.2691
Proportion of the population with no close access to safe water	0.4123
Proportion of the population that use a pit latrine, bucket latrine or have no toilet facility	0.4164
Proportion of the population that are from households headed by a female	0.3969
Proportion of the population that do not use either electricity or solar energy as their main energy source	0.3370
Proportion of the population that are from households headed by an uneducated individual	0.3543

*All eigenvalues have been rounded to three decimal places

Table 6.4 shows the results for the 2007 Community Survey. The first component accounts for over 64% of the total variation in the 9 variables. As in the results for the previous years, the signs of the scoring coefficients for the variables associated with the first component are all in line with expectations. As in the analysis of the 2006 GHS data, the scoring coefficient for the “proportion of the working age population that are unemployed” is very low compared to other scoring coefficients. The reason

for this is investigated in the next section. The deprivation indices generated from the 2007 Community Survey data ranged from -3.802 to 4.577.

Table 6.4 Principal Components Analysis on 2007 Community Survey Data

Component	Eigenvalue*	Difference	Proportion	Cumulative
1	5.827	4.629	0.648	0.648
2	1.198	0.333	0.133	0.781
3	0.865	0.517	0.096	0.877
4	0.347	0.049	0.039	0.915
5	0.298	0.032	0.033	0.948
6	0.266	0.173	0.030	0.978
7	0.093	0.034	0.010	0.988
8	0.059	0.012	0.007	0.995
9	0.047	-	0.005	1.000

Variable	Component 1
Proportion of the population that are children below the age of 5	0.3538
Proportion of the population that are Africans (Black)	0.3253
Proportion of the working age population that are unemployed	0.0653
Proportion of the population that live in a shack or traditional dwelling	0.3105
Proportion of the population with no close access to safe water	0.3931
Proportion of the population that use a pit latrine, bucket latrine or have no toilet facility	0.3837
Proportion of the population that are from households headed by a female	0.3767
Proportion of the population that do not use either electricity or solar energy as their main energy source	0.3445
Proportion of the population that are from households headed by an uneducated individual	0.3256

*All eigenvalues have been rounded to three decimal places

6.1.1 Comparisons between PCA Results

The results of PCA on a set of variables from one survey dataset cannot be directly compared to the results of PCA on a similar set of variables from another survey dataset as will be explained later. However, some useful information about the pattern

of deprivation in South Africa from 2001 to 2007 can still be gleaned out of the results of PCA on the datasets.

The scoring coefficients for each variable represent the weights attached to each variable in calculating the deprivation index. The weights therefore are a reflection of the strength of association between the variables and the generated index – deprivation. A comparison of the scoring coefficients for the 9 variables from the four datasets in Table 6.5 provides some additional information on how the strength of association between these variables and deprivation has changed over the years.

Table 6.5 Comparison of Scoring Coefficients

Variable	Census 2001	GHS 2005	GHS 2006	CS 2007
<i>p_child</i>	0.2973	0.3011	0.2618	0.3538
<i>p_black</i>	0.3523	0.3148	0.3436	0.3253
<i>p_unemp</i>	0.2738	0.3672	0.0315	0.0653
<i>p_shacktrad</i>	0.3340	0.2490	0.2691	0.3105
<i>p_nocloseaccess</i>	0.3807	0.3753	0.4123	0.3931
<i>p_pitbucketnone</i>	0.3808	0.2758	0.4164	0.3837
<i>p_femhhhead</i>	0.3251	0.3780	0.3969	0.3767
<i>p_noenergy</i>	0.3285	0.3791	0.3370	0.3445
<i>p_headnoeduc</i>	0.3122	0.3315	0.3543	0.3256

The table shows that there has been little change in the weighting of these variables from 2001 to 2007. For most variables, the scoring coefficients have remained within a small range over the years. The exception is the proportion of the working age population that are unemployed. From the 2001 and 2006 datasets, the scoring coefficients for this variable were 0.2738 and 0.3672 respectively. However, the scoring coefficients reduced to 0.0315 and 0.0653 based on the 2006 and 2007 datasets.

Further investigation revealed the reason for the drop in the scoring coefficient from 2005. Table 6.6 summarises the distribution of the variable: “proportion of the

working age population that are unemployed” for districts in 2005, 2006 and 2007. There is greater variation in the value of the variable in 2005 in comparison to 2006 and 2007. The range of the variable is wider in 2005 (from 0.168 to 0.758) than in the following years. This is further confirmed by the decrease in the standard deviation from 0.124 in 2005 to as low as 0.0458 and 0.039 in 2006 and 2007 respectively. The reduction in variation lowers the correlation between the variable with deprivation. This reduces the level of association between the variable and deprivation, hence a lower scoring coefficient.

Table 6.6 Summary of Distribution: Unemployment 2005 – 2007³⁴

	2005 GHS	2006 GHS	2007 CS
Mean	0.436	0.157	0.187
Standard deviation	0.124	0.046	0.039
Minimum	0.168	0.079	0.106
Maximum	0.758	0.275	0.264

At this point it is important to explain that even where a variable is considered to be an indicator of deprivation, the level of variation in that variable is important in its ability to reflect underlying patterns of deprivation. For instance, consider that based on literature and context, access to electricity is an indicator of deprivation. If in South Africa the government decides to provide electricity for every household such that 99% of the entire population have access to electricity, then the variable “proportion of the district’s population with access to electricity” will not be a good indicator of deprivation. This is because the variable has very limited variability and therefore is less able to vary with deprivation between districts. So, what can be concluded from this section is that reduction in the level and variation of

³⁴ Only the three data sets are used to illustrate the point.

unemployment across districts are the reasons for the drop in the value of the scoring coefficients.

6.2. Descriptive Statistics for the Deprivation Index

Table 6.7 and Table 6.8 provide some of the results of the district level deprivation index analysis. The tables lists the 5 most deprived districts and the 5 least deprived districts from the four datasets analysed. Table 6.7 shows that 4 districts have consistently been among the 5 most deprived districts.

Table 6.7 Most Deprived Districts in South Africa: 2001 - 2007

Census 2001		
Province	District	Dep_index
Eastern Cape	O. R. Tambo	1.8240
Eastern Cape	Alfred Nzo	1.6311
KwaZuluNatal	Umkhanyakude	1.5892
KwaZuluNatal	Umzinyathi	1.5876
KwaZuluNatal	Zululand	1.2120
GHS 2005		
Province	District	Dep_Index
E Cape	O. R. Tambo	4.6037
E Cape	Alfred Nzo	4.4341
KZNatal	Umkhanyakude	4.2539
KZNatal	Umzinyathi	3.7304
Limpopo	Bohlabela	3.5096
GHS 2006		
Province	District	Dep_Index
Eastern Cape	Alfred Nzo	4.5858
KwaZulu Natal	Umzinyathi	4.1301
KwaZulu Natal	Unkkhanyakude	4.0554
Eastern Cape	O.R. Tambo	3.4934
KwaZulu Natal	Sisonke	3.0602
GHS 2007		
Province	District	Dep_Index
KwaZulu Natal	Umzinyathi	4.5767
Eastern Cape	O.R. Tambo	4.3486
KwaZulu Natal	Umkhanyakude	4.2792
Eastern Cape	Alfred Nzo	4.1464
KwaZulu Natal	Sisonke	3.5584

They are O.R Tambo, Alfred Nzo, Umkhanyakude and Umzinyathi. Also, the 5 most deprived districts have generally been from two provinces: KwaZulu Natal and the Eastern Cape. Table 6.8 shows the 5 least deprived districts for the four years. As in Table 6.7 above, most of the districts listed have consistently been among the least deprived districts. They are West Coast, Overberg and Cape Winelands. In all years, most of the districts that are among 5 the least deprived are from the Western Cape. Namakwa district from the Northern Cape joined the list of the 5 least deprived from 2005.

Table 6.8 Least Deprived Districts in South Africa: 2001 - 2007

Census 2001		
Province	District	Dep_index
Western Cape	West Coast	-3.2192
Western Cape	Overberg	-3.0637
Western Cape	Cape Winelands	-3.0124
Western Cape	Eden	-2.7900
Western Cape	Central Karoo	-2.775
GHS 2005		
Province	District	Dep_Index
Western Cape	West Coast	-4.3397
Western Cape	Overberg	-4.0157
Western Cape	Cape Winelands	-3.7806
Northern Cape	Namakwa	-3.3069
Western Cape	Central karoo	-2.9760
GHS 2006		
Province	District	Dep_Index
Western Cape	West Coast	-3.8327
Western Cape	Overberg	-3.7301
Western Cape	Cape Winelands	-3.4222
Western Cape	City of Cape Town	-3.1774
Northern cape	Namakwa	-2.7666
GHS 2007		
Province	District	Dep_Index
Western Cape	West Coast	-3.8021
Northern Cape	Namakwa	-3.7673
Western Cape	Overberg	-3.5344
Western Cape	Cape Winelands	-3.2686
Western Cape	City of Cape Town	-2.9891

Although the deprivation indices have been listed in the above tables, it is important to note that the values of indices generated by PCA from different datasets are not directly comparable. So, even though the deprivation index for West Coast district was -3.2192 in 2001 and then -4.3397 in 2005, this does not mean that West coast is less deprived in 2005 than it was in 2001 (although this may well be the case). The index generated for any district from a dataset depends on the distribution of the variables included in the PCA from that particular dataset. So, the results of PCA are sample-specific.

This can be confirmed by looking at the formula for calculating a deprivation index using PCA as written in equation 5.1 in Chapter 5 and the scoring coefficients used for each dataset. The scoring coefficients used differ for each dataset because the variation in deprivation differs from year to year. Secondly and more importantly, the deprivation index calculated from each dataset depends on the following:

- The mean of each variable included,
- The standard deviation of each variable, and
- The value of each variable for the district

Since these values all differ for each of the datasets used, the value of the deprivation for any given district will be different for each dataset. Indeed, even where the actual values of each variable is the same for a particular district in the different years, differences in the means of the variables used and differences in their corresponding standard deviations will yield a different deprivation index for the particular district for different years. Essentially, the deprivation index calculated for any given district from any given dataset is a value that places the specific district in relative terms to

other districts – for only the particular dataset. So, if a district has a deprivation index of 2.34 in 2001 and a deprivation index of 3.45 in 2005, this does not conclusively mean that the district has become more deprived. Statements can only be made about the level of deprivation in a district relative to another district within the same year (i.e. from the same dataset).

6.3. Assessing Equity in Primary Health Care Allocations Across Districts

To investigate the extent trend of equity in PHC, per capita non-hospital PHC expenditure is compared with deprivation indices for all districts. Data on per capita non-hospital PHC expenditure (henceforth referred to as per capita PHC expenditure) for only four financial years were available. These are for the 2001/02 financial year and 2005/06 to 2007/08 financial years. Data on per capita PHC expenditure for these years are available in Appendix D. Data on PHC expenditure used in this section are based on 2007/08 prices. Regression analysis is used to compare per capita PHC expenditure and deprivation indices. The results are presented in Table 6.9.

Table 6.9 Results for Regression Analysis

Dependent Variables	2001/02 per capita PHC	2005/06 per capita PHC	2006/07 per capita PHC	2007/08 per capita PHC
Deprivation Index 2001(Coefficient)	-40.0644***	-21.8956***	-25.7750***	-27.5783***
Adjusted R²	0.2215	0.1705	0.2100	0.1885
Prob >F	0.0003	0.0014	0.004	0.0008
* = significant at 10% level				
** = significant at 5% level				
*** = significant at 1% level				

Note that the complete regression results are displayed in Appendix E

The results from the regression analysis show that in the four years reviewed, there has been a negative relationship between levels of deprivation and the per capita

expenditure on PHC. This means that per capita spending on PHC in districts that are more deprived is lower than per capita spending on PHC in districts that are less deprived. This is contrary to the vertical equity perspective on how resources should be allocated for PHC. Based on a vertical equity definition, districts that are more deprived (and based on this study's definition – in greater need of health care) should be spending more on PHC than those that are less deprived.

However, a closer look at the coefficients of the deprivation index shows a reduction in value from -40.0644 in 2001 to -27.5783 in 2007. This suggests that although there remains a negative relationship between the two variables, a unit increase in the deprivation index should result in a lower reduction in PHC per capita expenditure in 2007 than in 2001. In other words, while there remains a negative relationship between the two variables, more recent expenditure outlays (2005-2007) are more equitable than what obtained in 2001.

Table 6.10 shows the changes in per capita PHC expenditure between 2001/02 and 2007/08 financial years for the ten least funded and ten most funded districts in 2001/02. Column three in the table lists the ranking of the districts based on the 2001 census deprivation index. The ranking starts from 1 (the least deprived district) to 53, which is the most deprived. The other columns are self-explanatory. From the table it is clear that the 10 least funded districts in 2001/02 are among the most deprived districts, while the 10 most funded districts are relatively less deprived (with one or two exceptions).

Table 6.10: Changes in real per-capita PHC expenditure 2001/02 to 2007/08

Province	District	Ranking by dep. index	*2001/02 per capita PHC exp.	*2007/08 per capita PHC exp.	Absolute change	Change (%)
<i>10 least funded districts in 2001/02</i>						
MP	Gert Sibande DM	30	59.40	211.29	151.89	255.7%
MP	Nkangala DM	25	62.22	226.26	164.04	263.7%
EC	Ukhahlamba DM	42	67.88	238.58	170.70	251.5%
EC	Cacadu DM	17	97.58	338.60	241.02	246.9%
FS	T. Mofutsanyana	31	100.41	210.59	110.18	109.7%
EC	Alfred Nzo DM	52	106.06	197.66	91.60	86.4%
LP	Capricorn DM	36	108.89	256.26	147.37	135.3%
LP	Gr. Sekhukhune DM	48	123.03	221.34	98.31	79.9%
FS	Fezile Dabi DM	22	125.86	229.61	103.75	82.4%
EC	O. R. Tambo	53	128.69	222.52	93.83	72.9%
<i>10 best funded districts in 2001/02</i>						
NW	Southern DM	21	305.47	342.45	36.98	12.1%
WC	Overberg DM	2	339.41	319.55	-19.86	-5.8%
NC	Namakwa DM	6	359.21	632.69	273.48	76.1%
WC	Eden DM	4	374.76	435.33	60.57	16.16%
WC	West Coast DM	1	388.90	466.20	77.30	19.9%
WC	Central Karoo DM	5	459.61	526.18	66.57	14.5%
GT	Johannesburg MM	9	483.65	371.42	-112.23	-23.2%
WC	Cape Town MM	7	504.87	444.69	-60.18	-11.9%
NW	Bophirima DM	34	534.57	367.33	-167.24	-31.3%
GT	Ekurhuleni MM	15	550.12	273.22	-276.90	-50.3%

*All figures used are in real 2007/08 prices

Data from Table 6.10 confirms the results of the regression analysis. In both 2001 and 2007, the districts that are more deprived generally have less PHC per capita expenditure than the least deprived. From the 6th and 7th column, it is clear that previously less funded districts have experienced a higher increase in PHC expenditure per capita than the best funded districts; both in absolute terms and in percentage increase. The changes in PHC expenditure across districts clearly show a move towards a more equitable distribution of PHC expenditure outlays. This suggests that provinces have been shifting more resources to districts that had much lower per capita expenditure on PHC.

Deprivation indices were also generated at the provincial level. Table 6.11 shows the deprivation indices calculated for provinces from the four datasets. The provinces are listed according to their ranking in terms of deprivation using the 2001 census data – from the most deprived (9) to the least deprived (1). The rankings are the same for most provinces in 2005 to 2007 as they were in 2001. In 2001, the most deprived province was Limpopo, while the least deprived province was the Western Cape. By 2005, Gauteng moved from the 3rd least deprived province to the 2nd least deprived province. Gauteng moved back to the 3rd least deprived in 2007. The only other change in ranking is between Limpopo and the Eastern Cape. Their rankings remained the same for 2001, 2005 and 2006. By 2007, Eastern Cape became the most deprived province while Limpopo became the 2nd most deprived province. All other provinces maintained their ranking for all years. In summary, the table shows that the relative ranking of provinces in terms of deprivation has generally remained the same from 2001 to 2007.

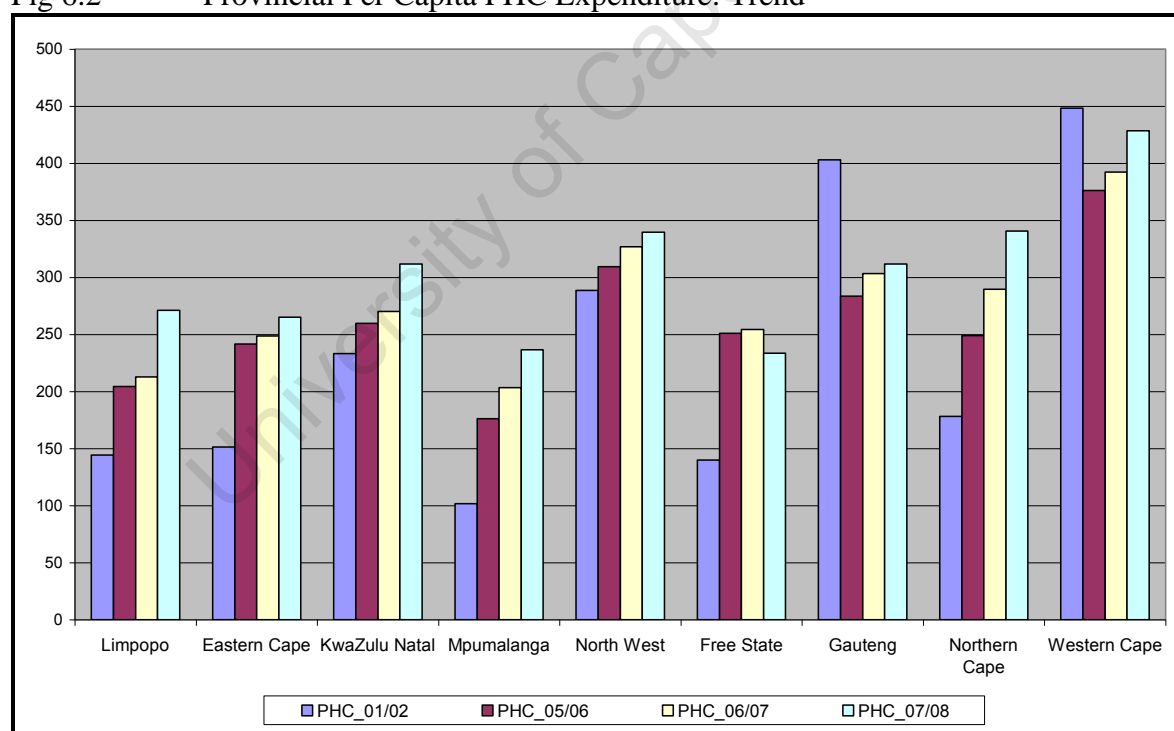
Tab 6.11 Ranking of Provinces by Deprivation Indices

Province	Rank 2001	Index 2001	Rank 2005	Index 2005	Rank 2006	Index 2006	Rank 2007	Index 2007
LP	9	0.173	9	0.413	9	1.766	8	1.813
EC	8	0.101	8	0.402	8	1.692	9	1.817
KZN	7	-0.094	7	-0.182	7	0.449	7	0.966
MP	6	-0.193	6	-0.528	6	0.426	6	0.329
NW	5	-0.292	5	-0.711	5	-0.688	5	0.056
FS	4	-0.486	4	-1.008	4	-1.004	4	-1.053
GT	3	-0.944	2	-2.106	2	-1.978	3	-1.847
NC	2	-0.001	3	-1.717	3	-1.646	2	-1.877
WC	1	-1.300	1	-2.878	1	-3.155	1	-3.075

Figure 6.2 provides a graphical summary of per capita PHC expenditure for all years under review. The provinces are arranged from the most deprived to the least deprived, based on 2001 Census data.

The graph shows consistent increase in per capita PHC expenditure for the 5 most deprived provinces between 2001 and 2007. Gauteng and Western Cape are the only provinces that have experienced a real reduction in PHC per capita expenditure, and they are among the least deprived provinces. Also Gauteng and Western Cape had the highest PHC per capita expenditure in 2001/02 financial year. The graph shows that since 2001/02, although provincial PHC per capita outlays have remained inequitable, there has been a convergence in the distribution of provincial PHC per capita expenditure.

Fig 6.2 Provincial Per Capita PHC Expenditure: Trend



Note: PHC expenditure is in 2008 prices

More deprived provinces have experienced a larger increase in PHC per capita expenditure than less deprived provinces. This is the same conclusion drawn from the district-level analysis. As can be seen in the graph, in 2001/02 financial year, the

maximum and minimum PHC per capita expenditure was R448.3 (in the Western Cape) and R101 (in Mpumalanga) respectively. Western Cape was spending more than 4 times the amount that Mpumalanga was spending on PHC for each member of their respective populations. In 2007, the maximum and minimum per capita PHC expenditure was R428.4 (in the Western Cape) and R233.5 (In the Free State) respectively. Western Cape spent less than twice the amount that Free State spent on PHC per person in their provinces.

In summary, the analysis at the district and provincial levels shows that the distribution of PHC funds has remained inequitable (using deprivation levels as indicators of health care needs) from 2001 to 2007. However, the analysis also shows that there have been noticeable shifts towards a more equitable distribution of PHC funds across geographic areas in South Africa. In general, the increase in funds committed to PHC in more deprived regions (districts and provinces) is higher than increases in funds committed to less deprived regions (in some cases there was a real decrease in PHC per capita expenditure). The next section of this chapter reviews provincial revenue and expenditure trends. This is done with a view to assess how changes in the size and composition of intergovernmental transfers to provinces may have influenced the shifts in PHC per capita observed within the country.

6.4. Trends in Provincial Revenue and Expenditure

The results of the regression and correlation analysis are surprising. Provinces still enjoy high levels of fiscal autonomy, and PHC is funded through a general purpose grant (the equitable shares). Based on the conceptual framework developed in this study, under these conditions, convergence of PHC expenditure per capita is not

expected. This section of the study investigates the pattern and size of intergovernmental transfers to provinces within the period to check whether changes in these could have influenced the pattern of geographic allocations to PHC.

Table 6.13 provides a summary of equitable share transfers and conditional grants from the national government to provinces, including provincial own revenue for the period 2002/03 to 2007/08³⁵.

Table 6.13 Conditional Grants and Total Provincial Revenue

ZAR million	Financial Years					
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Equitable shares	132,605	142,396	153,002	164,730	177,471	190,638
Conditional grants	18,956	20,040	21,455	22,513	32,266	35,055
Own revenue	8,451	8,121	7,897	8,985	9,364	8,541
Total revenue	160,012	170,557	182,354	196,227	219,101	234,234
Conditional grants as % of total revenue	11.8%	11.7%	11.8%	11.5%	14.7%	15.0%
Annual increase in equitable share	-	7.4%	7.5%	7.7%	7.7%	7.4%

Sources: National Treasury: Intergovernmental Fiscal Reviews (National Treasury, 2005, National Treasury, 2006, National Treasury, 2007)

Note: All figures in real 2008 prices

The table shows that the proportion of total provincial revenue that is made up of conditional grants has remained the same at approximately 12% from 2002/03 to 2005/06. From 2006/07, this proportion increased significantly. This is due to the introduction of two new conditional grants: *Further education and training college sector recapitalisation grant* (Education sector) and a grant for the *Gautrain rapid rail link* (Transport sector) (National Treasury, 2006). Although the proportion of total provincial expenditure that is made up of conditional grants increased

³⁵ Reliable data for 2000/01 and 2001/02 could not be accessed. All data was confirmed for reliability by cross checking various data sources. Available data for these two years were not consistent for different data sources. The differences were too large.

substantially from 2006/07, equitable shares to provinces have increased in real terms consistently throughout the period at around 7.5% per annum.

In total, equitable shares increased by approximately 44% from 2002/03 to 2007/08. The increase in the proportion of total transfers to provinces that is made up of conditional grants has not put any constraint on the size of the funds that provinces can use at their discretion. Also, the new conditional grants are not in the health sector, and so have no effect on the funds available for PHC services. With the consistent increase in equitable shares to provinces, the study rules out the mix of transfers (conditional and equitable shares) as a possible explanation for the convergence of PHC allocations.

However, the table provides a possible explanation for the convergence of PHC allocations. It could well be that the increased resources available to provinces in the form of equitable shares allowed for additional funds to be allocated to PHC, especially in the provinces in which PHC was relatively less well-funded. From figure 6.2, only Gauteng and Western Cape experienced a real decrease in PHC per capita expenditure within the period of review. These two provinces had the highest per capita PHC expenditure in 2000/01 financial year. The most deprived provinces such as Limpopo, the Eastern Cape and KwaZulu Natal, experienced huge increases in per capita PHC expenditure.

It is possible that the disproportional increases in PHC expenditure in provinces such as Limpopo, the Eastern Cape and KwaZulu Natal are as a result of disproportional increases in available funds to them. Consequently, the next section reviews

information on expenditure and revenue patterns for all provinces. The focus is on revenue and expenditure from the equitable shares grant, as this is the source of funds for PHC expenditure.

Table 6.14 shows the total amount of funds transferred to each province as equitable shares (in millions) for the period 2002/03 to 2007/08.

Table 6.14 Trend in Provincial Equitable Shares allocations

R'Million	Financial Years						Total change
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	
Eastern Cape	21,373	22,579	24,464	27,184	29,010	30,135	8,762
Annual % change	-	5.6	8.4	11.1	6.7	3.9	40.9
Free State	9,014	9,553	9,982	10,616	11,296	11,960	2,946
Annual % change	-	6.0	4.5	6.3	6.4	5.9	32.7
Gauteng	21,851	23,475	25,120	25,398	27,502	31,408	9,557
Annual % change	-	7.43	7.01	1.11	8.28	14.20	43.7
KwaZulu Natal	26,445	28,380	29,983	34,704	37,733	41,259	14,814
Annual % change	-	7.3	5.6	15.7	8.7	9.3	56.0
Limpopo	17,783	19,582	21,232	22,481	24,269	24,866	7,083
Annual % change	-	10.1	8.4	5.9	8.0	2.5	39.8
Mpumalanga	9,653	10,587	11,466	12,211	13,217	15,739	6,086
Annual % change	-	9.7	8.3	6.5	8.2	19.1	63.0
Northern Cape	3,105	3,347	3,637	3,826	4,063	5,118	2,013
Annual % change	-	7.8	8.7	5.2	6.2	25.9	64.8
North West	11,207	11,952	12,845	13,577	14,535	13,327	2,120
Annual % change	-	6.6	7.5	5.7	7.1	-8.3	18.9
Western Cape	12,174	12,943	14,273	14,733	15,845	16,827	4,653
Annual % change	-	6.3	10.3	3.2	7.5	6.2	38.2

Note: All amounts are in 2008 prices

Source: Intergovernmental Fiscal Reviews, National Treasury (2006, 2007)

Provinces with the highest overall percentage increase in equitable shares are KwaZulu Natal (56%), Mpumalanga (63%) and the Northern Cape (64.8%); and these

are not the most deprived provinces. The provinces with the lowest overall percentage increase in equitable shares for the entire period are Free State and North West.

The overall increases in the equitable shares grant transferred to the Western Cape and Gauteng are not in any way considerably lower than for other provinces. The overall increase in equitable shares transfers to the Western Cape is 38.2% and 43.7% for Gauteng³⁶. Information from the table shows that all provinces received substantial increases in their equitable shares from 2002/03 to 2007/08 financial years. These probably provided provinces with additional funds to allow for the substantial increase in per capita PHC expenditure observed for the more deprived provinces. Given that the changes in PHC expenditure per capita for provinces are not an exact reflection of the changes in overall equitable shares grants, it means that the size of the equitable shares grant has not been the sole influence on the changes in the amount of funds committed to PHC in all provinces.

The amount of funds from the equitable shares grant that is committed to provincial health services is determined by provincial budgetary negotiations. So, even where there are substantial increases in equitable shares to provinces, this is not a guarantee that the health sector within each province will experience a proportional increase in health spending. Consequently, a more detailed assessment of provincial spending on health care services from the equitable shares grant is required.

³⁶ It is important to note though that the population size of Gauteng and Western Cape increased by about 16% from 2001 to 2008. Within the same period, the average increase in population size for other provinces is about 5%. Source: STATISTICS SOUTH AFRICA (2008) Mid-year population estimates, South Africa 2008. Statistics South Africa..

Indeed, even after provincial health budgets have been determined, provincial departments of health determine how much is spent on PHC. So, while increases in the overall equitable shares grants to provinces creates more room for increases in PHC expenditure, provincial budgetary negotiations (for different sectors) and provincial department of health budgetary negotiations can also determine the pattern of PHC expenditure obtained. Table 6.15 shows the trend and annual percentage change in total provincial health expenditure from equitable shares grants.

Table 6.15 Trend in Health Expenditure from Equitable Shares

R'Million	Financial Years						Total change
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08[†]	
Eastern Cape							
Health expenditure	5,560	5,970	5,776	6,439	7,457	7,827	2,267
% change HE		7.4	-3.2	11.5	15.8	5.0	40.8
Free State							
Health expenditure	2,413	2,570	2,760	2,887	3,152	3,106	693
% change HE		6.5	7.4	4.6	9.2	-1.5	28.7
Gauteng							
Health expenditure	7,354	7,398	7,566	9,063	9,333	9,488	2,134
% change HE		0.6	2.3	19.8	3.0	1.7	29.0
KwaZulu Natal							
Health expenditure	9,138	9,179	9,823	11,283	11,833	12,840	3,702
% change HE		0.4	7.0	14.9	4.9	8.5	40.5
Limpopo							
Health expenditure	4,074	4,316	4,881	5,204	6,387	6,192	2,118
% change HE		5.9	13.1	6.6	22.7	-3.1	52.0
Mpumalanga							
Health expenditure	2,214	2,271	2,571	2,940	3,191	5,564	3,350
% change HE		2.6	13.2	14.4	8.5	74.4	151.3
Northern Cape							
Health expenditure	421	871	836	1,038	1,021	1,152	731
% change HE		106.9	-4.0	24.2	-1.6	12.8	173.6
North West							
Health expenditure	2,535	2,597	2,948	3,191	3,512	3,620	1,085
% change HE		2.4	13.5	8.2	10.1	3.1	42.8
Western Cape							
Health expenditure	3,568	3,983	4,535	4,770	5,255	5,563	1,995
% change HE		11.6	13.9	5.2	10.2	5.9	55.9

Note: All expenditure data are in 2008 prices.

† The figures for total health expenditure the 2007/08 financial year are based on medium term estimates and not actual expenditures.

The reason for reviewing this component of health expenditure is to find out how much of the equitable shares grant the different provinces have allocated to the health sector. This can shed some light on how the convergence of PHC expenditure has been achieved. It may well be that provinces that have historically spent less on PHC are in recent times committing more of the equitable shares grant to the health sector (than they previously did), allowing for the proportionally higher increase in PHC expenditure. Mpumalanga and the Northern Cape experienced the highest percentage increase in health expenditure, while the Free State and Gauteng experienced the lowest overall increase in health expenditure. Table 6.16 compares the changes in equitable shares allocation to provinces with changes in health expenditure and changes in PHC per capita expenditure.

Table 6.16 Comparison of Change in Equitable Shares and Health Expenditure

Province	% change in equitable shares allocation 2002/03 – 2007/08	% change in health expenditure from equitable shares 2002/03 – 2007/08	Difference	% change in per capita PHC³⁷ 2001/02 – 2007/08
Eastern Cape	40.9	40.8	-0.1	75.3
Free State	32.7	28.7	-4.0	66.7
Gauteng	43.7	29.0	-14.7	-22.7
KwaZulu Natal	56.0	40.5	-15.5	33.5
Limpopo	39.8	52.0	12.2	88.0
Mpumalanga	63.0	151.3	88.3	132.4
Northern Cape	64.8	173.6	108.8	91.1
North West	18.9	42.8	23.9	17.7
Western Cape	38.2	55.9	17.7	-4.45

The fourth column of the table shows the difference in percentage points between column 2 and 3. A positive value means that the province increased its allocation to the health sector by a higher percentage than the increase in equitable shares to the province, and vice versa. The Northern Cape and Mpumalanga have the highest

³⁷ 2001/02 data is included to expand on the coverage of the data

positive values in this column. This means that they have increased their allocation to the health sector much more than the increase in equitable shares grants (by a greater percentage than other provinces). This is a reflection of greater priority given to health. Interestingly, these two provinces also record the highest increase in per capita PHC expenditure (from 2001 to 2008). Also, Mpumalanga had the lowest per capita PHC expenditure in 2001/02. KwaZulu Natal and Gauteng have the highest negative values in column 4. The negative values mean that the increase in health expenditure from the equitable shares grant expenditure over the period of review is lower than the increase in equitable shares allocated to the province. For Gauteng, per capita PHC expenditure from 2001 to 2008 reduced by 22.7% even though total expenditure on the health sector increased by 29% between 2002/03 and 2007/08. However, for KwaZulu Natal, the percentage increase in health expenditure from 2002/03 to 2007/08 is not as high as the percentage increase in the equitable shares allocation, PHC per capita expenditure increased by 33.5% percent between 2001/02 and 2007/08 financial years.

Provincial level analysis shows that there has been a consistent increase in equitable shares allocations to all provinces from 2002/03 to 2007/08. Similarly, there have also been consistent increases in health expenditure from the equitable shares grant across all provinces, within the same time period. What can be deduced from the data on provincial equitable shares allocations and health sector expenditure trends is that the increase in equitable shares allocations has enabled provinces that had the least per capita PHC expenditure in 2001/02 (such as Mpumalanga, Limpopo and the Free State) to substantially increase their levels of expenditure on PHC. This has resulted in a more equitable PHC expenditure outlay across provinces.

It is also important to assess whether provinces changed allocation patterns to their districts to a more equitable one. The tables below provide a summary of changes in per capita PHC expenditure by district within each province. Table 6.17 shows the change in PHC per capita expenditure from the 2001/02 financial year to the 2007/08 financial year for the Eastern Cape. For each of these tables (6.16 to 6.24), the districts are listed according to levels of deprivation based on the 2001 Census data. The first district is the most deprived in the province, while the district in the last row is the least deprived in the province. The fourth column of these tables shows the ranking of each district based on the deprivation index calculated from the 2001 census data. Districts that are more deprived have a higher rank; so O.R Tambo that is ranked as 53 is the most deprived district.

Table 6.17 Eastern Cape: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Deprivation Index Rank	Difference	% change
O.R Tambo	128.7	222.5	53	93.8	72.9
Alfred Nzo	106.1	197.7	52	91.6	86.4
Ukhahlamba	67.9	238.6	42	170.7	251.5
Chris Hani	154.2	302.9	39	148.5	96.5
Amathole	193.7	304.9	35	111.2	57.4
Cacadu	97.6	338.6	17	241.0	246.9
Nelson Mandela MM	182.4	263.6	10	81.2	44.5

The table shows that for the Eastern Cape, the districts with the lowest per capita PHC expenditure in 2001/02 are not the most deprived districts. Nevertheless, these are the districts with the greatest increase (in real and percentage terms) in expenditure by 2007/08. The result is that although PHC expenditure per capita in 2007/08 still favours the least deprived districts, changes in expenditure have served to reduce the

range in per capita PHC expenditure between districts. In 2001/02 Ukhahlamba spent the least - only R67.9 per capita, while Nelson Mandela Metropolitan Municipality spent the most: R182.4 per capita – 2.7 times the amount spent in Ukhahlamba. However, by 2007/08, the highest per capita expenditure is recorded for Cacadu (R338.6), and the lowest is in Alfred Nzo (R197.7). The amount spent by Cacadu in 2007/08 is less than double what was spent in Alfred Nzo.

Table 6.18 Free State: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Deprivation Index Rank	Difference	% change
Thabo Mofutsanyane	100.4	210.59	31	110.18	109.7
Lejweleputswa	135.8	190.9	24	55.2	40.7
Motheo	181.0	273.9	23	92.9	51.4
Fezile Dabi	125.7	229.6	22	103.8	82.4
Xhariep	205.1	387.2	19	182.1	88.8

In the Free State, in 2001/02 and 2007/08, the most deprived districts are spending the least in per capita terms on PHC. Another interesting finding is that the most deprived district (Thabo Mofutsanyane) experienced the second largest increase (in real terms) in PHC per capita between 2001/02 and 2007/08. However, for the remaining districts, the increase in PHC per capita expenditure is higher in real terms for less deprived districts. Clearly, while all districts in the Free State experienced increases in per capita PHC expenditure, the increases in district level PHC per capita expenditure further exacerbates the level of inequity in PHC resource allocation in the Free State.

Table 6.19 shows the changes in PHC per capita expenditure in Gauteng. Districts that are the most deprived spent less on PHC in per capita terms in 2001/02 than the least deprived districts. Change in per capita expenditure from 2001/02 to 2007/08 show reductions in districts that spent the most in 2001/02, and increases in PHC per

capita expenditure for districts that spent the least in 2001/02. This is with the exception of Sedibeng DM.

Table 6.19 Gauteng: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Deprivation Index Rank	Difference	% change
Metsweding	213.5	286.6	18	73.1	34.2
West Rand	230.5	236.2	16	5.7	2.5
Ekurhuleni MM	550.1	273.2	15	-276.9	-50.3
City of Tshwane MM	239.0	335.3	14	96.3	40.3
Sedibeng	268.7	233.5	11	-35.2	-13.1
City of Johannesburg MM	483.7	371.4	9	-112.2	-23.2

Clearly, there has been a conscious effort in Gauteng to equalise (at least within the time frame reviewed) the amount of funds committed to PHC per person for each district.

Table 6.20 KwaZulu Natal: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Rank	Difference	% change
uMKhanyakude	234.8	339.7	51	104.9	44.7
uMzinyathi	189.5	263.3	50	73.8	38.9
Zululand	213.5	280.2	49	66.7	31.2
Sisonke	239.0	415.8	47	176.8	73.9
Ugu	233.3	272.1	46	38.7	16.6
uThukela	212.1	276.5	44	64.4	30.4
uThungulu	212.1	277.6	43	65.4	30.8
Ilembe	175.4	310.2	41	134.8	76.9
Amajuba	209.3	219.9	28	10.6	5.1
uMgungundlovu	282.8	275.8	26	-7.0	-2.5
eThekwini MM	253.1	365.4	20	112.2	44.3

For KwaZulu Natal, in 2001/02, PHC per capita expenditure was around R200 in each district. Districts with substantially higher figures are uMgungundlovu and eThekwini (Durban). By 2007/08 all districts except uMgungundlovu experienced an increase in

per capita PHC expenditure. Districts with the highest increases in per capita PHC expenditure are not restricted to those that are the most deprived. However, Iembe district has the lowest per capita PHC expenditure in 2001/02 financial year, but by 2007/08, PHC per capita expenditure had increased by R134.8 (one of the highest increases). In summary, it does not appear that changes in per capita expenditure in KwaZulu Natal are based on levels of deprivation or previous levels of expenditure. Indeed, PHC per capita expenditure outlays in 2007/08 have a wider range than what is observed for 2001/08, and district-level increases in expenditure does not particularly favour the most deprived districts.

Table 6.21 Limpopo: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Rank	Real Difference	% change
Greater Sekhukhune	123.0	221.3	48	98.3	79.9
Vhembe	175.4	301.1	45	125.7	71.7
Mopani	197.9	289.9	38	92.0	46.4
Capricorn	108.9	256.3	36	147.4	135.3
Waterberg	176.7	302.8	29	126.1	71.3

Based on the deprivation index generated from the 2001 census data, Limpopo is one of the most deprived provinces. Table 6.21 shows that in 2001/02 financial year, per capita PHC expenditure for all districts in Limpopo were below R200. The most deprived district spent a relatively low amount on PHC per person. What is interesting is that the district with the lowest per capita PHC expenditure in 2001/02 experienced the highest increase in per capita expenditure by 2007/08. Also, the size of the increases for different districts is neither a strict reflection of the levels of deprivation nor a strict reflection of previous levels of expenditure (although the percentage increases are a better reflection of the 2001/02 expenditure outlays). For example, Greater Sekhukhune is the most deprived district in Limpopo, yet it experienced one

of the lowest increases in per capita expenditure. Also, Waterberg is the least deprived district, and by 2007/08, its per capita expenditure on PHC was the highest.

The changes in PHC per capita expenditure have resulted in a convergence of expenditure outlays. In 2001/02 financial year, the district that spent the most in terms of PHC per capita (Mopani), spent 1.8 times the amount spent by Capricorn (the lowest) per person. In 2007/08, Waterberg spent the most on PHC per capita, while Greater Sekhukhune spent the least in per capita terms. In 2007/08, Waterberg spent only 1.4 times more per person than Greater Sekhukhune.

Table 6.22 Mpumalanga: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Rank	Difference	% change
Ehlanzeni	189.5	255.8	32	66.3	35.0
Gert Sibande	59.4	211.3	30	151.9	244.7
Nkangala	62.2	226.3	25	164.1	263.6

The trend in PHC expenditure in Mpumalanga shows that in 2001/02 financial year, the most deprived district (Ehlanzeni) spent the most on PHC, in per capita terms. From 2001/02 to 2007/08, the other districts achieved much higher increases in per capita expenditure than Ehlanzeni. What is of note is that PHC per capita expenditure in Mpumalanga in 2001/02 was very low compared to what obtained in other districts nationwide. By 2007/08 PHC expenditure in the districts within Mpumalanga are more comparable to expenditure in districts of other provinces. Also, the most deprived district is still spending the most on PHC per capita in 2007/08. It appears that Provincial health authority in Mpumalanga has over time increased PHC expenditure in Gert Sibande and Nkangala to bring the per capita expenditure on PHC in all districts to the same level.

Table 6.23 Northern Cape: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Rank	Difference	% change
Kgalagadi	197.9	353.3	37	155.4	78.4
Frances Baard	190.9	314.3	13	123.4	64.6
Pixley Ka Seme	230.5	375.8	12	145.3	63.0
Siyanda	141.4	206.1	8	64.6	45.7
Namakwa	359.2	632.7	6	273.5	76.1

Table 6.23 shows the trend in PHC per capita expenditure for districts in the Northern Cape. In 2001/02, the least deprived district (Namakwa) spent the most per person on PHC – this remains the case in 2007/08. The most deprived districts experienced a higher increase in PHC per capita expenditure from 2001/02 to 2007/08 than the less deprived. The result is that the more deprived districts maintain a higher per capita PHC expenditure than the less deprived in 2007/08 (with the exception of Namakwa).

Table 6.24 North West: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Rank	Difference	% change
Bophirima	534.6	367.3	34	-167.3	-31.3
Central	224.9	397.6	33	172.7	76.8
Bojanala	202.2	290.3	27	88.0	43.5
Platinum					
Southern	305.5	342.5	21	37.0	12.1

Table 6.24 shows that in 2001/02 financial year, the most deprived district in North West (Bophirima) had the highest per capita expenditure, followed by the least deprived district (Southern). Central and Bojanala Platinum recorded the lowest PHC per capita expenditure, however, these two districts experienced the greatest increase in per capita PHC expenditure between 2001/02 and 2007/08. Also, within the same

period, per capita PHC expenditure in Bophirima declined in real terms. The result is a convergence of PHC per capita expenditure in North West province for the period under review.

Table 6.25 Western Cape: Change in District PHC expenditure 2001/02 to 2007/08

District	2001/02 PHC per capita expenditure	2007/08 PHC per capita expenditure	Rank	Difference	% change
City of Cape Town MM	504.9	444.7	7	-60.2	-11.9
Central Karoo	459.6	526.2	5	66.6	14.5
Eden	374.8	435.3	4	60.5	16.2
Cape Winelands	284.3	353.1	3	68.8	24.2
Overberg	339.4	319.6	2	-19.8	-5.9
West Coast	388.9	466.2	1	77.3	19.9

For the Western Cape, in 2001/02, the most deprived district (City of Cape Town) spent the most on PHC per capita, followed by the second most deprived district – Central Karoo. Within this financial year, the least deprived districts (Cape Winelands, Overberg and West Coast) spent the lowest in terms of PHC expenditure per capita. Changes in per capita PHC expenditure from the 2001/02 to 2007/08 financial years does not conclusively result in a convergence of PHC expenditure per capita. In 2001/02 financial year per capita expenditure on PHC in the City of Cape Town was 1.7 times more than the per capita PHC expenditure in the Cape Winelands (which had the lowest PHC per capita expenditure in 2001/02). By 2007/08 the district with the highest per capita expenditure was spending 1.6 times more per capita than the district with the lowest PHC per capita expenditure. Interestingly, the City of Cape Town, which is the most deprived in the province experienced a real reduction in per capita PHC expenditure, while the West Coast (least deprived) experienced the highest increase in per capita PHC expenditure within the period of review. It should

be noted though that the City of Cape Town had the highest per capita expenditure on PHC in the 2001/02 financial year.

6.5. Summary and Discussion

The results of the analysis in this chapter show that the distribution of PHC per capita expenditure at the district and province levels are more equitable in 2007/08 than they were in 2001/02, even though the distribution of PHC per capita expenditure remains inequitable. Provinces still maintain a high level of fiscal autonomy in determining PHC expenditure, as PHC is funded through a general purpose grant. Under this dispensation and based on the conceptual framework developed by this study, it would have been more likely for inequities in PHC expenditure to be maintained rather than be reduced.

Based on the predictions of the conceptual framework, achieving equity in the distribution of PHC funds across regions is feasible under any of the following non-mutually exclusive conditions:

- PHC is funded by a specific purpose grant, which gives the national government control over how much is spent on PHC in each province
- A very high proportion of transfers to provinces are in the form of specific purpose grants (and provincial own-revenue is low), leaving little room for provincial or district-specific preferences to influence the size of funds committed to services for which provinces have fiscal discretion.

- Constitutional arrangements allow for the national government to influence the size of funds committed to PHC through setting norms and standards; with adequate mechanisms to ensure compliance on the part of provinces
- Local preferences for PHC in relation to all other provincially provided services are similar for all provinces and districts.

Based on the review of the South African Context (chapter 4) and the results presented in this chapter, none of these conditions (with the exception of one) have been experienced in South Africa within the period of review. As previously mentioned in chapter 4, the National Department of Health (in 2000) set norms and standards to guide the provision and financing of PHC. However, as will be revealed in later chapters, these guidelines have been poorly disseminated and weakly implemented. The question therefore is: how has South Africa achieved a more equitable geographic distribution of PHC expenditure under conditions that are more conducive for maintaining or exacerbating the inequities in PHC expenditure?

Analysis of quantitative data including the review of equitable shares allocations to provinces and provincial health expenditure trends provides information on how a more equitable distribution of PHC funds has been achieved. These are discussed in turn.

Between 2001/02 and 2007/08 financial years, there has been a consistent increase in the amount of equitable shares allocated to each province. This allowed for increases in the amount of funds allocated to the health sector in each province and therefore

increased the possibility for increasing the amount of resources allocated to PHC for districts that were previously relatively under-funded.

Secondly, provinces such as the Eastern Cape, Limpopo, Mpumalanga and the Free State that recorded relatively low per capita PHC expenditure in 2001/02 financial year increased their real per capita expenditure on PHC per capita by larger amounts than provinces that spent relatively more on PHC per capita in 2001/02 (Gauteng and the Western Cape). This caused a convergence in province-level per capita expenditure on PHC.

Thirdly, as observed in intra-provincial analysis of per capita PHC expenditure trends, all provinces with the exception of Free State and KwaZulu Natal reduced the range of PHC per capita expenditure across their respective provinces between 2001/02 and 2007/08 financial years. Also, provinces that had a district(s) with an extremely low level of per capita PHC expenditure in 2001/02 increased the expenditure on PHC for that district significantly.

All these changes in district and province-level expenditure patterns for PHC resulted in a more equitable distribution of PHC per capita expenditure. What is clear from the analysis is that changes in district-level or province-level allocations to PHC have not been made solely based on health needs as defined by this study (deprivation). Per capita PHC spending in 2001/02 seem to have been the main motivation for changing allocations to districts in most provinces.

Intra-provincial convergence of PHC per capita expenditure is not contradictory to the predictions of the conceptual framework. Provincial health authorities have significant influence in determining PHC allocations to the various districts within the province. What is very interesting is that provinces that recorded relatively low levels of PHC per capita expenditure in 2001/02 increased their expenditure to levels closer to those that are obtained in provinces that had a relatively high per capita expenditure. Indeed it would seem as if these provinces are attempting to reach a target level of per capita expenditure on PHC. The question is why? A possible reason is that these provinces that were previously relatively less funded in terms of PHC want to spend as much as other provinces. Another is that there is a national benchmark on PHC per capita expenditure that provinces are trying to achieve. If any of these reasons are true (or both), then this could explain why the relative increases in PHC per capita expenditure for districts is not a direct reflection of health needs.

If provinces are attempting to achieve some benchmark expenditure on PHC, another question arises. Who set the benchmark? If the benchmark was set by the national government, then indeed there has been some national influence in fiscal arrangements for the financing of PHC.

In summary, the results of the analysis of quantitative data raise some important questions: Has the national government been influencing health budgets and PHC expenditure? If so, how has the national government achieved this given that the constitution gives provinces autonomy in determining health budgets to a large extent and PHC exclusively? Have provinces achieved a more equitable distribution of PHC finances on their own?

In the next chapter, qualitative data collected through interviews with government officials is analysed. The analysis of qualitative data will explore possible answers to these questions.

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CHAPTER 7

Analysis of Qualitative Data

In this chapter, data collected from interviews are presented and analysed. As stated in the methods section, this will be done according to seven broad themes. For each theme, the central focus is to assess the impact of processes, actors and structures on the equitable distribution of PHC finances. Although the chapter focuses mainly on the analysis of qualitative data, information from the chapters on quantitative analysis and the South African context will be used to support arguments and discussions where necessary.

7.1. The Vertical Division of Revenue

This section focuses on the analysis of data on the process of vertical division of nationally collected revenue. Government officials were asked to describe the process for the vertical division of revenue. Officials unanimously agreed that the vertical split of revenue is not a “narrow formulistic approach”. They explained that the amount of funds transferred to provinces, and other spheres of government in the vertical split depends largely on the following:

- The broad macro-economic situation within the country. This includes factors such as the growth rate of the economy, revenue targets, the amount of interest payments to be made by the government, etc. These determine the level of overall government expenditure that is set for each year.
- Expenditure priorities of the government. These determine the amount of resources allocated to each sphere of government. The weighting given to any

sphere in the vertical split of revenue is a reflection of the priority given to the functions that are the responsibilities of that sphere of government.

As an official from the National Treasury commented:

“For example, if the government puts a lot of emphasis on buying submarines... that will be at the national sphere ... The vertical weighting must also reflect some sort of differential weighting of priority across spheres (government levels)”

- Spending pressures of different levels of government. These spending pressures are gauged from sector processes such as the 10x10s (expressed as “ten-by-tens”), and 4x4s (four-by-fours)³⁸. These annual meetings that set different sector pressures and policy priorities. They also inform and identify expenditure priorities for the government.

Nevertheless, the budgeting process begins with a soft division of revenue based on historical divisions across spheres (as a starting point). This is then adjusted based on the medium term expenditure framework adopted by government, following the assessment of the above listed factors. The health sector “ten-by-ten” is a forum where different provincial health departments and the national departments of health agree on national health priorities, and make bids for additional funds for particular health programmes – in line with their stated priorities. It is also a forum for individual provincial departments of health to make bids for additional resources based on province-specific health sector priorities. The ten-by-tens also serve as a monitoring and evaluation process. In these forums, the National Treasury and their

³⁸ The 10x10s are forums that comprise all nine provincial treasuries, all nine provincial health departments in addition to the National Treasury and the national health department. The 4x4s are forums that comprise of representatives from the National Treasury, three provincial treasuries, the national department of health and three of its provincial counterparts. Only a few provinces are represented on a particular 4x4, but each province is involved in at least one 4x4. These 4x4s comprise of the Technical Committee on Finance and the Joint Sectoral Technical Committees

provincial counterparts have the opportunity to evaluate the performance of the various departments of health in terms of how efficiently and effectively they (provincial departments of health) have used funds already allocated to them. This is taken into consideration in negotiations for granting additional funds for any programme or activity within the health sector.

These ten-by-tens are held for other sectors that have provincial departments, such as education and transport. These forums form important conduits for collating provincial level priorities and assessment of spending pressures for provinces in relation to other spheres of government.

7.1.1 Discussion

Information gathered from interviewees suggests that the process for identifying national priorities for determining the vertical split of revenue is a consultative process that allows for inputs from different sectors and spheres of government. Also, most interviewees claimed that this process determines the size of funds transferred to each sphere.

If indeed the claims of interviewees are true, then this process should result in a division of revenue that reflects the relative level of priority of different sectors within each sphere. Given that equity and PHC are priority areas for the government, this budgeting process (for the vertical split) should facilitate the distribution of the equitable shares in such a way that the health component reflects different provincial health needs. This will obviously depend on whether the process for determining

spending priorities and pressures for each sphere of government is effective and produces accurate estimations.

Determination of the vertical split of revenue is about, for lack of a better phrase, “sharing money”. This invariably makes the process a political one. The outcome of any political process depends on which stakeholders wield the most power. Interestingly, most of the interviewees skirted direct questions that attempted to elicit this information. However, most interviewees did allude to the consistent presence of the National and Provincial Treasury in all forums around decision-making for the vertical split of revenue and even for the determination of allocations to different sectors within provinces.

Further review of literature (Okorafor and Thomas, 2007, McIntyre and Nicholson, 1999) revealed that the key players in the determination of the vertical division of nationally collected revenue are:

- Minister’s Committee on the Budget (MinComBud): This committee comprises of the Minister of Finance, Deputy Minister of Finance, Minister of Trade and Industry, Arts and Culture, Science and Technology, Health and Education
- Budget Council: comprising of the Minister of Finance and the Members of Executive Council (MECs) of finance for each province
- National and Provincial Treasuries
- National and Provincial Departments from all sectors
- Parliament
- The Cabinet

Most budget decisions are made by the Budget Council, Cabinet and the Provincial Executive Committees. Civil servants within the different departments draw up and revise (with their Treasury counterparts) their respective budget estimates to follow the indicative budgets given by the MinComBud; these are also considered by the Budget Council. National Treasury collates revised departmental estimates and these are presented to the MinComBud for approval. The proposed budget then needs to be approved by the Cabinet and finally by the Parliament. Legislators within parliament can only vote in favour or against the budgets. Parliament cannot adjust budget estimates (McIntyre and Nicholson, 1999). The National and Provincial Treasuries feature prominently in this process and probably have a huge influence on the outcome of the vertical split of revenue. Given their interest in maintaining efficient use of resources, it may well be that the size of resource increase (or decrease) to the three spheres of government for any given year is largely dependent on each sphere's ability to effectively and efficiently utilise resources allocated to them in the previous year. Also, decisions that determine the size of allocations to each sphere can be politically motivated. For instance, towards the end of 1999, the South African government decided to modernise its defence equipment. This then required a substantial increase in national level allocations (National Treasury, 2000).

While it appears that different levels of government are represented in this decision-making process, no interviewee mentioned any form of engagement with citizens with regard to the determination of the vertical split of nationally collected revenue. Questions around community participation and community preferences were posed to all government officials, and the analysis of their responses is carried out in a later

section of this chapter. These will help in assessing how transparent the overall budgeting process is.

The process of the vertical split of revenue is important in ultimately determining how much money any province can spend on the health sector and PHC. However, the size of national revenue allocated to the provincial sphere of government is not the only factor in determining equity in resource allocation to PHC across provinces and districts. Horizontal division of revenue is an equally important determining factor.. To make this point clearer, if fewer financial resources are allocated to the provincial sphere of government, this simply constrains the available resources for all provincial responsibilities, and not just PHC. Whether geographic distribution of PHC resources becomes more or less equitable will depend on how much each province receives, how much each province is willing to allocate to the health sector, and then how much each provincial department of health is willing to allocate to PHC across districts.

7.2. Horizontal Division of Revenue and Provincial Budgeting

In general, once provinces have received their equitable shares, based on the equitable share formula, they would then decide on the amounts of their total revenue that would be allocated to each sector, through their budgeting process. There are two budgeting processes here. First, provinces decide on how much will be spent on each sector (e.g health, education, etc). Second, and within the provincial department of health, the amount to be spent on PHC is decided.

A concern that was raised by an official with respect to the equitable shares formula is that although it is supposed to promote an equitable distribution of funds between

provinces, based on general indicators of health needs, educational needs, etc, the official claimed that it is a flawed process. The government official from a Provincial Department of Health pointed out that the equitable shares formula uses out-dated population figures that do not reflect the actual population sizes of provinces and also does not properly estimate the number of patients that cross provincial boundaries to seek health care. The official did not have exact figures of how much PHC services were provided to patients from other provinces, however. The validity of this official's comment on cross-border flows is questionable as this (cross-border flows) is usually not a problem for PHC services; rather it is a more common phenomenon with the use of tertiary services. No other interviewee felt that the process of distributing equitable shares was a flawed process. Further discussion with the interviewee who claimed that the equitable shares process was flawed revealed that the interviewee felt that the population figures used for his province underestimated the true population figure.

Based on interview data, the following are the key activities that inform the amount of funds from the equitable shares that are allocated to sectors within provinces. It is worth noting that these processes outlined below are the same for each province. They are based on guidelines set out in the constitution to foster co-operative governance and aligning of policy and implementation (National Treasury, 2006):

1. In August each provincial department submits a list of new programmes or expansion of programmes to their provincial treasuries that they would like funded in the next year.

2. Cabinet committees (including Heads of Departments and Members of the Executive Council (MECs) from the three provincial clusters³⁹ (social; economic; and governance and administration) define the criteria for evaluating all listed policy options (listed programmes). These criteria are weighted by their relative importance.
3. These criteria are used by each department to rank the programmes and policies that they have planned for the next year.
4. The end product is a list of programmes and policies for each department, ranked by priority. These, including the nationally identified priorities, are then the basis for deciding which programmes are funded. National priorities take precedence over provincial priorities, and are decided by 10x10s and 4x4s that would have taken place earlier in the year (between May and June).

These activities as listed above indicate that there is a channel for the national government, through the National Department of Health and National Treasury to influence provincial expenditure behaviour. However, although this process has been in place for some time, it is only recently that the National Treasury has started to enforce adherence to nationally agreed priorities in provincial expenditure behaviour. According to interviewees at the national level, in the past, even with national forums such as “ten-by-tens”, provinces enjoyed high levels of autonomy in deciding on how much they could spend on each sector and programme. What this means is that at that time, even after national priorities were decided in forums such as the “ten-by-tens”, provinces still spent their equitable shares grants as they saw fit, regardless of what the national priorities were. This created a situation where there was some disjuncture

³⁹ Health and education are under the social cluster

between national priorities and actual provincial expenditure on policies and programmes. Provincial expenditure patterns often did not reflect national priorities.

As a government official from the national level explained:

“...historically, there’ve always been attempts at inter-governmental coordination because of the location of policy at national level and funding decisions at provincial level, and that creates inconsistencies. ...many national departments have expressed the view that they are really finding it impossible to function given the inconsistencies in their own arrangements [being responsible for overall national policy development and not having any say in the way available funds are spent]”

Information from interviews with officials within provincial Treasuries revealed that in recent years, the national government has become more and more involved in provincial budgetary decision-making. These officials claim that this has been to ensure that there is better coordination between nationally identified priorities and provincial expenditure on these priorities. One provincial official stated that:

“The whole system has changed significantly in the past few years. Three years ago [2004], the equitable share was unconditional and there were probably some broad priorities that were outlined in the MTEF [Medium Term Expenditure Framework]. 2006, you started to get the Budget Council memorandum and allocation letters [from the National Treasury] saying we have allocated X amount additional to your (province) equitable shares and the expectation is not only will it go to these priorities but that this percentage of it will go to this priority and that’s something completely new element. Its one thing to say that generally we think the province should spend their money on job creation and social development and poverty alleviation, it’s another thing to say that we are giving you this equitable share money and we expect that 50% of it is going to go to the following 5 priorities. That’s what started happening in 2006, what happened in 2007 was even more so. We had X amount for additional equitable share I think a full 80% of it was designated by national – that is the equitable shares not conditional grants”.

At this point, it is important to clarify some of the statements made by the interviewee above. The MTEF provides a framework for government expenditure in three-year cycles (expenditure funded through the equitable shares to provinces and local governments). Within this framework, the size of budgeted expenditure for a particular year based on previous MTEF projections is known as the baseline budget for the year. So, the actual expenditure in each year could be more than the baseline budget (and usually is). The additional funds for the equitable shares (over and above the amount set out by the baseline budget) are those that the interviewee referred to as being more “conditional”. Also, the interviewee indicated that some health sector programmes have received additional funds through these means, although the interviewee was not aware if PHC was one of such health sector programmes.

The intervention of the national government in provincial fiscal affairs was confirmed by an official of the National Treasury. The official explained that provinces were now being pushed to adhere to spending patterns in line with national priorities. In response to the question on how the national government has managed to achieve this, he responded that:

“...Its largely force of arguments and pressurising, and in a sense embarrassing provinces that have been seen not to be complying with the national priorities, so what happened in the last budget is that there was a very strong articulation of national priorities and the cost”.

The official noted that this had a positive impact on intergovernmental coordination, with provincial spending assuming a better reflection of nationally determined priorities. However, the negative effect has been that provincial-specific priorities are

now being squeezed out. What was apparent from interviews on the subject was that pressure on provinces to spend according to nationally defined priorities came from the National Treasury. This confirms that the National Treasury indeed wields considerable power in determining financial allocations to provinces and provincial spending behaviour.

7.2.1 Budgeting for Health and PHC

Based on interview data, the size of PHC budgets within provinces depends on the priority of the health sector relative to other sectors; the relative priority of PHC within the health sector⁴⁰, and the relative priority of PHC to other programmes in other sectors within the province. Consequently, the size of the health budget in any province will depend on how well the Departments of Health (province and national) present their policy priorities at sector forums (such as 10x10s and 4x4s) that determine the overall government expenditure priorities. As previously described, budgeting for sectors (including health) at the provincial level involves submissions of spending priorities and budget proposals by all provincial sectors to the provincial Treasury. These bids are evaluated by the provincial Treasury to see if they are in line with the three-year fiscal framework, national priorities (as agreed in 10x10s), and the indicative budget available for the province.

Interview data further revealed that there is a collective bidding process by national departments (in consultation with their provincial counterparts), which is a national bid for funds that informs the size of equitable share transfers, and a local bid at the

⁴⁰ Health programmes under the provincial government are: (1) Administration (2) District health services (3) Emergency health services (4) Provincial hospital services (5) Central hospital services (6) Health sciences and training (7) Health care support services (8) Health facilities management

level of the province by provincial sectors. The bids at the provincial level are usually in line with nationally agreed priorities, but they also address any needs peculiar to a sector within the province. As a provincial treasury official commented:

“You may have a local requirement for some other thing that is a local anomaly, then you get a bid at the province level”

This province-level bidding process, which should lead to priority-led allocations to sectors within provinces (the hallmark of an ideal fiscal federal system), is becoming increasingly constrained because more and more of the equitable share funds are being transferred with instructions from National Treasury on what these funds are meant for. What this means is that programmes or policies that are the responsibility of provinces, and are on the national priority list, have a better chance of being adequately funded by provinces.

This recent development in intergovernmental relations between provinces and national government ensures that the provincial allocations to health programmes are a better reflection of nationally identified priorities. Under this dispensation, the realisation of a more equitable distribution of health and PHC resources between and within provinces stands a better chance, as equitable shares are no longer completely at the mercy of provincial budgetary negotiations. PHC is considered a priority by the national Department of Health. National health sector Strategic Plans since 2004 and the 2006 Annual National Health Plan⁴¹ of the National Department of Health have all listed the strengthening of PHC as a key priority (Department of Health, 2004,

⁴¹ These strategic plans are developed collaboratively by the NDoH and the Provincial departments of Health. Out comes of the “ten-by-ten” meetings inform the development of these plans.

Department of Health, 2006, Department of Health, 2006). Also the national government, as stated in its 2006 Budget Review (National Treasury, 2006), considers the improvement of access to PHC services a central policy priority.

Nevertheless, an official from a provincial treasury confirmed that the provincial government still has authority to (and in some cases does) refuse to allocate their funds according to national priorities but rather according to their own priorities. This is also confirmed by an official from the NDoH. These interviewees preferred not to elaborate on this and did not want to cite examples of which provinces had refused to allocate their resources according to national priorities⁴².

Within provincial departments of health, budgeting for primary health care requires submission of budget proposals by health districts (the providers of PHC services) to the provincial health department. These budget proposals are aggregated to generate a provincial budget proposal for PHC (or district health services). Almost all district managers believe that the budget proposals (district plans) they submit to their respective provinces do not influence their allocations. For example, a district manager commented that:

“...we submit our budget tools ... we do almost something like zero-based budgeting... we submit it to our head office in X and then basically that’s the last we hear of it until we are told here’s your budget for the year...”

This response on the use of district plans by provincial health authorities was generally the same as for most interviewees at the district level. However, in a couple

⁴² Interviews were conducted with a representative of the NDoH present and this may have influenced the decision of the interviewees on further elaboration.

of districts in the Western Cape, the managers felt that although the provincial departments considered their budget proposals, the amount of money the district eventually received was dependent on the total health budget and historical expenditure of districts. This was confirmed by a provincial official from the same province:

“...we give each hospital and each clinic the budget they had in the previous year in real terms – so we add inflation. And then we ask them: what are the real critical needs that they have? We would consider those if additional funds are available”

In the Eastern Cape, the process of aggregating district budget proposals apparently does not work at all. Some districts actually do not send in budget proposals. All district managers that were interviewed confirmed that they never receive exactly what they proposed. In all cases, the budget they eventually receive is lower than what they had proposed. Officials admitted that PHC budgeting is generally based on historical expenditure.

What is interesting though is that while all interviewees at the district level claim that they never received as much as they ask for in their proposals, real expenditure on PHC (as seen in chapter 6) has consistently increased for almost all health districts in South Africa.

Decentralisation of the health system requires the transfer of some decision-making authority to lower administrative levels. Within a district health system, district level managers need to have appropriate authority over decision-making for finances as this is critical for effective provision of PHC services to their communities (Reynolds et

al., 1994). Indeed, early policy documents on the development of the district health system acknowledged that the devolution of “sufficient powers” around finances and personnel to managers of districts was necessary to promote accountability and efficiency (HPCU/DoH, 1995). However, since then (more than a decade ago) research has shown that district health management have very limited authority around finances (Thomas et al., 2005, The Local Government and Health Consortium, 2004). Data from interviews confirms that up until the time that the field work for this study was carried out (2007), this has not changed.

7.2.2 Other Issues that Influence the Size of PHC Funds

Apart from the budgetary processes, there are other factors that influence the size of funds available to PHC. An official of the National Treasury identified some limitations to the equitable financing of PHC. First, while the amount of funds allocated to PHC across provinces has increased in the last 3 years, there has been a deterioration of performance indicators in certain areas such as maternal health and tuberculosis control in certain provinces⁴³. These poor performance indicators have negated NDoH bids for additional funds to health and PHC, as National Treasury is concerned that funds already allocated are not being effectively utilised. Although the National Treasury is keen to assist the health sector in securing adequate funds to carry out its functions, the performance of the health sector has been a drawback in this regard. Of greater concern is that provinces with relatively poorer performance indicators are those that have been previously less funded. In addition, as commented by a National Treasury official, the NDoH is not giving provinces sufficient support

⁴³ Poor performance indicators in terms of health status and cure rates for tuberculosis and maternal health may be as result of the HIV and AIDS epidemic, although this was not mentioned by any interviewees.

in terms of clear norms and guidelines on how much they should spend on PHC and how to achieve these targets.

“...I think there’s a strong sense by many that the NDoH needs to be more active in its norms and standards and support role ... we are not talking about NDoH interfering in delivery but we are talking about NDoH setting much clearer norms and standards and supporting provinces to deliver on those”

Also, the National Treasury is of the view that NDoH does not adequately articulate and back-up the collective bid for the health sector with “real hard information”. This has also reduced the effectiveness of the NDoH to secure additional funds that could be used to support a more equitable distribution of resources. A provincial health official commented that:

“...in terms of the dynamics of increasing the funding to the health sector, our perception is that they [NDoH] have not done profoundly enough work to convince Treasury [National Treasury]. I don’t think Treasury needs convincing. I do speak to them [Treasury], they are waiting for us to present the case: why should we get more money? I think that is my biggest concern at the moment is that NDoH does not have a strong enough economic unit to present a strong enough argument to Treasury as to why we should get more”

7.2.3 Summary

With the increased “conditionality” of equitable share grants, provincial budgeting processes have less influence on the total health budget than was the case in 2001/02. From interview data, district budget proposals also have very little influence, if at all, on the size of the PHC or overall provincial health budget. Interviews with officials

did not reveal any form of “conditionality” of funds for PHC. What is true is that priorities as developed by all provincial Departments of Health and the NDoH take precedence over individual provincial priorities. This has potentially reduced the autonomy enjoyed by the provinces and the provincial Departments of Health in determining the overall health budget and PHC expenditure outlays. A key point to note though is that provincial Departments of Health are part of the decision-making process for defining national health priorities. In essence, if a province(s) has health priorities that need more funding it stands a better chance to get increased funding if this health priority gets onto the national agenda and is identified (by consensus with other provinces and NDoH) as a national priority.

Clearly, nationally determined priorities have some influence on the division of equitable share revenue between provincial sectors. The implication for the equitable distribution of PHC funds between and within provinces depends on whether the NDoH has the ability and commitment to drive this initiative in the national prioritisation processes. An official of the NDoH stated that the NDoH has been successful in getting the equitable distribution of PHC allocations on to the national prioritisation process. He also explained that the shift towards a more equitable distribution of PHC funds across districts and provinces was initiated by the NDoH; and also that the health component of the equitable shares allocated to provinces incorporates the cost of providing a comprehensive PHC package, determined by utilisation rates and unit costs.

However, there is no indication in published reports on budgeting and resource allocation processes to confirm that equity in PHC resource allocations has been

included in the national prioritisation process. Also, the claim that the NDoH is responsible for the shift to a more equitable outlay of PHC expenditure (convergence of PHC per capita expenditure) could not be confirmed in any published work. What is true is that the NDoH had in 2000 defined a set of norms and standards⁴⁴ as a guideline for the provision of a PHC package to ensure uniform quality of service throughout South Africa (Department of Health, 2000). This may have set the stage for substantial increases for PHC allocations to districts that were extremely under resourced, and could not deliver on the defined norms and standards. In addition, and as will be pointed out later, none of the interviewees at the provincial or district level thought that the NDoH had anything to do with the shift to a more equitable distribution of PHC expenditure. As for the claim that the health component of the equitable shares incorporates the cost of providing a comprehensive PHC package, this could not be confirmed. However, given the changes in PHC per capita expenditure observed from 2001/02 to 2007/08, this is plausible.

In the current dispensation, and based on interview data, National Treasury is aware that the health sector needs more funds, and so is open to releasing more funds. National Treasury believes that the onus lies with the NDoH to articulate good evidence for extra funds and ensure that provinces are providing high quality care with good indicators of performance in terms of improved health status and higher cure rates. Only when the NDoH can do this would National Treasury be open to releasing more funds to the health sector or specifically, PHC. Examples given by the National Treasury concerning poor performance were around maternal health and tuberculosis.

⁴⁴ The norms and standards proposed was in summary around the types of services expected to be provided at PHC facilities, the appropriate mix of staff, types of equipment to be used at different levels of facilities, the types of drugs and the tasks / roles of PHC staff

South Africa has one of the highest HIV and AIDS prevalence rates in the world (Kaiser Family Foundation, 2008). Maternal health and the incidence of tuberculosis can be seriously affected by HIV and AIDS. At the time these interviews were carried out, there was no official antiretroviral programme in place. It is surprising that no official from the departments of health (National or Provincial) mentioned that their performance indicators could have been affected by the HIV and AIDS epidemic.

The budgeting process from the district level seems to contribute little to the overall provincial health budget. This is unfortunate as this limits the district's ability to respond to the needs of the population it serves. Also the use of the historical-led approach to budgeting at the province level further limits the possibilities for shifts in PHC funds to achieve a more equitable outlay between health districts.

7.3. Influence of key stakeholders

The key stakeholders involved in the financing of publicly provided health and PHC services are the Cabinet, the Budget Council, the National and Provincial Treasuries, the National and Provincial Departments of Health and the districts (part of the provincial health authority). Based on the current process for determining health budgets, the NDoH potentially has substantial influence in determining health budgets. This is because the NDoH coordinates the national prioritisation process for the health sector. Provincial Departments of Health also exert considerable influence on the outcomes of budget processes, as they have the authority to determine the actual expenditure budgets for PHC, and are involved in determining national health priorities. National Treasury's role in ensuring that provincial expenditure outlays

reflect nationally determined priorities strengthens National Government's role in provincial budgetary processes.

Currently, and based on interview data, the NDoH and the provincial Departments of Health play a major role in the process for determining the overall size of the health sector budgets and therefore the PHC budget. However, because of poor output indicators (cure rates for TB for example), especially in previously less well funded provinces and districts, and that the NDoH is not able (from the National Treasury's perspective) to properly articulate the need for additional funds, the influence of the NDoH and provincial Departments of Health is substantially limited by the National Treasury. Provincial Treasuries essentially work within broad guidelines as defined by National Treasury. Within provinces, the provincial Departments of Health also submit budget bids to their provincial Treasuries. While operating within the guidelines as defined by national health priorities, provincial Departments of Health are able to influence the size of their budget depending on the strength of their bids. Within each province, district managers have very little (if any at all) influence on the health budget. It appears that their submissions in many cases are not considered in the budgeting process. They only have some influence in deciding how provincially-determined PHC budgets are allocated to various cost centres.

It appears that Provincial Departments of Health, NDoH and the National Treasury wield considerable influence over the outcome of budgeting processes for health and PHC. Provincial Departments of Health have less control over budgetary outcomes in more recent years. The NDoH is now in a better position to influence allocations to health and PHC since it coordinates health sector strategic plans (which inform

national health priorities) and the National Treasury in recent times enforces adherence to nationally agreed priorities. However, the National Treasury appears to wield the most power in budgetary and resource allocation processes for the health sector. This is because the National Treasury has the authority to agree to or reject proposed budgetary bids for additional funds by the NDoH and provincial Departments of Health

Officials at all levels were asked to comment on the convergence of PHC expenditure per capita between districts in South Africa. Most of the officials were aware of these shifts but did not know who was responsible for them. In the Eastern Cape, officials attributed shifts in PHC to areas of greater need to the provincial health department. The author conducted a follow-up interview with the National Department of Health on the matter. The interviewees stated that the shift towards convergence in PHC expenditure across districts and provinces was initiated by the NDoH through the use of norms and standards for benchmarking PHC expenditure per capita. Also, the interviewees cited the abundance of research evidence on the disparities in PHC allocations across provinces and districts as an influencing factor in changes in PHC allocations. Interestingly and as previously explained, no official interviewed at the province or district level mentioned the use of norms and standards from the NDoH as a guide to PHC allocations. What this means is that NDoH may have come up with a ZAR 300 per capita benchmark for financing primary health care, but have failed dismally in communicating this to their provincial counterparts. This supports the assertion by Thomas et al (2005) that there is a lack of effective communication between levels of government within the health sector in South Africa.

Most of the interviews with officials (national, provincial and district levels) admitted that they have been aware of the trends in PHC expenditure across the country. They also admitted to awareness of changes in PHC per capita expenditure in different provinces and districts outside their provinces, and the inequities in PHC expenditure between and within provinces. According to them, information on these was obtained through numerous research publications that had been carried out, direct interaction between government officials and researchers and non-governmental organisations such as the Health Systems Trust⁴⁵ (HST), and direct interaction between government officials from different provinces and levels of government. According to them, they believe that knowledge of the inequities in PHC has made a strong case for additional resources to be committed to certain districts that are well known to be historically socio-economically disadvantaged.

7.4. Community Participation and Health Policy

All interviewees confirmed that there is some or other mechanism to elicit community preferences and views regarding the provision of PHC services. All districts acknowledged that constitutionally established structures such as clinic committees and hospital boards were operational in their districts and provinces. However, most district managers said that these structures were not working very well. Major reasons for this were the lack of attendance of committee members and lack of understanding of members' roles. In their (district managers) opinion, these structures are not effective in drawing community views, preferences or complaints into the policy agenda. In cases where the communities have the opportunity to air their views, they

⁴⁵ HST is a non-governmental organisation that works with the public health sector primarily to promote equity and strengthening the health system

do not see the desired change in the provision of health care. A district manager commented that:

“The good thing is that we do have these meetings with the communities so that at least we’re not hiding away or anything like that – so that does help. But the community say that you keep saying that you can’t improve the service here because you don’t have money to appoint staff, and what are you doing about it? And all you can say is that we are asking X [provincial authority] and X says you can’t fill posts because there is no money”

However an exception was a district in Limpopo where the district manager stated that these structures work very well. However, the manager was quick to say that their major limitation was adequacy of funding to respond to the revealed needs of the community. Interestingly, all provincial officials were of the opinion that their mechanisms for eliciting community views and preferences work very well. For example a provincial health official commented that:

“We have a complaints and compliments system in place in each and every facility. People do not have to expose themselves, and these are monitored on a monthly basis. We are lucky, currently we get more compliments than complaints. We also do annual waiting time surveys. We try to reduce waiting time. At the governance level we have Provincial Health Council, an advisory body to the Minister and acts in accordance with the Act... Also there are individual health committees and health forums at the local level, and all these are working very well; we don’t have a problem. We have created enough space for people to air their views... our Standing Committee is very open, our Chairperson opens the doors of the government to the people, and they tell us whatever they want to”.

Closer examination of interview data revealed that the provincial authority has alternative means for eliciting community inputs such as health summits and “Imbizos”⁴⁶, where top ranking provincial health officials met with community members. However, these meetings between officials of the Provincial Department of Health and the community do not happen on a regular basis.

On whether community views influence health policy and budgets, officials at the district level thought that community views were not taken into consideration. However, provincial officials believed that communities’ views were well represented in the policy agenda. With respect to the provision of PHC, the districts are responsible for service delivery and are closer to community members. Based on this assumption, it is therefore more likely that health districts are more aware of any changes made with respect to service delivery based on communities’ inputs. Also, the historical-incremental approach to budgeting within the province, does not ideally allow for any radical changes in service delivery based on community preferences. A key question then is that if communities’ views are not incorporated into health policy, how does the province or the district respond to the health needs of the people? For the PHC approach to function effectively, it should be responsive to the needs of the communities. In the absence of or limited participation of the community in decision-making for PHC service delivery and financing, the responsiveness of the health system to community needs, and the level of accountability of the health system to citizens is compromised.

⁴⁶ Imbizos are gatherings between government officials and community members held periodically to elicit community views and preferences. Government officials would move from one district to another to interact with the community members.

7.5. Financing Options for PHC

PHC activities have been financed from equitable shares, through inter-sectoral negotiations and intra-sector (within the provincial health authority) budgetary negotiations. Provincial PHC budgets and PHC allocations are largely determined by the provinces, with the National and Provincial Treasuries playing a monitoring role on overall expenditure (their roles are increasingly influencing budgeting processes at provinces). Interviewees were asked if the funds for PHC should be transferred through another mechanism that protected the budget for PHC to ensure adequate and equitable funding. Most respondents did not see the necessity for the funding of PHC through some protected mechanism like conditional grants or having the funds for PHC ring-fenced. From a National Treasury perspective, it is believed that financing PHC as a conditional grant is not necessary considering the significant growth in PHC expenditure per capita experienced in recent years.

“...I think if it [PHC expenditure] hadn't been growing strongly, we would have been much more receptive to mechanisms to ring fence but because it's growing so strongly, we haven't felt the need to do it. In fact, ... we're a little concerned at some of the constraints in hospital budgets, you know, because there are some things in health that are being funded, there are some things that are not being funded and, for example, some of the hospital budgets have been constrained for a decade and the services in some hospitals are really, we think, woefully inadequate. So, I'm not really... not that worried about the growth in provincial primary health care budgets, what I'm more worried about is the limited progress on district level allocation [referring to improving equity in allocations between districts]”.

An official from the NDoH also maintained that it is not necessary to protect PHC as a conditional grant. The official argued that the same goals (increased budgets for PHC in areas that have previously been relatively under-funded) could be achieved

with implementing norms and standards⁴⁷. The official added that the use of norms and standards poses fewer problems for financial management. Using norms and standards gives the provinces an objective to aim for; using a conditional grant sets a definite amount that should be spent on PHC in a financial year. The problem with the use of conditional grants is that, unfortunately, those provinces that have greater health needs are those that are least able to utilise additional funds. So, if PHC is funded as a conditional grant, these provinces may not be able to fully utilise the funds ear-marked for PHC. Failure to use up PHC budgets from conditional grants would attract budget cuts and other financial management disciplinary actions. Such repercussions could further reduce the districts' or provinces' capacity to motivate for the needed additional funds. As an official of the NDoH commented:

“Well, I think there are different ways of doing it, you know obviously if you can make it a conditional grant you are making it conditional upon a number of things. The question is what will it be conditional upon? The second thing to say is if you have a norms and standards approach it reaches the same goal. The problem with mandating that in a way that a conditional grant might do is absorptive capacity, so you might get the same result. You are getting more money but you are not able to spend it because 60% of the funds will be human resources. These are the same provinces that have difficulties in retaining and attracting personnel, so it might not give you the intended aim because of these other barriers, supply...issues....”

“I think there are two things here, one is that I think provinces can do more to strengthen primary health care. Secondly, national can provide more guidance to provinces around primary health care even without changing the financing.....I think that's missing. So even without changes to fiscal federalism we can do better”

⁴⁷ Norms and standards in this case refers to setting a specific amount of money that should be spent on PHC for each individual within a district or province

The view that provinces should, on their own, be able to ensure that PHC is adequately and equitably funded is held by most interviewees at the national level. They believe that since PHC has been identified as a priority programme within the health sector, budgetary allocations within the PDoH should reflect this. Provincial Departments of Health, they felt, should be “mature” enough to adequately fund PHC without national prodding. One official commented that national and provincial treasuries did not “like” conditional grants. Specifically, the official said that conditional grants reduce the amount of control that provincial treasuries have within the province, and so are opposed to them. No official (who commented on options for financing PHC) proposed some form of protection for PHC funds.

Interviewees were asked whether there were any guidelines from the NDoH or the provincial Departments of Health that influenced the size of PHC budgets or expenditure at the province or district level. One official at the district level mentioned a “national utilisation rate” for PHC facilities as a guide. All the other interviewees were not aware of any guideline from the NDoH on PHC. In fact an official from a provincial Department of Health said:

“...That is also a problematic situation; I think I will expect the NDoH to give us more guidance in that; to tell us like we should have ZAR 10 [for example] per member of the population for PHC. Now we don't receive that guideline”

Interestingly, an official of the NDoH noted that they (NDoH) had set the cost of the PHC package at ZAR300 per capita, and this was used as a benchmark to see how provinces were funding PHC. None of the provincial or district officials interviewed seemed to be aware of this benchmark, or more accurately, did not mention it in response to the question. Further investigation into the claim by the NDoH that they

had set a benchmark for providing the full PHC package revealed that indeed the NDoH commissioned a study that recommended ZAR 300 per capita as a ball park estimate when planning for comprehensive PHC delivery (Chitha et al., 2004). It would seem that the NDoH has not been effective in communicating this guideline to provincial Departments of Health or health districts. This lends credence to statements made by some officials that the NDoH has not been “pulling its weight” in terms of monitoring and supporting the provision of health care. This is potentially a weak link in the drive for achieving any adjustments in PHC financing between provinces and districts. However, given the changes in PHC per capita observed in chapter 6, it appears that most provinces indeed attempted to attain a certain benchmark for PHC per capita expenditure. It is quite surprising that no interviewee at the provincial or district level admitted to knowledge of this ZAR 300 per capita benchmark

7.6. Expenditure Capacity and Sufficiency of Funds for PHC

A key issue in the progress towards a more equitable distribution of PHC funds is the ability of districts and provinces⁴⁸ that are less well funded to utilise extra funds adequately. Interviewees were asked if the Provincial Departments of Health (head office) and the districts had sufficient capacity to manage health and PHC funds (and any extra funds for achieving equity) that were allocated to them.

Most officials thought that the provincial authorities in general had sufficient capacity to manage and utilise any extra funds allocated to them. However, they thought that most districts did not have sufficient managerial capacity to adequately manage

⁴⁸ Although the district is an administrative part of the province, a distinction is made between the two to allow for assessing these two administrative structures. A provincial authority therefore refers to the provincial head office.

finances allocated to them. All interviewees who responded to this question cited the lack of skilled personnel in financial management, and in some cases, a general lack of management level personnel. Previous studies have shown that capacity constraints to the effective absorption of PHC resources are not only limited to lack of human resources. For example, a study by Thomas et al (2005) concluded that other capacity constraints such as: unsupportive environments for managers, lack of adequate representation of the communities, ineffective communication and coordination between levels of government affected districts' abilities to varying degrees in absorbing additional resources. So, it is interesting that most interviewees focused only on the human resource aspect of capacity. Unfortunately, the districts that experience the greatest lack of absorptive capacity are those that are in the rural areas, and are most deprived. One provincial Department of Health official commented that:

“...in the Eastern Cape the big problem is turnover of staff. So you have staff, you train them, they are enthusiastic, they start learning things and then they move, then you have to start from scratch”

Another PDoH official related the lack of capacity to inability to effectively utilise additional resources:

“No, I don't think the capacity is there. You know, a few years ago there was a concerted effort to move money to areas that were previously disadvantaged, but they were not able to spend it, which meant a reverse in equity”

This opinion is shared mainly by officials from the Eastern Cape. Interviewees from the Eastern Cape admitted that their provincial Department of Health had in recent years significantly increased PHC allocations to districts that were considered to be

very poor, and these districts failed to effectively absorb the additional funds allocated to them.

These results are interesting in the sense that with respect to management of PHC funds, the districts' lack of capacity is seen as a provincial lack of capacity by National Treasury and NDoH.

The lack of personnel in many rural districts and provinces has reduced their capacity to use extra funds allocated to them. In addition, such districts and provinces find it difficult to attract staff to work in those areas. This is a recognised problem within the South African public health system. This issue of lack of absorptive capacity within health districts (especially those in the rural areas) has been raised in previous studies (Masilela et al., 2001, Lehmann and Makhanya, 2005, Okorafor et al., 2005, Thomas et al., 2005).

In 2003, a rural allowance for health professionals was instituted to attract health personnel to rural areas⁴⁹. Research on the effect of this initiative shows it may have had some effect in retaining staff working in rural areas. However, the study showed that besides financial considerations, other factors such as career development, job satisfaction and postgraduate education opportunities, are equally important in influencing the site of practice for health personnel (Reid, 2004). The health sector is largely human resource driven, and so areas that are under-staffed are more likely to have lower per capita PHC expenditure. For example in the 2006/07 financial year,

⁴⁹ Rural allowance ranges from an increase of 8% to 22% in salary depending on the staff position and whether the health personnel works in a rural area or a "rural node" as defined by the Integrated Sustainable Rural Development Strategy (ISRDS). ISRDS nodes are rural areas that are identified as requiring the most assistance in the improvement of welfare of the people.

53.6% of total provincial health expenditure was on compensation of employees (National Treasury, 2007).

Lack of personnel is therefore a major constraint to achieving an equitable distribution of PHC resources in South Africa. In general the more urban provinces (Gauteng and Western Cape) and districts have no problems in attracting the right mix of personnel, and these areas have relatively lower health needs and lower levels of deprivation than the more rural areas (districts and provinces). Their expenditure on PHC is generally higher partly because they are relatively well staffed and have the requisite managerial skills to make good use of any extra funds allocated to PHC. On the other hand, the more rural provinces and districts fail to attract staff, are generally under-staffed and so have lower expenditure. Now, an additional problem for most of these under-staffed areas is that their lack of managerial skills reduces their capacity to utilise any extra funds allocated to them to improve on the quality or quantity of health services delivered. As an official mentioned:

“...so the key thing, really, in all of these initiatives is human resource management. If we can't fix that up, you can't throw money at the initiative”

All officials at the province and district level said that funds for PHC and health in general were not sufficient to adequately deliver PHC services to their populations. Only one district manager in Gauteng believed that if funds allocated to districts were utilised efficiently, the funds would be enough. In addition, an official from the NDoH said that provinces and districts always claim that they do not have enough funds. From the data on PHC per capita expenditure use in chapter 6, average per capita PHC expenditure for the country was ZAR 238 in 2001/02 and increased to

ZAR 302 in 2007/08⁵⁰. Clearly, there has been a substantial increase in allocations to PHC across the country. An NDoH official stated that:

“..if you go to provinces and districts, they will always say that they are under funded for the whole range of services that they are providing, but at the same time, they are not able to spend the money that has been given to them”

Follow-up interviews conducted in 2008 revealed that the National Treasury has recently approved the disbursement of funds specifically to support an audit of PHC facilities in a bid to identify where there are gaps in the availability of required PHC facilities and resources. Also, interviewees stated that the relationship between the National Treasury and the NDoH has become better, with the National Treasury being more supportive and understanding in dealing with issues such as the lack of capacity to effectively utilise resources in certain areas.

7.7. Perceptions on Equity and Criteria for PHC Allocations

On the issue of equity, most officials cited either “equal expenditure per capita” or expenditure based on disease burden as a basis for allocating PHC funds to achieve equity. The use of population size as basis for equitable allocation of resources is a basic approach to achieving equity, important nonetheless. Population size is an indicator of relative need, but if used alone, the process neglects the differential health needs (based on other factors such as burden of ill-health, socio-economic status, environment, etc) of individuals that make up the population. Disease burden is also a good indicator of need that can be used to inform equity-targeted financing. However,

⁵⁰ Using the Consumer Price Index from Statistics South Africa, with base year of 2001, the index for 2005 is 121.09

a drawback of this approach is that statistics on disease burden are usually collected from facilities, and so the measure of disease burden may well depend on the levels of availability and utilisation of health care facilities in different health districts. Nevertheless, it is encouraging that most officials understand equitable financing of PHC as the financing of PHC according to the relative needs of each district.

In general, interviewees agreed that PHC was a priority. This was a unanimous perception. The strengthening of the district health system in providing PHC is a priority policy goal in the Eastern Cape, Limpopo and the Western Cape as specified in their 2007/08 Annual Performance Plans (Provincial Government of the Western Cape, 2007, Limpopo Department of Health and Social Development, 2007, Eastern Cape Department of Health, 2007).

Some of the respondents also cited specific disease programmes as major health priorities. These were HIV/AIDS, tuberculosis and lifestyle diseases such as diabetes, hypertension and cardiovascular diseases. Concerning the distribution of PHC funds between districts, interviewees admitted that allocations were not entirely distributed according to health needs. Budgeting based on historical expenditure still prevails, although indicators such as disease burden increasingly influence allocations. In general, interviewees thought that allocations between districts were not equitable, but were becoming more equitable. This is confirmed by the changes in PHC per capita expenditure presented in chapter 6.

Government officials' views on equity and the level of priority placed on PHC services are encouraging. The implication of this is that they will be less resistant to

changes in the financing pattern of PHC in support of equity. On the other hand, the use of a budgeting process that is based on historical expenditure limits the progress in the shift of PHC finances for achieving equity. Importantly, an official raised a concern that equity is not the only concern for the provision of PHC services. It is important that districts and provinces are able to use resources allocated to PHC efficiently, effectively and the services should be provided in an appropriate manner.

“ quality cannot be measured by equity alone ... efficacy, efficiency, equity, affordability, accountability and appropriateness. If you bring all these into equity then we can talk”

This raises the important issue of an overall well-functioning health system. Although equity is a key policy priority, without these other qualities, any shifts towards a more equitable distribution of resources may not result in intended social benefits. Although this study does not focus on these other issues, they are addressed in the last chapter of this thesis.

On the question of what ‘equity’ means, and how it should be defined for operational purposes, most district health managers were not sure what it meant and refrained from answering the question. Only one district manager suggested that per capita expenditure should be the basis for assessing equity. It is of concern that managers at district levels are not confidently knowledgeable about what equity means and how it can be used. Responses from provincial and national level officials were more encouraging. Some provincial officials thought that equity in health care referred to equal access to high quality services for everyone. Other responses from provincial officials are presented below:

“My definition will be the same service for everybody ... it must be in terms of quality”

Some felt that equity in allocations means equal per capita expenditure.

“Well we would look at allocations per capita, so that a person who lives in Maluti, we’d spend the same on that person as we spend on a person from another area”

Others thought that equity in allocations should require the consideration of differential burden of disease.

“The disease profile would be one of the things I would also look into”

An official at the NDoH explained that health needs should be the basis for allocating health resources to achieve equity. He explained further that health needs should be measured in terms of trends and prevalence of diseases in different areas.

What is clear is that while most officials at the level of the province and the national government have an idea of what equity means, most district managers do not understand what it means. Considering that district managers are responsible for preparing budget proposals, it is discouraging that they then cannot motivate for increases in their funds on the basis of equity, since they do not understand equity and how it can be achieved. At the risk of being cynical, one can say that in the current dispensation their understanding (or lack of it) does not matter as district managers have no influence on the amount of resources allocated to their districts.

7.8. Comparisons Between Relatively Higher and Lower Funded Provinces

Comparison of interview data from the historically higher funded provinces (Gauteng and Western Cape) and lower funded provinces (Eastern Cape and Limpopo) revealed that information from the two groups were similar with the exception of two areas. Areas of similarity include: health priorities, relative priority of PHC, key players involved in budgeting for health and PHC, guidelines for determining PHC allocations, and who has been responsible for the convergence in PHC per capita expenditure.

The two areas of dissimilarity are around: personnel; and the relationship between the provincial Departments of Health and their Treasury counterparts.

Gauteng and Western Cape officials stated that although they still needed skilled personnel in management positions, they were coping very well with the number of management staff they had. For Limpopo and Eastern Cape, they acknowledged a shortage of staff in the areas of administration, financial management and health personnel. They essentially have a more acute shortage of human resources than Gauteng and Western Cape. This is not surprising as Gauteng and Western Cape are more urban provinces, while Limpopo and Eastern Cape are more rural. It may well be that higher PHC expenditure per capita experienced in the Western Cape and Gauteng could be partly attributed to personnel costs.

Interview data revealed that the provincial health departments of the Western Cape and Gauteng engage with their provincial Treasuries very often. Their Treasuries were always aware of their key priorities, problems and plans in as much as they related to

budgeting and resource allocation. It appears that there is a good deal of cooperation and understanding between them. As commented by a provincial Treasury official in the Western Cape:

“...provincial Treasury has a tight relationship with provincial health and they all go up to the 10x10s and 4x4s together...”

On the issue of interaction and cooperation between the provincial Treasury and the provincial Department of Health in Western Cape another provincial Treasury official said:

“It’s on a whole number of different levels, so I couldn’t say. It’s everything from informal to HOD [Head of Department] level. Some of the interactions, for example in the budget office, we have an economist who is assigned to the health department and she will be in regular contact with them. Both with their budgeting side and their CFO [Chief Financial Officer], HOD, and their programme managers... So for instance, a good example (of cooperation) is before we have the ten-by-ten, we got together with them here back in the province and said what are we going to put on the table? What are the key issues that we want to take to the national level about this. I think most of the provinces did not do that; you could tell because once they come to the meeting, their Treasury is saying something different from their provincial departments. We had a conference beforehand and talked about what they wanted to put on the table and how we could support them putting it on the table, and what did not make sense as well. Even if we don’t agree, at least we would have had that conversation before the national meeting”

With this kind of relationship, the Provincial Departments of Health get support from their Treasury counterparts in bidding for additional resources. Unlike the Western Cape and Gauteng, the provincial Treasury and provincial Departments of Health in

Limpopo and Eastern Cape do not have this kind of relationship. This is confirmed by a statement from a provincial Treasury official in the Eastern Cape:

“...look, I must be frank with you; we do interact [with provincial Department of Health] but not as often as one would want it to be ...in summary there is a weak link between Treasury [provincial] and departments ... you know the problem with the intergovernmental relation is that when departments outline their policy areas, when they embark on their strategic plans, provincial Treasuries are left behind”

The official attributed this weak link to the fact that the provincial Treasury is understaffed and so cannot afford to engage with the various departments as regularly as they should.

7.9. Summary and Discussion

Analysis of quantitative data in the previous chapter showed that the geographic distribution of PHC expenditure has become more equitable in recent years, notwithstanding the prediction of the conceptual framework developed in this study. This chapter has reviewed and analysed the data from qualitative data that focused more on processes around intergovernmental arrangements, resource allocation and budgeting.

Based on interview data, it appears that the process of the vertical split of revenue to the different levels of government allows for a consultative process that promotes financing of sectors based on overall government priorities. On the assumption that this is correct, it is a good foundation for promoting an equitable distribution of resources for any priority, whether it is PHC or some other programme. The equitable

shares grant, from which health and PHC are funded, is distributed to each province based on a supposedly equity-promoting formula. Because the equitable shares are unconditional grants, provinces can, and have been allocating equitable share funds to sectors as they see fit.

Budgeting for the health sector involves assessment of health priorities, in relation to priorities in other sectors. Provincial Departments of Health, the NDoH and the National Treasury are all involved in this process. The strength of this process is that identified priorities from the province level are taken into account in deciding the vertical split of revenue. A concern with this process is that inputs from districts, which are the closest to the communities, are not taken into consideration. Community preferences are important in identifying priorities in each sector. Although there are mechanisms in place to enable districts to collect this information, they are not effective. This is not surprising as the districts do not have the authority to make changes in service delivery in response to community needs; this is done by provincial governments. As provincial Departments of Health (the head office) are the ones that make changes in the pattern of service delivery, community members have greater incentives to actively participate in engagements with provincial health officials rather than the district level forums. Unfortunately, these engagements are not regular enough. Also, budgeting for health and PHC is primarily done through a historical approach. With limited input from the community and predominance of historical led budgeting, information that filters upwards to inform the vertical division of revenue is not based on actual health needs as expressed by the community. Although historical led budgeting is predominant, many provinces are

allocating (albeit incrementally) more PHC funds to districts they believe have higher needs for health care.

Provinces in South Africa are not homogenous in terms of the socio-economic and other characteristics of their population, or the level of infrastructure available to their populations. This is verified by the differences in the deprivation indices generated for each province. So, if geographic allocations to PHC are based on the preferences of communities, it is most likely that PHC per capita will differ for each district and province based on the each community's preference for PHC services relative to other types of services. Indeed, this is the central argument for greater scope for inequity in PHC allocations within a fiscal federal system. Whether this (differential preferences) has been the reason for the disjoint between provincial expenditure patterns and national priorities is not answered by this study, but what is known (and more importantly) is that independent provincial budgeting processes contributed significantly in the inequitable financing of PHC in previous years.

National intervention in fiscal arrangements at the level of the province by "pushing" provinces to adhere to national priorities has resulted in a better level of coordination between provincial expenditure behaviour and national priorities. Based on interview data and publications from the NDoH, PHC is a national health sector priority, although there is no evidence to suggest that the National Treasury has "pushed" provinces to spend on PHC according to any nationally (NDoH and provincial Departments of Health) agreed levels. However, the fact that National Treasury is not willing to increase allocations to PHC because of poor performance indicators in certain provinces suggests that the National Treasury is regulating the level of PHC

expenditure, and so one cannot rule out completely the possibility that National Treasury may have influenced provincial spending behaviour on PHC. So, in the absence of any evidence of direct influence from the national government on provincial PHC expenditure behaviour, the question of how the convergence of PHC happened remains.

Analysis of qualitative data provides some possible explanations for this. First, the ZAR 300 per capita benchmark for PHC expenditure, although based on interview data has not been effectively communicated to provinces, may have strengthened provincial Department of Health bids for additional revenue within the provincial budgeting negotiations (budgetary negotiations for different sectors) especially for provinces that were spending less than ZAR 300 per capita. From the nature of changes in PHC expenditure it appears that most provinces attempted to meet some target expenditure. This however is only a supposition as there is no hard evidence to back this up.

A second explanation is that with increases in available equitable share grants, many provinces, with the knowledge of the inequities in PHC expenditure and the level of spending in other provinces allocated proportionally more to districts that had extremely low per capita expenditures (or historically disadvantaged). Information on how provinces allocate additional resources to districts confirms that this is very likely.

While these explanations are plausible, they do not provide sufficient explanation for the relative changes in PHC per capita expenditure that was observed in chapter 6.

Relative increases in PHC per capita expenditure has not generally been a direct reflection of health needs (as defined by deprivation) or exclusively by previous levels of expenditure. On the other hand, since provinces allocate increases in funds to districts independently, there is no reason to expect that each province will allocate additional resources to districts based on the same criteria.

In many previously relatively under-funded districts or provinces, lack of managerial capacity and overall lack of health personnel has dampened their ability to effectively utilise additional budgets to PHC. This human resource problem may well be, in the current time, the most critical problem to the achievement of equity in the financing of PHC in South Africa. One can argue this point logically. The inability of rural areas to attract health personnel lowers their overall expenditure per capita on PHC. The lack of personnel, especially managerial capacity reduces their ability to effectively utilise additional funds allocated to them. The combination of high levels of health needs and low per capita PHC expenditure experienced in these areas maintains high levels of inequity in financing of PHC. Additional funds allocated to these areas to reduce inequity are not effectively utilised. Indeed, the lack of human resource capacity can adversely affect performance indicators for these areas. These in turn reduce the effectiveness of the NDoH's case for additional funds that are needed to provide better PHC services in these areas.

Both qualitative and quantitative data has shown that within the fiscal federal structure of South Africa, it is possible to shift health finances to districts or provinces with greater need. The unanimous agreement that equity and PHC are priority areas that need serious attention among government health officials is encouraging. This

also means that there is less resistance to shifts in resources to areas of greater need, within the health sector. Getting the buy-in of government officials on this can be viewed as the fundamental step in promoting equity in resource allocation to PHC, although the use of historical-led budgeting is a limiting factor. However, one can argue that using a historical led budgeting process that allows for incremental changes in resource allocation patterns can work in the favour of provinces with districts that lack capacity to absorb large increases in PHC allocations. Smaller increases in resource allocation are easier to manage and absorb.

An interesting issue that arises from the analysis of the interview data is around the performance of the NDoH. Officials from the National Treasury and the Provincial Departments of Health do not think that the NDoH is doing its job properly. For example, while the NDoH believes that norms and standards on financing PHC which they developed has been a major factor in achieving a more equitable distribution of PHC expenditure, officials from Provinces (Health Departments and Treasuries), including district managers are not aware of any such guidelines. Based on interview data, the National Treasury and the Provincial Authorities do not think that the NDoH has been providing provinces with sufficient support and guidance, and neither has the NDoH been effective in bidding for additional funds for health care.

In the next chapter, information from analysis of data (qualitative and quantitative), literature review and the conceptual framework is discussed with a view to provide recommendations for the South African government, and countries that are operating a decentralised health system (whether within a fiscal federal context or not). Also,

the next chapter highlights the contribution of this study to the theoretical body of literature on the subject.

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CHAPTER 8

Conclusion and Recommendation

8.1. Discussion

This study investigated the impact of fiscal federalism on the equitable distribution of PHC resources across geographical areas in South Africa. In achieving this objective, a key question that arose is how South Africa has managed, in recent years (despite the predictions that fiscal federal thinking would suggest) to achieve a shift towards more equitable PHC resource allocation between health districts and provinces. Other specific objectives of the study included the identification of barriers and facilitating factors to achieving an equitable distribution of PHC resources. The literature on fiscal federalism, decentralisation, PHC and equity as summarised in the conceptual framework support the expectation that there is a greater scope for inequities in the distribution of PHC resources within the prevailing intergovernmental fiscal federal arrangements in South Africa.

In 1994, the South African government was faced with the immense challenge of managing a country with severe inequities that were created by the policies of the apartheid government. Inevitably, equity was a key policy objective for most social sectors, including health (Gilson et al., 1999, Okorafor et al., 2003, Thomas et al., 2003). That remains the case.

After 1994, the government embarked on an ambitious policy of achieving an equitable allocation of health care finances between geographical areas and sought to achieve this in the very short timeframe of just 5 years (Chetty, 2007). Subsequently, provinces that were previously relatively under-funded received substantially more

health care allocations. Similarly, provinces that had previously been better funded, received significantly less. By 1996, it became evident that provinces simply could not cope with these huge short-run changes. Those provinces which received significantly more funds could not spend all the additional money effectively – they could not absorb effectively the extra funds allocated to them for health care (ibid).

To add further to the problems of management and governance at this level, it was just at this time that the country adopted a fiscal federal system that gave provinces significant fiscal autonomy. The provinces suddenly had power; they had money; but those that were previously ‘under-funded’ did not have the management capacity to cope. They were overwhelmed.

Considering the predictions of fiscal federalism literature on decentralisation and equity (as identified in Chapters 2 and 3), it is not surprising that previous research identified the move to a fiscal federal system as the main culprit for the slow-down in progress towards a more equitable distribution of health and PHC resources (Thomas and Muirhead, 2000; Thomas et al 2003). This school of thought would claim that the shift of authority in determining health and PHC budgets to provinces in 1996 resulted in the derailment of the national plan to achieve equity in public health care resource allocation within 5 years. Other research at the same time identified the inability of provinces to cope with the challenge of using huge extra resources in public health care allocations as the reason for the slowdown in progress towards greater equity (Chetty, 2007).

The conceptual framework in this study also suggests that the move to a fiscal federal system and in particular the form of the fiscal federal system adopted in South Africa, could contribute to slowing-down progress towards equity. A bigger problem identified (see chapter 4) was the inability of provinces to utilise additional funds effectively which were allocated to them. That was a more critical problem. Provinces that received significantly more funds did not have the management capacity to use them effectively. This problem was compounded by simultaneously giving them authority to manage their own fiscal affairs. The fact that at this time, the provinces were still very young, with much weaker administrative structures and systems, was also a factor contributing to the slowing down of the move to equity. These two reasons for lack of progress on equity are not wrong. The most probable explanation is that one constraint reinforced the other.

The question then remains: why against a background which was not conducive to the promotion of equity in terms of the fiscal federal arrangements and the management skills and organisation, did progress nonetheless occur? On the question of how South Africa managed to achieve a convergence of PHC allocations by geographical areas, responses from interviewees were often and understandably 'contradictory'. Most district managers were not sure who was responsible for initiating the moves to greater equity, while a few felt that the responsibility for the equity initiative rested with the provincial authority. The responses from provincial officials were similar. Most national level officials believed that national government was responsible for the shift towards equity. The NDoH believes that the benchmarking of PHC per capita expenditure has been the guiding force to the provinces, and has influenced how they budget for PHC. The National Treasury believes that their intervention in fiscal

arrangements to ensure that provincial spending is more in line with national priorities has facilitated this outcome.

Although these responses may appear to be confused and contradictory, they may all have some truth in them. No single government unit, it is worth noting, is solely responsible for seeking to achieve this move towards a more equitable distribution of PHC services. What emerges as will now be explained is that all government units have contributed to achieving a more equitable outcome. A closer and more critical examination of available evidence from research outputs, government policies since 1994 and data from this study all point to this conclusion.

Since 1994, the government has put equity in the forefront of all development and social policies. Equity was emphasised in the RDP, and the White paper for the transformation of the health system; which led to large reallocations of health care resources between 1994 and 1996. The reason for the failure of this initial programme to achieve equity is simply because provinces did not have sufficient capacity to cope with these massive shifts. Equity still remains a key policy objective in the South African policy-making arena, even when the term 'equity' is not explicitly used. Initiatives such as the Reconstruction and Development Programme (RDP), Integrated Sustainable Rural Development Programme (ISRDP) and Urban Renewal Programme (URP) launched in 2001⁵¹ (Thomas et al., 2005), the Black Economic Empowerment (Republic of South Africa, 2003) that provides previously disadvantaged groups with preferential treatment; all provide evidence that equity is still a high priority for the South African government.

⁵¹ The ISRDP and URP is an initiative that identifies rural and urban areas that have the highest concentration of poverty for poverty alleviation; promotion of equity, social cohesion and development; and enhance local government capacity amongst others.

This study has shown that there have been numerous studies that have provided evidence of the inequities in the financing and provision of health care and PHC between different geographic areas (McIntyre, 1994, McIntyre et al., 1995, Doherty and van den Heever, 1997, Thomas et al., 2003, Brijlal et al., 1997, Daviaud et al., 2000). As is established in the analysis of qualitative data, research institutions over the years have consistently provided the government with evidence of inequities in health sector resource allocations and have been working with the government on how to address these issues.

Stakeholders (National and Provincial Treasuries, National and Provincial Departments of Health and Health Districts) involved in the process of determining health and PHC budgets are therefore well aware of the inequities in the allocation of PHC resources. They understand the need to provide additional resources to areas that have greater need. This is confirmed by interview data. These data also reveal that there is unanimous agreement by officials involved in budgeting and resource allocation to health care within provinces that equity is a priority goal for PHC. It is important to note at this point that some officials from historically relatively well-funded provinces have concerns around the effective use of additional resources allocated to previously relatively under-funded provinces. The implication of this is discussed later. The National Treasury acknowledges that PHC may require more funds to achieve equity and is more willing to agree to increase the amount of resources available for PHC. The National Department of Health has confirmed that equity in PHC allocations is a priority. Also, those who have clarified the meaning of equity agreed that equity involved the provision and financing of health care in such a

way that those that were in greater need of health care should receive more resources. The conclusion therefore of this study is that within the constraints – indeed despite the constraints - presented by the prevailing fiscal federal system in South Africa, each governmental level and unit has ‘bought in’ to the view that equity is a priority and is operating accordingly, albeit in something of a piecemeal and incoherent fashion. This is explained in more detail below.

As identified in this study (see Chapter 7) the National Treasury has been concerned that provincial expenditure behaviour is not in line with nationally agreed priorities. Their intervention in fiscal arrangements has been to promote greater alignment between the two. All Provincial Departments of Health and the National Department of Health (they determine national priorities) have consistently made bids for increased funding for PHC. These have been supported by equity-based arguments. National Treasury is aware of the differences in need for PHC and, on the basis of that awareness, has been positive to the idea of providing more funds for PHC to achieve a more equitable outlay (see chapter 7). So, National Treasury’s intervention has been conducive to the idea of promoting the equitable distribution of PHC resources.

National Treasury has in the past been more concerned with the effective and efficient use of funds allocated to the health sector. There are signs that in recent times, National Treasury is more ready to help in boosting absorptive capacity in districts and provinces than to continue to blame them for failing to utilise the funds adequately. As mentioned in the previous chapter, the National Treasury is supporting an audit of gaps in the PHC infrastructure and is also more understanding of capacity constraints faced by different districts and provinces. This supportive role currently

played by National Treasury is essential for any capacity building initiative driven by any of the health authorities (national, province or district).

The National Department of Health supports initiatives to promote equity and this is reflected in their setting of a benchmark for PHC expenditure per capita (Chitha et al., 2004). From interview data, it becomes apparent that this standard may not have been effectively communicated to provinces; however, it does show that the NDoH is in support of changes in the spending pattern of PHC that increases the amount of PHC resources committed to areas (districts or provinces) that spend less than the pronounced benchmark.

Provincial Departments of Health in less well-funded provinces are aware that they are spending much less on PHC compared to other provinces that have relatively lower health care needs and have used this to increase their bargaining power for additional funds for PHC. The basis for such bids has in principle been favourably considered by NDoH and the National Treasury, although poor performance indicators have adversely affected the success of the bids.

It is critical to mention that the convergence in PHC per capita expenditure occurred largely as a result of increases in expenditure in districts and provinces that previously recorded relatively low levels of expenditure. Consequently, convergence in PHC expenditure has been possible in the first place because of the consistent increase in the size of the equitable shares grant allocated to provinces since the early 2000s. Without the increase in funds to provinces, achieving a more equitable distribution of PHC expenditure would have required larger reductions in the allocations to districts

that were relatively better funded – a process that would have met with fiercer resistance.

8.2. Constraints to Equity

At the same time the study identified some important constraints to the progress towards equity in PHC allocations.

8.2.1 Lack of Absorptive Capacity

Health districts and provinces that were previously less well-funded have in recent years recorded higher budget allocations to PHC. Despite this, many of these areas, especially those that are in rural areas, have found it difficult to spend these additional funds on PHC. Unfortunately, these are the same areas that have a greater need for health care services. Some of the reasons cited for this are:

1. These areas have found it very difficult to attract staff (health professionals, administrative and managerial) to work in those areas. The health sector is human resource driven and a large proportion of health expenditure is on human resources. If health personnel cannot be attracted to work in these areas, then PHC expenditure will continue to be relatively lower than in areas that can attract these kinds of staff.
2. These same areas lack managerial skills and do not have innovative managers who can utilise additional resources effectively even when human resources are a constraint.

8.2.2 Historical Approach to Budgeting

Most provinces and health districts still use a predominantly historical approach to budgeting. The budget for PHC in one year is generally based on the previous year's expenditure on PHC plus some average add-on. The problem with this approach is that it fails to encourage the radical reallocation of resources to areas of greater need. What is of note is that, nevertheless, even with this constraint, there have been significant changes towards a more equitable distribution of PHC resources. As interview data revealed, most managers responsible for PHC budgeting have allocated extra resources available for PHC in such a way that they have favoured districts that are considered to have greater needs – *essentially a differentiated historical incrementalist approach*. This was done by maintaining the level of real expenditure to areas that have been relatively well funded resources, while allocating new funds to areas of greater need. Given the problems of absorptive capacity, this gradual approach to reallocation of resources is better.

8.2.3 Inter-Agency Relations

A potential constraint to achieving equity is the poor interaction between Provincial Departments of Health and their provincial Treasuries in less well-funded provinces. Provinces such as Gauteng and Western Cape have a good relationship with their provincial Treasuries. They have frequent engagements that afford the Treasury Departments a better insight into their problems and plans for dealing with these problems. The level of cooperation fostered by this relationship encourages the Treasury Departments to support initiatives, including PHC, from the health departments. This level of cooperation is not found in Limpopo and even less so in the Eastern Cape. In fact, the relationship between the Eastern Cape Department of

Health and the Provincial Treasury is more adversarial than cooperative. This has impacted negatively on the Department of Health's motivations to provide additional funds in the pursuit of equity in PHC allocations. The poor level of cooperation between these government agencies reduces the capacity of these provinces in meeting their equity objectives (refer to diagram of conceptual framework in Chapter 3).

8.2.4 Equity Vs Efficiency

The study also identified an issue that could pose a constraint to achieving equity in the future. Although all officials interviewed agreed that equity is a priority and should be a priority for PHC allocations, some of them have raised concerns around the way "reallocated" funds are used. Officials from better resourced areas such as Western Cape and Gauteng admitted that shifts in resources to areas with greater health need is necessary; however, some of them remain concerned about how effectively and efficiently these resources are used. A point of genuine worry for the future, as identified already in chapter 7, is that such concerns might grow to become more prominent in debates around equity in PHC allocations if additional funds allocated to areas of greater need are not effectively absorbed. These concerns have been echoed by the National Treasury. In their view, indicators of performance from areas that have received additional funds are not encouraging and National Treasury has been opposed to making even more resources available to these areas. In recent times (as already mentioned in the previous chapter), the National Treasury is more amenable to capacity strengthening initiatives that should promote more efficient and effective use of resources. For now, it appears that within the policy arena, the "call" to equity sounds louder than the "call" to use additional resources more efficiently

and effectively. If efficiency concerns become more dominant amongst officials from districts and provinces that were previously well funded, this could negatively impact on the universal buy-in of equity as a priority in PHC that has been built up since 1994. As highlighted in Chapter 4, previous research has raised this issue of absorptive capacity. Unfortunately, there has been no action across the board to address these capacity problems. As will be reemphasised later, this needs to be addressed urgently as calls for greater efficiency may ultimately prevail over calls for equity.

8.3. Community Participation

An additional observation from this study is around the functioning of mechanisms for promoting community participation and eliciting community preferences. One of the tenets of the PHC approach is the participation of the community in decision-making around the nature of PHC services provided to the community. Decentralising health services is a way of encouraging community participation. What is apparent from this study is that the mechanisms put in place to facilitate community participation, especially at the district level is not functioning optimally. Districts have little or no influence in responding to the needs of the people, since they have no authority in determining PHC budgets. The provincial health authorities have this power, and so it is not surprising that the communities prefer to engage with provincial level forums rather than district level mechanisms. The failure of the district health system to promote community participation is not far-fetched. Originally, district managers in South Africa were supposed to have some decision-making authority around financing of PHC services (see discussion in Chapter 7) specifically so that they could adequately respond to the needs of the communities

they served. If the district health system is to serve as a mechanism for encouraging community involvement in decision-making for PHC, then districts should be given some financial autonomy, perhaps around the use of monies allocated to them. The ability of districts to respond to the needs of the communities if granted some financial autonomy is only one amongst other conditions that are needed to galvanise community engagement with the district authority. Nevertheless, it will be a step in the right direction.

While eliciting community preferences is one way of determining community 'needs', quantitative indicators of need should also be employed to feed into resource allocation decisions. Disease burden and indicators of socio-economic status for different districts and provinces can assist provincial and district managers in promoting equity.

8.4. Recommendations

The study has shown that even within a fiscal federal system that allows provinces significant autonomy in determining PHC allocations, it is possible to improve equity. In the South African case, this has been achieved through continuous representation of equity-oriented goals in the policy arena. Also, evidence of the existence of inequities in PHC resource allocation has been consistently fed into the policy arena since before 1994. This has had the effect of garnering the buy-in of stakeholders in the process for determining PHC allocations. In essence, the shift towards a more equitable pattern of PHC allocations is attributed to considerable political will at all levels of government to promote equity in the health sector. Also, it is important to add that the increase in available funds to provinces over time created a favourable

climate for changes in PHC expenditure patterns. This is also supported by the review of country experiences.

Over time, there has been a steady generation of evidence from researchers on geographic inequities in PHC allocations. This has helped to maintain buy-in of stakeholders to equity oriented changes in PHC expenditure, even years after the first democratic elections in South Africa.

Initial attempts to achieve equity in the mid 1990s failed because the initiative did not consider the capacity of provinces to handle such huge shifts in healthcare funds (Chetty, 2007). In more recent times, the shifts in PHC allocations have remained but importantly have been taken at a slower pace. Indeed, reasonably and sensibly the extent of these shifts have been tempered by the lack of absorptive capacity in areas that have greater need for health. Lessons have been learned from the past.

Overall, this study makes recommendations concerning the promotion of equity in PHC allocations in three broad, non-mutually exclusive areas. The first set of recommendations speaks to the South African policy environment. The second set of recommendations highlights the contribution of the study to literature on fiscal federalism, decentralisation and equity, by way of pointing out deficiencies in the literature. The third set of recommendations is aimed at other countries wishing to pursue equity under a fiscal federal structure. For this third set of recommendations, it should be noted that the entire work is of relevance to other fiscal federal systems, but only the South African specific lessons are outlined

Policy recommendations made by the study are in three areas. The first focuses on the buy-in of stakeholders, the second focuses on intergovernmental arrangements in South Africa, while the third deals with capacity development. Although these are discussed separately, they can be viewed as separate components of one initiative.

8.4.1 Buy-in of Stakeholders

The main recommendation to the South Africa government (referring to NDOH as the policy developers) with regard to promoting equity in PHC allocations and indeed for the health sector is to keep stressing the importance of equity within the policy environment. This should be targeted at sustaining the buy-in of government officials involved in budgeting for and allocating resources to PHC. This process could be complemented by continuing to commission research organisations and universities to conduct research that provides evidence on the area of equity and health and what to do about it. These should provide evidence on the state of affairs with regards to areas of greatest need and what policy options are needed to further reduce inequities. This strategy of maintaining the buy-in of stakeholders is necessary to combat any attempt to derail equity-oriented policies due to efficiency and effectiveness concerns around how additional funds are being used by previously less well-funded provinces and districts. It is particularly important to continue emphasising the importance of pursuing equity, given that inequities are reducing; this could lead to complacency. Nevertheless, the efficient use of resources for PHC has to be simultaneously promoted especially in less well funded districts and provinces. Without the efficient and effective use of PHC resources, any progress made in terms of equity in resource allocation may not translate into equitable distribution of actual health services provided.

8.4.2 Intergovernmental Arrangements

Based on reviewed literature and theory, intergovernmental arrangements in South Africa are such that they are likely to promote inequities in the allocation of PHC resources between provinces and districts. Provinces have substantial autonomy in deciding how much to spend on health and PHC. It is fortunate that equity has taken such a prominent place in overall national policy, thus creating a favourable climate for equity-oriented changes in resource allocation to PHC. However, this may not remain indefinitely. In the meantime, it is necessary to strengthen intergovernmental relations and mechanisms that promote a more equitable distribution of PHC resources. Of great importance are

- Strengthening of the mechanism for provincial government accountability on expenditure to National and Provincial Treasuries. Although South Africa operates under a fiscal federal system, achieving equity in the distribution of health care resources requires coordination between the national government and the provincial government.
- Promoting a more collaborative relationship between provincial Departments of Health and their Treasury counterparts., and
- Communicating norms and standards on the PHC package better to provinces and districts. The use of norms and standards is a good way to provide provinces with expenditure targets to aim for. Better communication of such norms and standards is therefore important. An approach for more effective communication is for the NDoH to work closer with their provincial counterparts. Physical visits to provinces, and direct support in the budgeting process for PHC is a good mechanism for promoting effective

communication. The apparent lack of effectiveness in communicating norms and standards is evidence of lack of engagement between the NDoH and its provincial counterparts.

8.4.3 Capacity Development

This study has not researched strategies for developing capacity in districts or provinces in South Africa and so does not make any specific recommendation on how capacity of districts and provinces can be developed in order for them to effectively absorb additional funds made available to them. However, the study does identify capacity development as critical for achieving and sustaining an equitable distribution of PHC resources. Indeed, the importance of building financial resource utilisation capacity within the South African context cannot be over-emphasised. The unanimous buy-in to equity by all stakeholders has been an important factor in facilitating the progress towards achieving equity; and the inefficient use of additional resources to areas of greater health needs is probably the single most important threat to stakeholder-wide buy-in to equity.

Building capacity to manage additional funds for PHC in previously less well-funded areas is not a feat that can be accomplished within a very short time. Indeed, it would require a full study on its own to come up with context-relevant strategies for developing capacity of rural districts and provinces to adequately manage and utilise additional PHC allocations. As part of the capacity development strategy, it is imperative that the government work on strategies to attract health personnel to rural areas. Reviewed literature suggests that factors such as poor career advancement opportunities and the lack of opportunity for post-graduate education are important

deterrents from working in rural areas. This is a cue for the government to build incentives such as fast-tracked career progression and scholarships (including time-off work) into the remuneration packages of health personnel working in rural areas.

Whatever strategy is adopted, the government needs to once again cultivate the buy-in of stakeholders to support this. Capacity development in the areas of management, administration and clinical operation in rural areas should take a prominent place in the health policy arena. Support from National and Provincial Treasuries, and provincial Departments of Health from previously well-funded provinces will be necessary for any strategy for capacity development in previously less-funded provinces to be successful.

8.4.4 Recommendations to Other Countries

The study provides good lessons for countries operating a fiscal federal system for which equity in PHC is a national policy objective and the financing of PHC is the responsibility of SNGs. The levels of autonomy enjoyed by SNGs, differences in SNG capacity and the nature of intergovernmental transfers used are all important factors that can influence the equitable distribution of PHC allocations. Indeed, and as this research shows, garnering political support for equity from all stakeholders involved in the process of budgeting and resource allocation to PHC could be instrumental in achieving equity, even under unfavourable intergovernmental fiscal arrangements. Where substantial autonomy is given to SNGs for financing and providing PHC, generating political will to achieve equity at all levels of the government can be as effective as changing intergovernmental arrangements for financing and providing PHC (like financing PHC through specific purpose grants or

shifting the responsibility of financing and providing PHC upwards to the central government). Of course, and based on literature, the context of the country (economic, political, cultural, social etc) need to be considered. For South Africa, the buy-in of stakeholders has been the key factor in changing expenditure patterns for PHC to one that is more equitable. However, this needs to be complemented by increasing the amount of resources committed to the health sector, and also removing constraints identified in the study to ensure that the shift towards a more equitable distribution of PHC resources is sustainable and that funds committed to areas that have greater need are used effectively. Indeed, achieving increases in resources allocated to areas of greater need is an accomplishment on its own, but if these funds are not used effectively, then equity gains from reallocation of resources may well be grossly overestimated.

8.4.5 Contributions to the Literature

Literature on fiscal federalism and decentralisation within the health sector shed some light on the likely implications of different intergovernmental arrangements on equity in resource allocation to health. What can be deduced from literature is that the level of fiscal autonomy enjoyed by the SNG level that is responsible for PHC is a major factor in determining how equitable PHC allocations will be (Thomas et al., 2003, Green, 1999). If SNGs have greater fiscal autonomy, then there is greater scope for inequity, and vice versa. The level of fiscal autonomy in turn is determined by the extent to which the SNG is dependent on transfers from the centre, the form that these transfers take, SNG revenue generating capacity and prevailing constitutional provisions for intergovernmental relations. The study has shown that these are not the only factors that can influence patterns of resource allocation by SNGs under a fiscal

federal context. Getting universal support for equity from stakeholders in the budgeting and resource allocation process across SNGs can facilitate the shift of resources towards equity even where SNGs enjoy substantial fiscal autonomy – as is observed for the South African case. Literature on decentralisation and equity does not acknowledge this, and this is a key contribution of the study to the literature on the subject. Subsequently, the conceptual framework developed in Chapter 3 needs to be revised to acknowledge this. A new conceptual framework is summarised in figure 8.1. This now includes political support for equity as a factor that can influence the relationship between levels of autonomy at SNG and the likelihood of inequity in the distribution of PHC resources. Indeed, the extent to which overall government and health sector budget is increasing can influence the rate of shifts in resource allocation outlays.

The key recommendation from this section to countries with either fiscal federal systems or just decentralised health systems that are facing inequitable patterns of allocation to PHC is that they should aim to get political buy-in from all stakeholders whether changes in intergovernmental arrangements can be made or not. Getting political buy-in for equity can be very instrumental in promoting equity within a decentralised system.

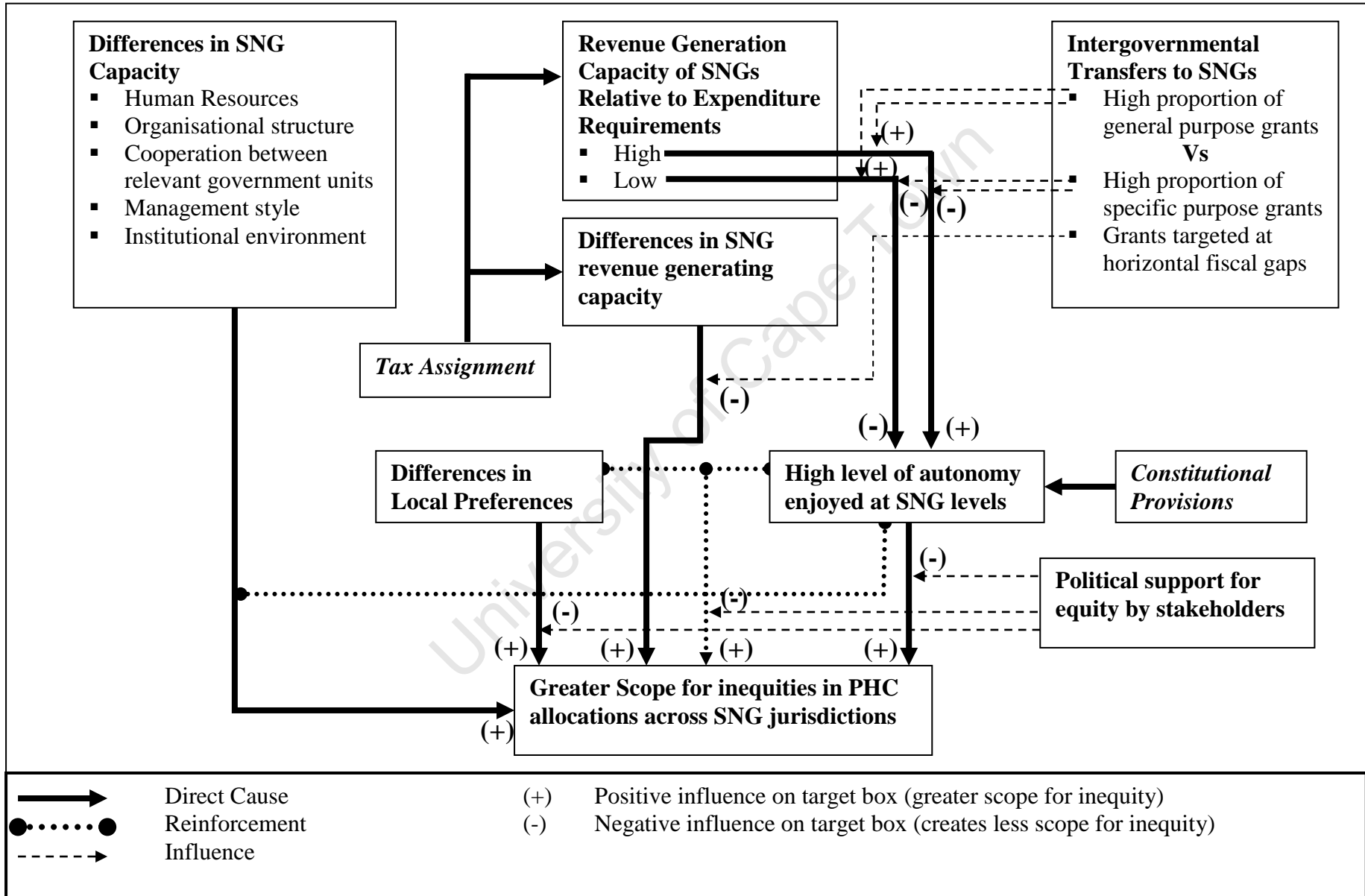
A second issue that is relevant to the subject of fiscal federalism and PHC refers to the supposition that equity-oriented policies are best managed from the centre (a top-down approach), as mentioned in chapter 2 (Shah, 1998, Buchanan and Wagner, 1971, Inman and Rubinfeld, 1997, Smith, 1985). This perspective supports a centrally imposed construct of equity. An outcome of this approach which is appealing to its

proponents is the uniformity in the process and criteria for assessment of need and allocation of resources to PHC across regions within a country. However, the proposition of centrally imposed equity and even uniformity in assessing and allocating resources may not be ideal.

The study shows that shifts towards a more equitable pattern of PHC allocations have not been achieved through central intervention, solely. The South African scenario provides a new dimension to arguments around whether a top-down or bottom-up approach is most appropriate for targeting equity. Neither of these two approaches was used to achieve shifts in PHC allocations, rather it was achieved through the generation of support from all levels of government – in what this study terms an “all-stakeholder” approach.

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Fig. 8.1 Intergovernmental Fiscal Arrangements and Equity in PHC Allocations



Efficiency gains from fiscal federalism are based on the recognition that different regions within a country have different characteristics and so different needs. Theory is of the opinion that such efficiency gains can be best achieved by assigning responsibility for each type of public expenditure to the level of government that most closely represents the beneficiaries of these outlays (Musgrave and Musgrave, 1989, de Mello, 2000, Bird and Vaillancourt, 1997, Ter-Minassian 1997) It is clear from both empirical and theoretical literature that PHC should be provided by lower levels of government or administrative structures such that they are able to respond to the unique needs of the communities they serve. Different communities that make up a country are generally different, with different cultures, attitudes and behaviours. It is therefore safe to say that different communities will invariably appreciate the need for health and PHC services differently. These differences in the appreciation of need will most likely be greater the more heterogeneous communities in a country are. Equity in resource allocation is about allocating resources based on need. If the communities' perception of need is to be the basis for assessing need (and this should be the way forward, if a PHC approach is to be followed), then a centrally imposed, uniform approach to assessing needs for resource allocation will not do in a heterogeneous society – and most societies are. Clearly, even in the pursuit of equity in health, a centrally imposed equity criterion is flawed. What is needed is broad policy guidelines on equity from the centre, leaving lower levels of government (responsible for PHC) room to manoeuvre within the boundaries of the policy to meet the specific needs of the communities they serve.

In conclusion, the introduction of fiscal federalism in South Africa created an additional constraint to achieving a more equitable distribution of PHC. The newly

created provinces lacked sufficient capacity to cope with large shifts in resource allocation. However, with a growing public sector budget, consistent increases in health sector allocations, and overwhelming political support for equity, South Africa is experiencing a shift towards a more equitable distribution of PHC resources.

8.5 Weaknesses of the Study

In conducting this study, the author identified several weaknesses in the methodology, approach and data used in analysis. As mentioned in earlier sections of the thesis, some PHC services are provided in hospitals. These were not taken into account because the exact proportion of services provided by hospitals in districts and provinces is not known. Consequently, it is likely that the total expenditure on PHC in some districts is underestimated.

Ownership of private health insurance does not preclude an individual from using public health facilities. Per capita expenditure on PHC that was used in this study is based on the population in each district or province that does not have private health insurance cover. Therefore PHC expenditure per capita is likely to be overestimated for most districts and provinces.

The study focuses only on allocations to PHC and does not consider the social benefits for spending in other sectors within each province. As a result, the analysis done is a narrow view as far as overall social benefits are considered.

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APPENDIX A

Schedules 4 & 5 from the South African Constitution 2006

Schedule 4 - Functional areas of concurrent national and provincial legislative competence

Part A

- Administration of indigenous forests
- Agriculture
- Airports other than international and national airports
- Animal control and diseases
- Casinos, racing, gambling and wagering, excluding lotteries and sports pools
- Consumer protection
- Cultural matters
- Disaster management
- Education at all levels, excluding tertiary education
- Environment
- Health services
- Housing
- Indigenous law and customary law, subject to Chapter 12 of the Constitution
- Industrial promotion
- Language policy and the regulation of official languages to the extent that the provisions of section 6 of the Constitution expressly confer upon the provincial legislatures legislative competence
- Media services directly controlled or provided by the provincial government, subject to section 192
- Nature conservation, excluding national parks, national botanical gardens and marine resources
- Police to the extent that the provisions of Chapter 11 of the Constitution confer upon the provincial legislatures legislative competence
- Pollution control
- Population development
- Property transfer fees
- Provincial public enterprises in respect of the functional areas in this Schedule and Schedule 5
- Public transport
- Public works only in respect of the needs of provincial government departments in the discharge of their responsibilities to administer functions specifically assigned to them in terms of the Constitution or any other law
- Regional planning and development
- Road traffic regulation
- Soil conservation
- Tourism
- Trade
- Traditional leadership, subject to Chapter 12 of the Constitution
- Urban and rural development
- Vehicle licensing
- Welfare services

Part B

The following local government matters to the extent set out in section 155(6)(a) and (7):

- Air pollution
- Building regulations
- Child care facilities
- Electricity and gas reticulation
- Firefighting services
- Local tourism
- Municipal airports
- Municipal planning
- Municipal health services
- Municipal public transport
- Municipal public works only in respect of the needs of municipalities in the discharge of their responsibilities to administer functions specifically assigned to them under this Constitution or any other law
- Pontoons, ferries, jetties, piers and harbours, excluding the regulation of international and national shipping and matters related thereto
- Stormwater management systems in built-up areas
- Trading regulations
- Water and sanitation services limited to potable water supply systems and domestic waste-water and sewage disposal systems

Schedule 5 - Functional areas of exclusive provincial legislative competence

Part A

- Abattoirs
- Ambulance services
- Archives other than national archives
- Libraries other than national libraries
- Liquor licences
- Museums other than national museums
- Provincial planning
- Provincial cultural matters
- Provincial recreation and amenities
- Provincial sport
- Provincial roads and traffic
- Veterinary services, excluding regulation of the profession

Part B

The following local government matters to the extent set out for provinces in section 155(6)(a) and (7):

- Beaches and amusement facilities
- Billboards and the display of advertisements in public places
- Cemeteries, funeral parlours and crematoria
- Cleansing

- Control of public nuisances
- Control of undertakings that sell liquor to the public
- Facilities for the accommodation, care and burial of animals
- Fencing and fences
- Licensing of dogs
- Licensing and control of undertakings that sell food to the public
- Local amenities
- Local sport facilities
- Markets
- Municipal abattoirs
- Municipal parks and recreation
- Municipal roads
- Noise pollution
- Pounds
- Public places
- Refuse removal, refuse dumps and solid waste disposal
- Street trading
- Street lighting
- Traffic and parking

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APPENDIX B

Interview Guides

Interview Guide for the National Department of Health (NDoH)

1. Is equity in the allocation of PHC finances across provinces and districts a priority for the NdoH?
2. Do you think equity in the allocation of PHC finances is a priority for the provinces?
3. Are there any existing mechanisms / initiatives / guidelines driven by the NDoH to promote equity in PHC allocations across geographic areas?

[If yes, probe for description of the initiative and how well the initiative performed. Also, find out what the constraints and facilitators to success have been.]

4. Have there been other initiatives to promote equity in PHC allocations in the past?

[If yes, probe for description of the initiative(s) and how well the initiative(s) performed. Also, find out what the constraints and facilitators to success have been.]

5. Are there any other strategies that could be used to promote equitable distribution of PHC resources?
6. Previous research has identified the lack of capacity (managerial, technical and human resources) to benefit as a key constraint to increasing allocations to poorly funded districts. What measures are being taken to solve this problem?
7. In general, many provinces and districts believe that they are underfunded. However, it appears that they usually underspend on their budget. Are there any strategies you (national / province / district) are considering to ensure that you fully utilise all the money you are given, so as to justify increases?
8. Does NDOH have strategies in place to assist provinces that constantly under-spend? Any mechanism in place to ensure that provincial health departments who under-spend still receive fair share from provincial equitable share.
9. What are the major causes of underspending?
10. Is the NDoH involved in negotiations for the provincial health budgets? And how? Who and why?
11. The NDoH submits bids for changes (increases) in the health budget to National Treasury, however, decisions taken at this level are generally undermined by provincial level budgetary negotiations. What is the PDoH or NDoH doing about this?
 - a. Are there bids for increased funding for specific health programmes? Are there any mechanisms to ensure that these funds are used for the intended programmes?

12. Is the NDoH involved in negotiations for the PHC budget? And how? Who and why?
13. Is the NDoH involved in defining the criteria for allocation of PHC finances across districts?
14. Are you aware of any guidelines used by provinces for the allocation of PHC finances across districts? If there are – what are they?
15. Do you think that the current budgeting and resource allocation system results in an equitable distribution of PHC finances? If yes (why?); If no (why not?)
16. Do you think that the NDoH should have more involvement in deciding the budgeting and resource allocation system within the provinces?

[If yes, what type of involvement?]

Questions around feasibility

17. Do you think that these strategies for involvement will meet any resistance?
18. Where would the resistance come from?
19. Are there any factors that could facilitate the success of this strategy?
20. What definition of equity do you think should guide the allocation of resources to PHC across geographic areas?
21. Are there any monitoring and evaluation system in place to ensure that equity in PHC allocations is achieved? If there are – what are they, and who is doing the monitoring and evaluation?
22. There has been considerable progress in the past 5 years towards a more equitable distribution of PHC funds across districts.
 - a. Who initiated this?
 - b. How was this achieved?
 - c. Are districts that are receiving more funds able to fully utilise the funds? Why? Why not?

Interview guide for officials of the National Treasury

1. What is the process for determining provincial budgets?
2. Is the National Treasury involved in any way in budgetary allocations to different sectors within the province? – What is the nature of this involvement?
3. Is the National Treasury involved in any way in decision-making for provincial health budgets? Who is involved? In what way?
4. Is there any structure in place for interactions with the Department of Health around issues of priority setting and financing?

If Yes:

5. Who does the National treasury interact with?
6. What kinds of decisions are taken in these meetings?
7. What impact do such decisions have on budgeting and resource allocation to health and PHC?
8. NDoH submits bids for changes (increases) in the health budget to National Treasury, however, decisions taken at this level are generally undermined by provincial level budgetary negotiations. What are is being done to resolve this issue?
9. Given that PHC is considered a priority, have there been any discussions with the Department of Health regarding the protection of PHC budget?

If Yes:

10. What forms of protection have been suggested?
11. Were these implemented? Were they successful? [*Probe questions on what factors influenced the success or failure of the form of protection foe PHC budgets*]
12. In not implemented, why not?

[Interviewer can list forms of protection such as conditional grants, norms and standards etc to prompt discussion]

13. What form of protection for PHC budgets (to promote equity) will the National Treasury be in support of?
14. What type of services should be protected (the funds)?
15. Are conditional grants a “separate” source of revenue to various departments from budgeted equitable shares to departments? Is it considered as part of departmental revenue in the process of budgeting from equitable shares?
16. To what extent is the health sector seen as a priority? Why? Why not?
17. What is the relative importance of different health programmes? PHC?
18. Are you aware of any DoH policy on PHC?

19. There are a lot of provinces and districts that under-spend on their health budgets (even those with relatively high levels of need). What is being done to resolve this problem?
20. There has been considerable progress in the past 5 years towards a more equitable distribution of PHC funds across districts.
- a. Who initiated this?
 - b. How was this achieved?
 - c. Are districts that are receiving more funds able to fully utilise the funds? Why? Why not?

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Interview guide for officials of the Provincial Department of Health

1. What are the priority areas for health in the province?
2. Are there any financial constraints in achieving the goals set for the priorities?
3. Are you involved in deciding the health budget for the province?
4. Who else is involved in this process?
5. Who has makes the final decisions on the budget for health? Why?
6. Can you describe the process for deciding the health budget?
7. [Probes] Do you usually get the amount you ask for? Are there any strategies you can employ to influence the size of your budget? What are there? Do you get reasons for budget cuts? What are they? [all these depend on the response of the interviewee]
8. Are there any guidelines that influence the health budget? What are they?
9. Are conditional grants a “separate” source of revenue to various departments from budgeted equitable shares to departments? Is it considered as part of departmental revenue in the process of budgeting from equitable shares?
10. Once you have received the health budget, how do you decide the budgets for different health programmes?
11. Are there any guidelines that influence the budgets for health programmes? And PHC?
12. NDoH submits bids for changes (increases) in the health budget to National Treasury, however, decisions taken at this level are generally undermined by provincial level budgetary negotiations. What are is being done to resolve this issue?
13. Are there any mechanisms in place to ensure that these guidelines are adhered to?
14. Are you involved in the distribution of PHC budgets to the districts? Who is involved?
15. On what basis/criteria are PHC allocations to districts made? What measure of relative need is used for allocating PHC funds?
16. Do you think that the current allocation process achieves an equitable distribution of PHC finances across districts?
17. Are there any mechanisms in place to elicit community preferences/priorities with respect to their needs? How does this information feed into decision-making?

18. What definition of equity do you think should guide PHC allocations to districts?
19. Do you think you have the capacity to manage the allocation of the PHC budget across all districts?
20. There has been considerable progress in the past 5 years towards a more equitable distribution of PHC funds across districts.
 - a. Who initiated this?
 - b. How was this achieved?
 - c. Are districts that are receiving more funds able to fully utilise the funds? Why? Why not?
21. Are some districts under-spending? Why? What is being done to resolve this?

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Interview guide for officials at the Districts

1. As a district manager what are your roles and responsibilities?
2. Do you have any involvement in deciding the provincial budget for health?
3. Do you have any involvement in deciding the provincial budget for PHC?
4. Are there any guidelines that influence the size of the overall provincial PHC budget? What are they?
5. Are there any guidelines / criteria for allocating PHC budgets across districts? What are they?
6. Are you expected to prepare a budget for your district? If so, do you get what you asked for?
7. Do you think that the PHC allocation to your district is sufficient to provide the required services? Why do you think this is so?
8. Do you think that the distribution of PHC budgets based on the current allocation is equitable?
9. If no; what criteria should be used in allocating PHC budgets across districts?
10. Are there any mechanisms in place to engage with communities to elicit their views on service delivery of PHC?
11. What are these mechanisms?
12. Do they work properly?
13. Does the voice of the community influence service delivery? Amount of PHC allocations committed to the district?
14. Do you have the authority to decide on how much of the PHC budget is spent on the various cost centres? Or are they decided at the province?
15. If decided at the province; would you prefer if the district had the authority to decide the amount of funds allocated to different PHC cost centres?
16. If yes: does the district have the capacity to manage the allocation of PHC budgets across cost centres?
17. What definition of equity do you think should guide the allocation of PHC budgets across districts?
18. There has been considerable progress in the past 5 years towards a more equitable distribution of PHC funds across districts.
 - a. Who initiated this?
 - b. How was this achieved?

- c. Are districts that are receiving more funds able to fully utilise the funds?
Why? Why not?

19. Is this district under-spending on its budget? Why? What is being done to resolve this?

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Interview guide for officials at Provincial Treasury

1. Are you involved in budgetary allocations to different sectors within the province?
2. What are your roles and responsibilities regarding allocating budgets for different sectors within the province?
3. Please describe the process for allocating budgets to different sectors within the province.
4. What is the extent of interaction with sectoral departments?
5. Are there any guidelines from National Treasury on how these allocations should be made?
6. Are there any guidelines developed by the Provincial Treasury on how these allocations should be made?
[Probe: are there any mechanisms in place to ensure that these guidelines are adhered to?]
7. Is 'Equity' a consideration in deciding budgets for sectors? How?
8. Who is involved in these budgetary negotiations?
9. Who would you say has the final say on allocations to different sectors? Why is this so?

Involvement in deciding the health budget

10. Do you have any specific involvement in deciding the health budget?
11. What is the nature of your involvement?
12. What kind of input does the Provincial Department of Health (PDoH) make in deciding the health budget?
13. Assuming that the PDoH wants to secure a significantly larger budget, what are the procedures for this? What are the strategies available to them?
14. What strategies have the PDoH used in past to secure larger budgets? Success? Failure?
15. NDoH submits bids for changes (increases) in the health budget to National Treasury, however, decisions taken at this level are generally undermined by provincial level budgetary negotiations. What are is being done to resolve this issue?
16. Does the PDoH usually use up all its budgetary allocations?

17. If 'no' what reasons have been given for under-spending?
18. What strategies have been initiated to address the problem of under-spending?
19. To what extent is the health sector seen as a priority in this province? Why? Why not?
20. What is the relative importance of different health programmes? PHC?
21. Are you aware of any DoH policy on PHC?

Involvement in PHC Allocations

22. Are you involved in budgetary allocations to PHC/District Health Services?
23. What is the nature of your involvement?

If the Provincial Treasury is involved in PHC allocations, probe to find out whether they monitor PHC allocations across districts, if they are aware of inequities in allocations across districts, if they know whether some districts under-spend, and what they do about these.

24. There has been considerable progress in the past 5 years towards a more equitable distribution of PHC funds across districts.
 - a. Who initiated this?
 - b. How was this achieved?
 - c. Are districts that are receiving more funds able to fully utilise the funds? Why? Why not?

APPENDIX C

Results of Principal Components Analysis

2001 Census Data

```
. pca pchild pblack punemp pshacktrad pncloseaccess p_pitbucknone
p_femhhhead pnoenergy phead_noeduc, mineigen(1.0)
(obs=21094)
```

(principal components; 1 component retained)

Component	Eigenvalue	Difference	Proportion	Cumulative
1	5.51153	4.66067	0.6124	0.6124
2	0.85086	0.25020	0.0945	0.7069
3	0.60066	0.09983	0.0667	0.7737
4	0.50083	0.06315	0.0556	0.8293
5	0.43769	0.07867	0.0486	0.8780
6	0.35902	0.04171	0.0399	0.9178
7	0.31731	0.03138	0.0353	0.9531
8	0.28593	0.14974	0.0318	0.9849
9	0.13619	.	0.0151	1.0000

Eigenvectors

Variable	1
pchild	0.29733
pblack	0.35229
punemp	0.27378
pshacktrad	0.33399
pncloseac~s	0.38066
p_pitbuckn~e	0.38082
p_femhhhead	0.32512
pnoenergy	0.32850
phead_noeduc	0.31217

```
. score dep_index
      (based on unrotated principal components)
      Scoring Coefficients
```

Variable	1
pchild	0.29733
pblack	0.35229
punemp	0.27378
pshacktrad	0.33399
pncloseac~s	0.38066
p_pitbuckn~e	0.38082
p_femhhhead	0.32512
pnoenergy	0.32850
phead_noeduc	0.31217

2005 General Household Survey Data

```
pca P_child P_African P_head_noeduc P_femhead P_shacktrad P_npwaternear
P_pitbucketnone P_nocleenergy P_unemp, minei
> gen(1)
```

```
Principal components/correlation          Number of obs   =      53
                                           Number of comp. =       1
                                           Trace           =       9
                                           Rho             =    0.6629

Rotation: (unrotated = principal)
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	5.96573	5.05906	0.6629	0.6629
Comp2	.906665	.225973	0.1007	0.7636
Comp3	.680692	.215621	0.0756	0.8392
Comp4	.465071	.0785885	0.0517	0.8909
Comp5	.386483	.149444	0.0429	0.9338
Comp6	.237039	.0549005	0.0263	0.9602
Comp7	.182138	.0701368	0.0202	0.9804
Comp8	.112002	.047819	0.0124	0.9929
Comp9	.0641826	.	0.0071	1.0000

Principal components (eigenvectors)

Variable	Comp1	Unexplained
P_child	0.3011	.4591
P_African	0.3148	.4087
P_head_noe~c	0.3315	.3445
P_femhead	0.3780	.1478
P_shacktrad	0.2490	.6301
P_npwater~r	0.3753	.1599
P_pitbucke~e	0.2758	.5461
P_nocleenergy	0.3791	.1427
P_unemp	0.3673	.1954

Scoring coefficients
sum of squares(column-loading) = 1

Variable	Comp1
P_child	0.3011
P_African	0.3148
P_head_noe~c	0.3315
P_femhead	0.3780
P_shacktrad	0.2490
P_npwater~r	0.3753
P_pitbucke~e	0.2758
P_nocleenergy	0.3791
P_unemp	0.3673

2006 General Household Survey Data

```
pca P_child P_African P_head_noeduc P_femhead P_shacktrad P_npwaternear
P_pitbucketnone P_nocleenergy P_unemp, minei
> gen(1)
```

```
Principal components/correlation          Number of obs   =      53
                                          Number of comp. =      3
                                          Trace           =      9
Rotation: (unrotated = principal)       Rho              =     0.8320
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	5.14886	3.91154	0.5721	0.5721
Comp2	1.23732	.135259	0.1375	0.7096
Comp3	1.10206	.541588	0.1225	0.8320
Comp4	.560473	.121296	0.0623	0.8943
Comp5	.439177	.198872	0.0488	0.9431
Comp6	.240305	.0936924	0.0267	0.9698
Comp7	.146612	.076485	0.0163	0.9861
Comp8	.0701272	.015061	0.0078	0.9939
Comp9	.0550663	.	0.0061	1.0000

Principal components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Unexplained
P_child	0.2618	0.4194	-0.2638	.3528
P_African	0.3436	-0.0053	0.2827	.304
P_head_noe~c	0.3543	0.3246	0.0254	.2225
P_femhead	0.3969	0.1433	-0.0877	.1551
P_shacktrad	0.2691	-0.6578	0.0612	.08763
P_npwater~r	0.4123	-0.0182	-0.1174	.1091
P_pitbucke~e	0.4164	0.1225	-0.0493	.08618
P_nocleenergy	0.3370	-0.4539	0.0644	.1557
P_unemp	0.0315	0.2100	0.9045	.0388

Scoring coefficients

sum of squares(column-loading) = 1

Variable	Comp1	Comp2	Comp3
P_child	0.2618	0.4194	-0.2638
P_African	0.3436	-0.0053	0.2827
P_head_noe~c	0.3543	0.3246	0.0254
P_femhead	0.3969	0.1433	-0.0877
P_shacktrad	0.2691	-0.6578	0.0612
P_npwater~r	0.4123	-0.0182	-0.1174
P_pitbucke~e	0.4164	0.1225	-0.0493
P_nocleenergy	0.3370	-0.4539	0.0644
P_unemp	0.0315	0.2100	0.9045

2007 Community Survey Data

```
. pca P_child P_African P_head_noeduc P_femhead P_shacktrad P_npwaternear
P_pitbucketnone P_nocleenergy P_unemp, minei
> gen(1)
```

```
Principal components/correlation          Number of obs   =      52
                                           Number of comp. =      2
                                           Trace           =      9
                                           Rho             =     0.7806

Rotation: (unrotated = principal)
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	5.82716	4.6288	0.6475	0.6475
Comp2	1.19836	.332967	0.1332	0.7806
Comp3	.865392	.518611	0.0962	0.8768
Comp4	.346781	.0489914	0.0385	0.9153
Comp5	.29779	.0322472	0.0331	0.9484
Comp6	.265542	.17276	0.0295	0.9779
Comp7	.0927821	.0336601	0.0103	0.9882
Comp8	.059122	.0120548	0.0066	0.9948
Comp9	.0470671	.	0.0052	1.0000

Principal components (eigenvectors)

Variable	Comp1	Comp2	Unexplained
P_child	0.3538	-0.0496	.2677
P_African	0.3253	0.4155	.1765
P_head_noe~c	0.3256	-0.0446	.3798
P_femhead	0.3767	-0.0331	.1719
P_shacktrad	0.3105	-0.1017	.4258
P_npwater~r	0.3931	-0.1199	.08215
P_pitbucke~e	0.3837	0.0028	.1421
P_nocleenergy	0.3445	-0.2027	.2593
P_unemp	0.0653	0.8695	.06917

Scoring coefficients

sum of squares(column-loading) = 1

Variable	Comp1	Comp2
P_child	0.3538	-0.0496
P_African	0.3253	0.4155
P_head_noe~c	0.3256	-0.0446
P_femhead	0.3767	-0.0331
P_shacktrad	0.3105	-0.1017
P_npwater~r	0.3931	-0.1199
P_pitbucke~e	0.3837	0.0028
P_nocleenergy	0.3445	-0.2027
P_unemp	0.0653	0.8695

Deprivation Indices 2001 – 2007

No	Province	District	Index 2001	Index 2005	Index 2006	Index 2007
1	Eastern Cape	Alfred Nzo DM	1.631172	4.434091	4.585833	4.146428
2	Eastern Cape	Amathole DM	0.238216	1.732225	1.349305	1.408376
3	Eastern Cape	Cacadu DM	-1.70192	-1.02251	-1.30724	-1.97121
4	Eastern Cape	Chris Hani DM	0.600198	3.097776	2.116326	2.459282
5	Eastern Cape	Nelson Mandela Metropolitan Municipality	-2.00425	-1.76347	-1.88953	-2.41658
6	Eastern Cape	O R Tambo DM	1.824015	4.603675	3.493356	4.348433
7	Eastern Cape	Ukhahlamba DM	0.634059	2.26335	2.178093	2.34347
8	Free State	Lejweleputswa DM	-0.98669	-1.10068	-1.52013	-1.456
9	Free State	Motheo DM	-1.26778	-1.60968	-1.41487	-1.34223
10	Free State	Fezile Dabi	-1.44245	-1.86652	-2.47634	-2.31864
11	Free State	Thabo Mofutsanyana	-0.18726	1.655178	0.885798	0.465155
12	Free State	Xhariep DM	-1.54088	-0.05748	-0.89036	-0.69371
13	Gauteng	City of Johannesburg	-2.01524	-2.86533	-2.32033	-2.08018
14	Gauteng	City of Tshwane Metropolitan Municipality	-1.85134	-2.55138	-1.97644	-1.6125
15	Gauteng	Ekurhuleni Metropolitan Municipality	-1.83629	-2.73034	-1.81427	-1.67624
16	Gauteng	Metsweding DM	-1.63837	-1.15797	-1.12809	-0.96644
17	Gauteng	Sedibeng DM	-1.9518	-1.84511	-1.68258	-2.11577
18	Gauteng	West Rand DM	-1.79614	-2.87515	-1.47101	-1.90926
19	KwaZulu Natal	Amajuba DM	-0.41922	0.317492	0.545533	0.507345
20	KwaZulu Natal	Ilembe DM	0.626324	0.88666	1.281763	2.148309
21	KwaZulu Natal	Sisonke DM	0.853005	1.922967	3.060228	3.558438
22	KwaZulu Natal	Ugu DM	0.693579	1.724339	1.841952	2.664567
23	KwaZulu Natal	Zululand DM	1.211906	3.379342	2.954347	3.519829
24	KwaZulu Natal	eThekweni Municipality (Durban)	-1.53655	-2.3486	-2.09331	-1.83502
25	KwaZulu Natal	uMgungundlovu DM	-0.63265	-1.25303	-0.8803	-0.53135
26	KwaZulu Natal	uMkhanyakude DM	1.589184	4.253882	4.055359	4.279194
27	KwaZulu Natal	uMzinyathi DM	1.587639	3.730372	4.130188	4.576696
28	KwaZulu Natal	uThukela DM	0.682727	2.048629	2.682975	2.773934
29	KwaZulu Natal	uThungulu DM	0.666524	1.264339	1.810806	1.914776
30	Limpopo	Bohlabela DM	0.606219	3.509576	2.552818	
31	Limpopo	Capricorn DM	0.306604	1.999115	1.50634	1.604587
32	Limpopo	Greater Sekhukhune DM	1.027324	3.161837	2.999338	3.289079
33	Limpopo	Mopani DM	0.466654	2.334091	1.733315	1.419189
34	Limpopo	Vhembe DM	0.690505	2.077491	1.932262	1.846795
35	Limpopo	Waterberg DM	-0.37427	-0.65519	-0.87736	0.179908
36	Mpumalanga	Ehlanzeni DM	-0.14583	0.056734	0.683869	0.921932
37	Mpumalanga	Gert Sibande DM	-0.2384	0.156581	0.293898	-0.09258
38	Mpumalanga	Nkangala DM	-0.68332	0.312834	0.303334	-0.10222
39	North Cape	Frances Baard DM	-1.86938	-0.90654	-0.85839	-2.04021
40	North Cape	Pixley ka Seme	-1.90131	-1.3423	-1.80802	-1.83961
41	North Cape	Kgalagadi DM	0.354167	1.408351	1.070969	0.608938
42	North Cape	Namakwa DM	-2.74831	-3.30689	-2.76663	-3.76729
43	North Cape	Siyanda DM	-2.27395	-2.2246	-2.51993	-2.46913
44	North West	Bojanala Platinum DM	-0.60245	-0.5165	-0.17637	-0.20511
45	North West	Bophirima DM	0.183052	2.127184	1.585682	1.757761
46	North West	Central DM	-0.13892	1.312398	1.139511	1.444043

47	North West	Southern DM	-1.50513	-1.12396	-1.92738	-1.56868
48	Western Cape	Cape Winelands DM	-3.01237	-3.78062	-3.42222	-3.26863
49	Western Cape	Central Karoo DM	-2.77544	-2.97601	-2.63885	-2.74977
50	Western Cape	City of Cape Town	-2.71355	-2.96147	-3.17741	-2.98912
51	Western Cape	Eden DM	-2.79	-2.57377	-2.1731	-2.83252
52	Western Cape	Overberg DM	-3.06368	-4.01569	-3.73006	-3.53437
53	Western Cape	West Coast DM	-3.21925	-4.33972	-3.83268	-3.8021

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APPENDIX D

PHC expenditure per capita 2001/02 – 2007/08

No	Province	District	2001/02	2005/06	2006/07	2007/08
1	Eastern Cape	Alfred Nzo DM	106.06	199.63	216.76	197.66
2	Eastern Cape	Amathole DM	193.74	282.39	284.23	304.93
3	Eastern Cape	Cacadu DM	97.58	217.9	239.91	338.6
4	Eastern Cape	Chris Hani DM	154.15	264.21	274.32	302.9
5	Eastern Cape	Nelson Mandela Metropolitan Municipality	182.43	247.87	259.26	263.64
6	Eastern Cape	O R Tambo DM	128.69	212.23	213.95	222.52
7	Eastern Cape	Ukhahlamba DM	67.88	209.98	224.39	238.58
8	Free State	Lejweleputswa DM	135.76	210.08	204.27	190.97
9	Free State	Motheo DM	181.02	286.08	318.23	273.99
10	Free State	Fezile Dabi	125.86	256.26	238.27	229.61
11	Free State	Thabo Mofutsanyana	100.41	231.51	228.67	210.59
12	Free State	Xhariep DM	205.06	372.99	387.15	387.17
13	Gauteng	City of Johannesburg	483.65	323.84	336.07	371.42
14	Gauteng	City of Tshwane Metropolitan Municipality	239	275.53	333.53	335.26
15	Gauteng	Ekurhuleni Metropolitan Municipality	550.12	274.17	306.65	273.22
16	Gauteng	Metsweding DM	213.54	222.71	161.17	286.63
17	Gauteng	Sedibeng DM	268.7	212.14	210.36	233.46
18	Gauteng	West Rand DM	230.51	272.29	237.49	236.17
19	KwaZulu Natal	Amajuba DM	209.3	170.54	190.19	219.94
20	KwaZulu Natal	Ilembe DM	175.36	219.23	233.02	310.2
21	KwaZulu Natal	Sisonke DM	239	269.22	293.39	415.79
22	KwaZulu Natal	Ugu DM	233.34	229.6	232.59	272.06
23	KwaZulu Natal	Zululand DM	213.54	226.56	231.87	280.23
24	KwaZulu Natal	eThekweni Municipality (Durban)	253.14	317.83	327.07	365.37
25	KwaZulu Natal	uMgungundlovu DM	282.84	243.75	253.41	275.83
26	KwaZulu Natal	uMkhanyakude DM	234.76	307.65	330.28	339.7
27	KwaZulu Natal	uMzinyathi DM	189.5	222.8	243.98	263.32
28	KwaZulu Natal	uThukela DM	212.13	192.97	208.98	276.54
29	KwaZulu Natal	uThungulu DM	212.13	255.81	245.77	277.56
30	Limpopo	Bohlabela DM				
31	Limpopo	Capricorn DM	108.89	185.3	206.97	256.26
32	Limpopo	Greater Sekhukhune DM	123.03	136.83	174.58	221.34
33	Limpopo	Mopani DM	197.99	245.25	252.58	289.93
34	Limpopo	Vhembe DM	175.36	244.69	217.44	301.11
35	Limpopo	Waterberg DM	176.77	210.13	220.17	302.75
36	Mpumalanga	Ehlanzeni DM	189.5	184.42	200.77	255.83
37	Mpumalanga	Gert Sibande DM	59.4	154.51	198.4	211.29
38	Mpumalanga	Nkangala DM	62.22	180.11	209.27	226.26
39	North Cape	Frances Baard DM	190.92	227.1	280.59	314.26
40	North Cape	Pixley ka Seme	230.51	266.03	315.28	375.79
41	North Cape	Kgalagadi DM	197.99	285.24	297.33	353.25
42	North Cape	Namakwa DM	359.21	467.62	535.08	632.69

43	North Cape	Siyanda DM	141.42	134.43	160.68	206.05
44	North West	Bojanala Platinum DM	202.23	249.48	300.24	290.26
45	North West	Bophirima DM	534.57	426.77	343.68	367.33
46	North West	Central DM	224.86	315.72	352.61	397.63
47	North West	Southern DM	305.47	328.44	334.25	342.45
48	Western Cape	Cape Winelands DM	284.25	306.13	312.82	353.14
49	Western Cape	Central Karoo DM	459.61	330.71	344.5	526.18
50	Western Cape	City of Cape Town	504.87	398.76	412.46	444.69
51	Western Cape	Eden DM	374.76	366.31	372.7	435.33
52	Western Cape	Overberg DM	339.41	239.21	264.53	319.55
53	Western Cape	West Coast DM	388.9	420.27	498.42	466.2

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APPENDIX E

Results of Regression Analysis

2001/02 Per capita PHC and 2001 Deprivation Index

`regress phc 0102 dep index2001`

Source	SS	df	MS	Number of obs = 52		
Model	166703.958	1	166703.958	F(1, 50)	=	15.51
Residual	537271.542	50	10745.4308	Prob > F	=	0.0003
				R-squared	=	0.2368
				Adj R-squared	=	0.2215
Total	703975.5	51	13803.4412	Root MSE	=	103.66

phc 0102	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dep ind~2001	-40.0644	10.1718	-3.94	0.000	-60.49505	-19.63375
cons	201.328	16.09407	12.51	0.000	169.0021	233.6539

2005/06 Per capita PHC and 2001 Deprivation Index

`. regress phc 0506 dep index2001`

Source	SS	df	MS	Number of obs = 52		
Model	49790.1436	1	49790.1436	F(1, 50)	=	11.48
Residual	216811.684	50	4336.23368	Prob > F	=	0.0014
				R-squared	=	0.1868
				Adj R-squared	=	0.1705
Total	266601.827	51	5227.48681	Root MSE	=	65.85

phc 0506	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dep ind~2001	-21.89563	6.461629	-3.39	0.001	-34.87419	-8.917063
cons	244.6374	10.22375	23.93	0.000	224.1024	265.1724

2006/07 Per capita PHC and 2001 Deprivation Index

`. regress phc 0607 dep index2001`

Source	SS	df	MS	Number of obs = 52		
Model	68996.4541	1	68996.4541	F(1, 50)	=	14.56
Residual	236947.635	50	4738.9527	Prob > F	=	0.0004
				R-squared	=	0.2255
				Adj R-squared	=	0.2100
Total	305944.089	51	5998.90371	Root MSE	=	68.84

phc 0607	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dep ind~2001	-25.77502	6.755024	-3.82	0.000	-39.34289	-12.20716
cons	256.0955	10.68797	23.96	0.000	234.6281	277.5629

2007/08 Per capita PHC and 2001 Deprivation Index

. regress phc 0708 dep index2001

Source	SS	df	MS	Number of obs = 52		
				F(1, 50) = 12.85		
Model	78988.3481	1	78988.3481	Prob > F = 0.0008		
Residual	307348.065	50	6146.9613	R-squared = 0.2045		
				Adj R-squared = 0.1885		
Total	386336.413	51	7575.22378	Root MSE = 78.403		

phc 0708	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dep ind~2001	-27.57828	7.693358	-3.58	0.001	-43.03085	-12.12572
cons	289.675	12.17262	23.80	0.000	265.2256	314.1245

⋮

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