# AN ANALYSIS OF THE FINANCING MECHANISMS PROPOSED FOR FUNDING NATIONAL HEALTH INSURANCE IN SOUTH AFRICA

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## ABSTRACT

In the 2011 Budget Speech, the Minister of Finance announced that South Africa would be introducing National Health Insurance. The Minister described the financing mechanisms under consideration for funding National Health Insurance. The Minister also referred to eight countries, namely Japan, South Korea, Taiwan, Chile, Colombia, Mexico, Thailand and Vietnam as examples of countries which had successfully implemented universal health coverage. These countries were selected for the purpose of the present research.

The goal of this study was to analyse the health care financing mechanisms under consideration in South Africa to determine if they were in line with international trends and "best practice" in relation to South Africa's economic profile. To determine whether the economic situation in South Africa is comparable to the eight countries selected for the research, a high-level comparison was made of the economic profile of South Africa and the eight countries, based on certain demographic, macro-economic, health expenditure and health status indicators. The health care financing mechanisms used in the eight countries was also analysed.

International trends suggested that health care should be financed primarily through pre-payment systems, that financing mechanisms should preferably be progressive in nature and that a large share of funding should be from government sources (albeit shared between general tax revenue and specific health care contributions). The financing mechanisms under consideration in South Africa reflect these norms. The health systems in the eight countries analysed all exhibited elements of "good performance" and also complied, to a large extent, with international trends, but the financing models used for funding health care in the eight countries were country-specific and could therefore not be compared directly or used to recommend a system for South Africa.

Areas not addressed by this thesis include the implications of a centralised healthcare system, the implications of a single-payer system, the benefit package to be offered and its cost implications, the role of private healthcare providers and how the significant human resource scarcity and infrastructure backlogs will be addressed.



**Key words:** National Health Insurance; taxation; universal health care

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# CHAPTER 1

# INTRODUCTION

## 1.1 Research context

Universal health care (a system that provides *all* citizens with *adequate* health care at an *affordable* cost) is a universal priority (United Nations Development Programme: 2010; World Health Organization: 2010).

In South Africa, universal health care is considered to be a constitutional right provided for in section 27(1)(a) of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996). A fundamental piece of legislation supporting section 27 of the Constitution, is the National Health Act, 2003 (Act No. 61 of 2003), which sets out the primary objectives of the healthcare system in South Africa. The National Health Act provides a framework for the structuring of a uniform health system within South Africa, in line with the obligations imposed by the Constitution.

The ruling party in South Africa (the African National Congress) has had universal health care as a priority since coming into power in 1994 (African National Congress: 2010). In the 2011 Budget Speech, read together with the 2011 Budget Review, the Minister of Finance announced the phasing in of National Health Insurance over the next fourteen years as part of the Minister of Health's ten-point plan for restructuring and enhancing public health. A National Health Insurance Fund will be established to receive funds, pool these resources and purchase health services on behalf of the entire population (African National Congress: 2010). The National Health Insurance Fund will cover all South African citizens and legal residents and will entitle individuals to a defined, comprehensive package of healthcare services, regardless of whether or not they have personally contributed to the scheme (African National Congress: 2010).

The African National Congress (in its 2010 National General Council document) estimated the likely funding requirements of implementing the National Health Insurance using a costing model recommended by the International Labour Office. The model indicated that funding requirements would increase from R128 billion in 2012 to R267 billion in 2020 and R376 billion in 2025, expressed in current financial terms (real terms) if phased in over fourteen years. The cost of the National Health Insurance will exceed the present funds allocated annually to the health budget, which for 2012 amounts to R112 million (National Treasury: 2011b). Econex (2010f) expressed the view that the estimated funding requirements could be conservative, based on what is being offered by the National Health Insurance. One study performed by McIntyre (2010a) provided a high-level

estimate of the resource requirements for a universal health insurance system and found it to be nearly R300 billion after full implementation over a fifteen-year period.

The Minister of Finance (National Treasury: 2011a), in the 2011 Budget Speech, stated that options for meeting the substantial funding requirements of the National Health Insurance would be considered, but may include a mandatory payroll tax (payable by employers and/or employees), an increase in the Value-Added Tax (VAT) rate as imposed by the Value Added Tax Act (Act No. 89 of 1991), earmarked for the National Health Insurance, and a surcharge on taxable income. The main sources of revenue for the National Health Insurance will be general tax revenue (National Treasury: 2011a). The Minister of Finance (National Treasury: 2011a) went further to state that the fiscal and financial implications of health system reform and alternative revenue sources would be considered in the year ahead (National Treasury: 2011a). In the 2011 Budget Review it was stated that the feasibility and practicality of co-payments or user charges would also be explored and that the specific financing instruments to be used to fund the implementation of the National Health Insurance would be announced in the 2012 Budget (National Treasury: 2011b). While the Minister of Finance (National Treasury: 2011a) stated that co-payments or user charges would be explored, the African National Congress (in its 2010 National General Council document) stated that there would be no co-payments or out-of-pocket payments required (other than for uninsured individuals, such as tourists) and that such payments would not be seen as a source of financing for the National Health Insurance. Although certain authors (Drechsler & Jutting: 2005; McIntyre: 2007a; Preker & Carrin: 2004; Uchimura & Jutting: 2006; World Health Organization: 2000; World Health Organization: 2005a) view out-of-pocket payments as a financial burden for many households, it is still one of the most widely used mechanisms to finance health care around the world (Savedoff: 2004 and Preker and Carrin: 2005).

The healthcare sector in South Africa is currently viewed as inequitable due to the disparity that exists between the private and public health sectors regarding the accessibility, funding and delivery of health services to the population they serve (Ataguba & Akazili: 2010; Econex: 2009; Kirby: 2009a; McIntyre: 2007a; Theron: 2011). In 2008 South Africa spent R168 billion (8.3% of Gross Domestic Product (GDP)) on health care (OECD: 2010a). The most recent year for which audited figures relating to medical scheme expenditure is available is 2008. Health care expenditure in South Africa (as a percentage of GDP) is higher than in most other middle-income countries and similar to some high-income countries. Despite the level of spending on health care, South Africa's health status indicators are much worse than other countries of a similar level of economic development (McIntyre: 2007a). Of the total amount spent on health care, 60% was funded by the

public sector and spent on the public sector (providing care to around 84% of the population), while 40% was funded by the private sector and therefore spent on the private sector (providing care to around 16% of the population) (OECD: 2010). The public sector health system is under-resourced and over-used while the private sector health system is smaller, but well-equipped and well-funded. This has resulted in the low-income, high-risk members of the population being served mainly by the public sector, while high-income, low-risk members of the population are generally treated in the private sector. Members of private medical schemes also currently receive a tax deduction for medical scheme contributions (in terms of section 18 of the Income Tax Act, 1962 (Act No. 58 of 1962)), but the African National Congress (2010) have indicated that this section will be repealed when National Health Insurance is implemented as an additional source of funding for the National Health Insurance system.

The consensus and trend internationally appears to be that the financing mechanisms used should be a pre-payment system made up of a combination of general taxation revenue and mandatory contributions, rather than out-of-pocket payments (Ataguba & Akazili: 2010; Drouin: 2007; Glied: 2008; Kirby: 2009b; McIntyre: 2007a; Preker & Carrin: 2004; World Health Organization: 2000; World Health Organization: 2005b). Furthermore, to ensure that citizens are not impoverished by the cost of healthcare, it is necessary to ensure that the financing mechanisms selected allow for cross-subsidisation within the healthcare system in terms of income (from the wealthy to the poor) and in terms of risk (from the healthy, or low-risk, to the ill, or high-risk, individuals) (McIntyre: 2010a; Drouin: 2007; Ataguba & Akazili: 2010). Progressive (or equitable) contribution mechanisms are preferred to regressive (or inequitable) mechanisms and integrated financing mechanisms are preferred to fragmented financing mechanisms (as fragmentation reduces the potential for cross-subsidisation) (Ataguba & Akazili: 2010; Drouin: 2007; McIntyre: 2007a).

The overarching question to be addressed by the research is whether the proposed financing mechanisms currently under consideration for funding National Health Insurance in South Africa are appropriate in relation to South Africa's economic profile and in line with international trends?

### 1.2 Research goals

The goal of this thesis is to analyse the financing mechanisms currently under consideration for funding National Health Insurance in South Africa in order to compare them with financing mechanisms currently used by both developed and developing countries with National Health Insurance, to determine if the proposed mechanisms are in line with international trends and "best

practice" for achieving universal coverage and appropriate in relation to South Africa's economic profile. The overall goal of the thesis will be addressed by the following sub-goals:

1. to determine whether the countries proposed as financing models are comparable with South Africa in terms of certain basic economic indicators;
2. to analyse the financing mechanisms used to fund the National Health Insurance of the countries used as a benchmark by the African National Congress in their business case, these being Japan, Taiwan, Chile, Thailand, South Korea, Mexico, Vietnam and Colombia;
3. to analyse the structure of the funding of the National Health Insurance of these countries in order to establish whether the financing mechanisms can be viewed as "best practice", worthy of being used as a benchmark for South Africa in order to achieve universal coverage;
4. to compare the financing mechanisms of the selected countries with the system proposed in South Africa and to identify similarities and differences; and
5. to make recommendations for a sound funding system for the South African National Health Insurance system.

### 1.3 Research methodology

An interpretative research approach will be adopted for the present research as it seeks to understand and describe (Babbie & Mouton: 2009). The research methodology to be applied can, for the greater part, best be characterised as a *doctrinal* research methodology. This methodology provides a systematic exposition of the rules governing a particular legal category (in the present case the legal rules proposed for the funding of the National Health Insurance), analyses the relationship between the rules and explains areas of difficulty and is based purely on documentary data (McKerchar: 2008). The research will also draw on literature sources for data relating to economic indicators, national budgets and other related statistics.

Financing mechanisms currently used for funding health care will be analysed across selected developed and developing countries and compared to the proposed funding mechanisms for the South African National Health Insurance system. A high-level comparison will be made of the economic profile of South Africa and the selected countries, based on measures and indicators such as population size, population growth, birth rates, population living in urban areas, GDP, GDP real growth, Gross National Income, health expenditure, health status, the Gini-coefficient, unemployment levels and poverty levels.

The documents to be analysed will include relevant legislation, public policy documents and strategies, annual reports, institutional reports, discussion papers, journal articles, academic works, technical briefs, research papers and articles in the public press addressing financing mechanisms for funding healthcare.

As the research will be based purely on documentary data that is in the public domain, no ethical considerations arise.

Areas relating to the National Health Insurance which are not addressed by this thesis include the implications of a centralised versus decentralised healthcare system (between the three tiers of government) in terms of their responsibility and ability to meet nationally agreed priorities; the implications of having a single-payer system (as proposed); the debate regarding what benefit package will be offered by the National Health Insurance and the cost implications of offering a comprehensive package of benefits; whether the optimistic fourteen year implementation timeframe is realistic; the extent to which private healthcare providers will be used; as well as how Government plans to address the significant human resource scarcity and infrastructure backlogs that exist in the current public health sector.

### 1.4 Structure of the thesis

The remaining chapters of this thesis are structured as follows. Chapter 2 discusses the current challenges in the South African healthcare system and the need for National Health Insurance. Chapter 3 presents an analysis of the proposed financing mechanisms for National Health Insurance in South Africa. Chapter 4 presents an analysis of the health systems and financing models or mechanisms used to fund health care within the eight "benchmarked countries". Chapter 5 presents an analysis of international trends in financing healthcare and documents how these compare to the mechanisms recommended for funding National Health Insurance in South Africa. Chapter 6 concludes the thesis with a summary of its goals, findings, implications, limitations and areas for further research.

## CHAPTER 2

## CURRENT CHALLENGES IN THE SOUTH AFRICAN HEALTHCARE SYSTEM AND THE NEED FOR NATIONAL HEALTH INSURANCE

### 2.1 Introduction

This chapter seeks to identify factors within South Africa's economy and current health system which have contributed to the need for National Health Insurance (offering universal health care to the population). The current level of expenditure on health, the equity challenges faced by the dual health system, the macro-economic context affecting health care resources and poor health status indicators will be discussed. This chapter therefore provides the link between South Africa's currently ineffective, unsustainable health system and the proposed National Health Insurance, which will be discussed in the following chapters.

South Africa does not currently have a National Health Insurance system. National Health Insurance is mandatory; it insures the entire population for the costs of health care; and is established by means of national legislation. It may be administered by the public sector, the private sector, or a combination of both. Financing mechanisms used to fund National Health Insurance vary between countries. South Africa is currently undergoing massive health reform with the introduction of a National Health Insurance system.

In 2008 South Africa spent R168 billion (8.3% of Gross Domestic Product) on health care (OECD: 2010a). The most recent year for which audited figures for private medical scheme expenditure is available is 2008. Health care expenditure in South Africa (as a percentage of Gross Domestic Product) is higher than in most other middle-income countries and similar to some high-income countries (Van den Heever: 2010). An analysis conducted by McIntyre (2007a) that looked at health expenditure and health status indicators of different countries at various levels of economic development revealed that despite the high level of spending on health care, South Africa's health status indicators (such as life expectancy and child mortality) were much worse than other countries of a similar level of economic development.

South Africa currently has a two-tier health system (a public and a private health sector), which is considered to be fragmented along socio-economic lines. The public health sector (serving the majority of the population) is under-resourced and over-used while the private health sector (serving the minority of the population) is smaller, but well-equipped and well-funded. Numerous authors (Theron: 2011; Kirby: 2009a; McIntyre: 2007a; Ataguba & Akazili: 2010) that have studied the South African health system have stated that the two-tier health system does not allow for

adequate cross subsidisation from the wealthy to the poor and from the healthy to the ill. These authors also found that the health care financing burden and available health care benefits were not equitably distributed across socio-economic groups. As a result, they have concluded that the overall health system in South Africa is inequitable based on the distribution of resources available to each health sector, relative to the population it serves.

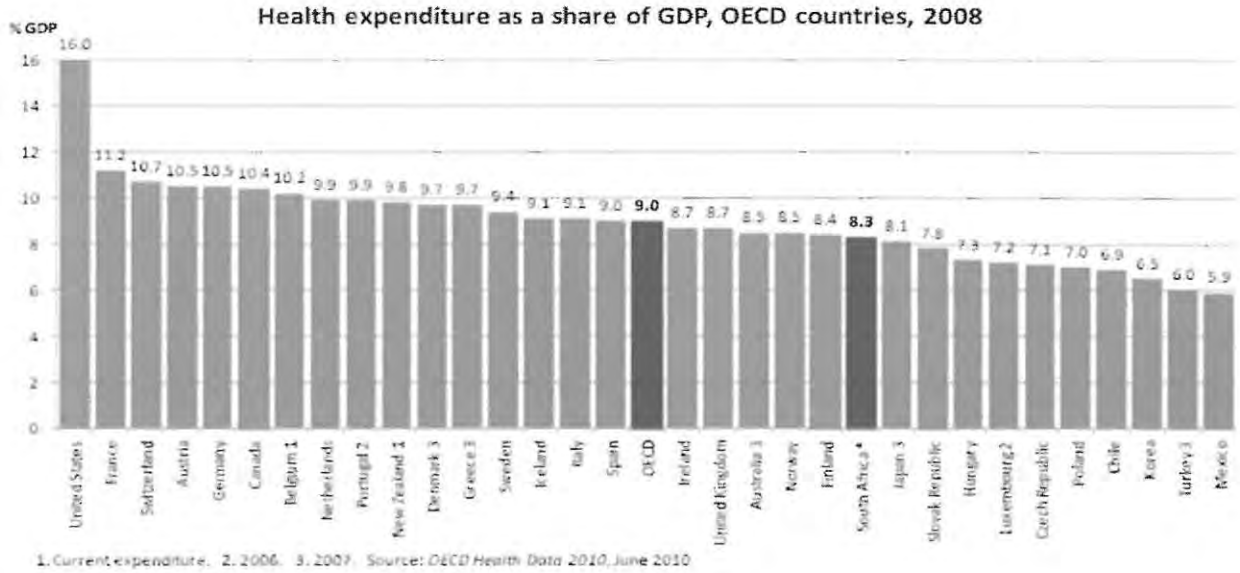
Health care in South Africa is financed predominantly through pre-payment mechanisms, primarily general tax revenue and private medical scheme contributions (National Treasury: 2010a). Despite this, vulnerable households are still not protected from unexpected health care costs as a result of direct out-of-pocket payments required for certain health care services.

McIntyre (2007) concluded after critically analysing the current South African health system that a number of factors shape the financing and delivery of health care services to the South African population, namely: the level of economic development and economic policies adopted, the burden of disease, the high levels of unemployment, the number of households living below the national poverty line as well as the unequal distribution of income.

## 2.2 Health care financing and the public-private mix

The OECD (2010a) and McIntyre (2007b) confirm that health care spending globally tends to rise with income, hence countries with higher Gross Domestic Product growth per capita tend to spend more on health. According to information obtained from the OECD (2010a), total healthcare expenditure in South Africa in 2008 was 8.3% of Gross Domestic Product (Table 1 below), which was slightly lower than the average for OECD member countries (9%), but higher than most other middle-income countries and similar to some high-income countries.

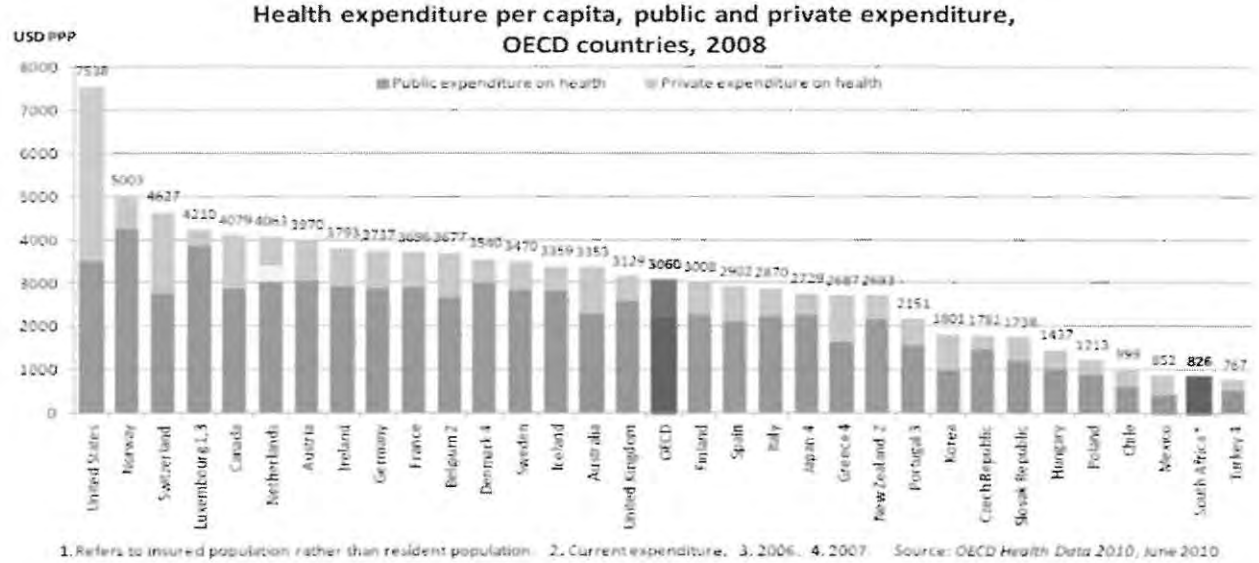
Table 1 Health expenditure as a share of Gross Domestic Product, member countries of the OECD, 2008




*Source: OECD: 2010a*

Total health expenditure per capita amongst OECD member countries was 3 060 United States Dollars (USD) compared with South Africa's 826 USD (Table 2 below) in 2008 (OECD: 2010a).

Table 2 Health expenditure per capita, public and private expenditure, member countries of the OECD, 2008




Data are expressed in US dollars adjusted for purchasing power parities (PPPs), which provide a means of comparing spending between countries on a common base. PPPs are the rates of currency conversion that equalise the cost of a given 'basket' of goods and services in different countries.
* South Africa. Source: WHO National Health Accounts 2010.

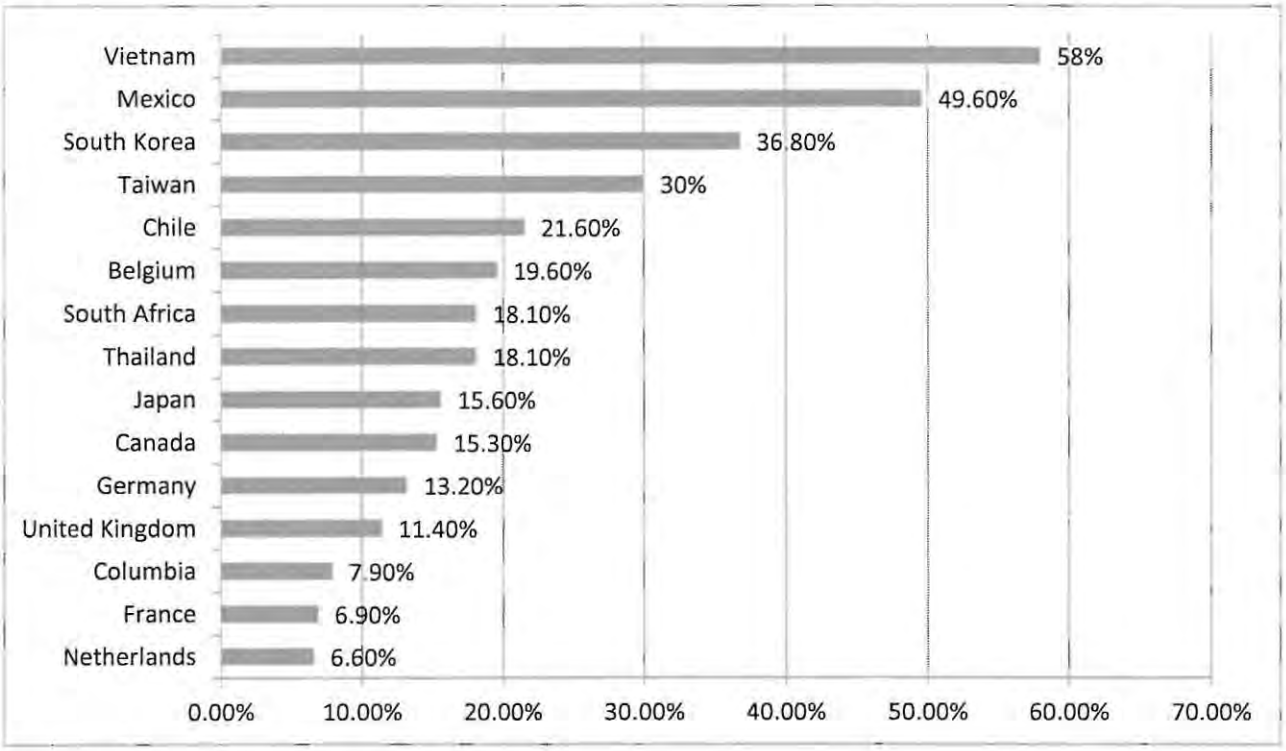
*Source: OECD countries: 2010a*

Van Den Heever (2010) expresses the belief that the level of total health care expenditure within countries is unrelated to whether the funding is predominantly public or private. Total health care

expenditure in South Africa in 2008 was funded 59.7% from government expenditure (public expenditure) in the form of general tax revenue, equating to 4.9% of Gross Domestic Product (OECD: 2010a). Government health care expenditure provided health care services to an estimated 84% of the population of 49 million people that are generally low-income and high-risk (Health Economics Unit (HEU): 2009c). The average for health expenditure funded from government revenue across OECD member countries was 72.8% in 2008 (OECD: 2010a). Government revenue is also the predominant source for health care expenditure in most OECD member countries as well as for 106 out of 191 World Health Organisation member countries (OECD: 2010a; Savedoff: 2004). The other 40.3% of total health expenditure in South Africa in 2008 was funded by private sector medical schemes and out-of-pocket payments. Private sector health care expenditure provided health care services to an estimated 16% of the population of 49 million who are generally high-income earners and low-risk from a health perspective (HEU: 2009c). According to research conducted by the Health Economic Unit (HEU: 2009b), in 2008, private medical schemes spent an average of R11 300 per person on health care costs; the private health sector spent nearly R2 500 per person as a result of out-of-pocket expenditure and the public health sector spent less than R1 900 per person. Public sector spending per person was therefore only one-fifth of the medical scheme spending per person in that year. The African National Congress (2010) stated that public sector spending on health care per person dependent on the public health sector has barely kept pace with inflation, while medical scheme expenditure per beneficiary has increased more rapidly than general inflation; more rapidly than average wages and salaries in the formal sector and is becoming increasingly unaffordable to the general population.

Van den Heever (2010) demonstrates that of the total private sector health expenditure in South Africa in 2008, 30% (or 13% of total health care expenditure) was from direct out-of-pocket payments made directly by individuals to health care service providers. This level of out-of-pocket payments is not unusual for a developing country and is in fact lower than many other upper middle-income countries (Table 3 below).

Table 3 Out-of-pocket expenditure for selected countries, expressed as a percentage of total health expenditure




*Source: Adapted from Van den Heever: 2010*

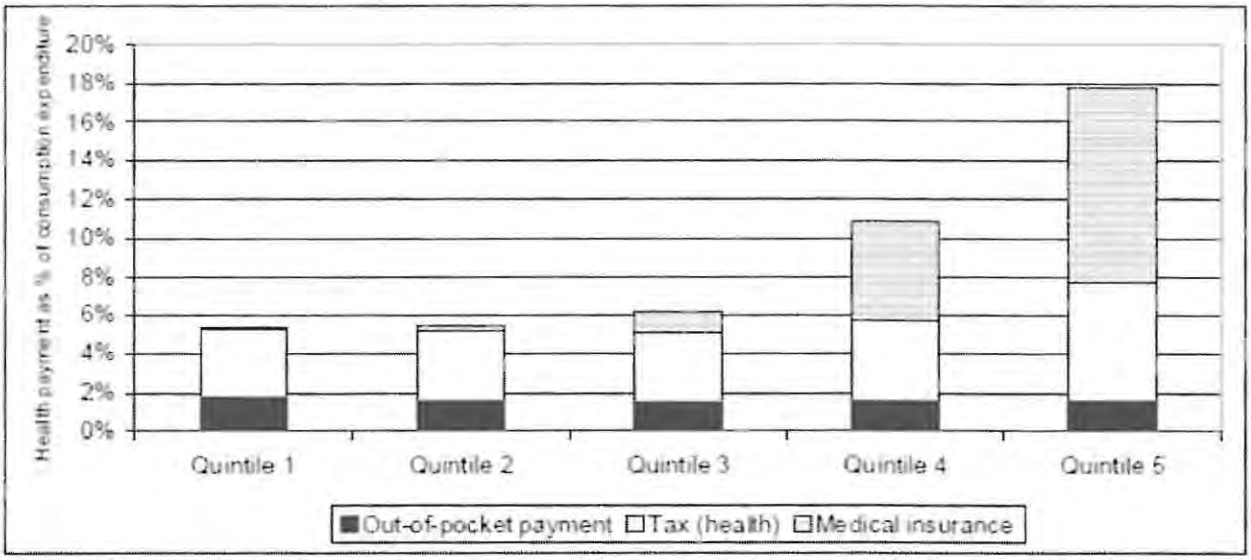
When the current high unemployment levels and the number of people living in poverty in South Africa is taken into consideration, out-of-pocket payments are the least desirable means of financing health care as they place the financial burden on the sick and only benefit the individual user and not the population at large.

The current mix of public and private funding of the South African health care system has resulted in a fragmented, inequitable health care system that favours the wealthy and healthy. Studies conducted by McIntyre (2007); Drouin (2007) and Ataguba and Akazili (2010) have also concluded that fragmentation within a health system reduces the potential for cross-subsidisation. Based on the findings from a study conducted by Ataguba and McIntyre (2009), it is clear that total health expenditure in South Africa, while relatively high in comparison with other developing countries, is not a good indication of the efficiency and equity (or fairness) that exists within the current health system. Ataguba and McIntyre (2009) performed a financing incidence and benefit incidence analysis of the overall health system in South Africa in an attempt to determine the level of equity across socio-economic population groups. The study was based on 2006 available data and expressed in 2006 terms. A financing incidence analysis determines which socio-economic group of the population bears what burden for funding health services, while a benefit incidence analysis

determines what benefit different socio-economic groups derive from using health services. The research aimed to determine how fair the health system was amongst the different socio-economic groups in the country. The socio-economic status of households was divided into 5 groups (or quintiles) based on household per capita consumption expenditure.

Table 4 (Ataguba & McIntyre: 2009) below analyses what percentage of household consumption different socio-economic groups spend on each of the three sources of health care financing in South Africa. The three sources were out-of-pocket expenses, tax expenditure (focusing on the main sources of general tax revenue used to fund health care, being personal income tax, corporate tax, excise taxes, fuel levy and VAT, which in total represent approximately 91% of general tax revenue) and medical scheme contributions. Table 4 reveals that medical scheme contributions represented the greatest burden to households in relation to health care financing at that time.

Table 4 Distribution of total health financing incidence in South Africa



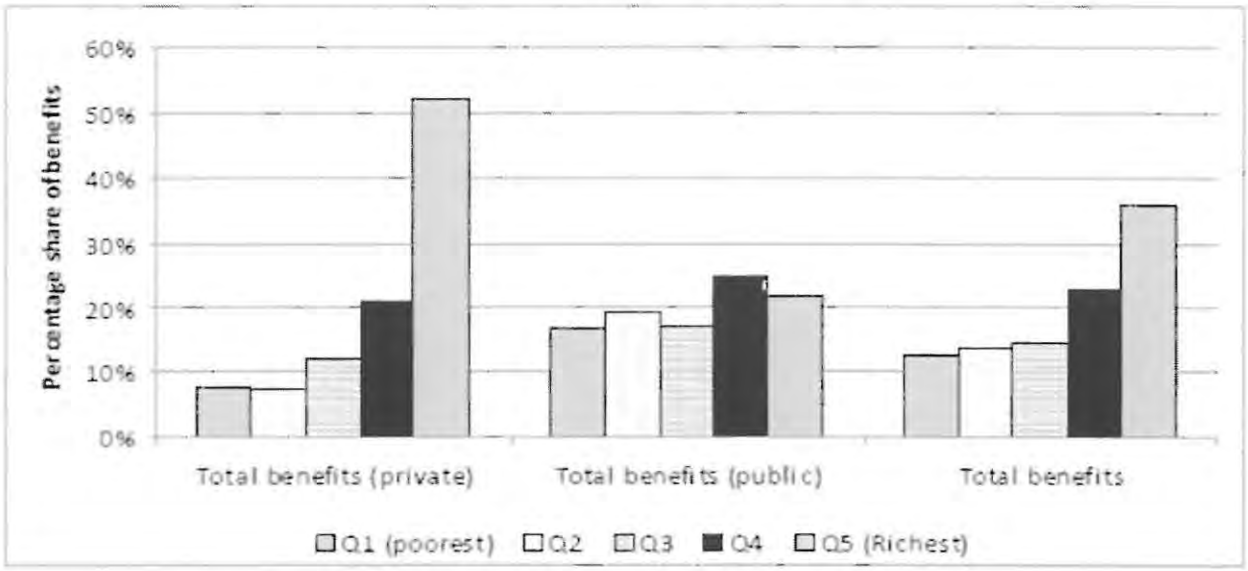

Note: 11.55% of total tax funds are allocated to health (National Treasury, 2007), as the basis for the health tax incidence

*Source: Ataguba and McIntyre: 2009*

Table 4 above further reveals that out-of-pocket payments were slightly regressive, while medical scheme contributions were highly progressive. The study also revealed that although personal income tax was very progressive, excise taxes and fuel levy were regressive and VAT was almost proportional. The overall financing incidence of the health system in South Africa was found to be very progressive (the percentage of health care costs borne by individuals increased as income increased). This progressivity was due almost entirely to medical scheme contributions (which only benefits the members of the schemes that are in the wealthy population quintiles).

Table 5 (Ataguba & McIntyre: 2009) below indicates the distribution of total health care benefits (benefit incidence) in South Africa across each quintile. What was evident from the findings was that the wealthier quintiles received a greater share of both private and public health care benefits.

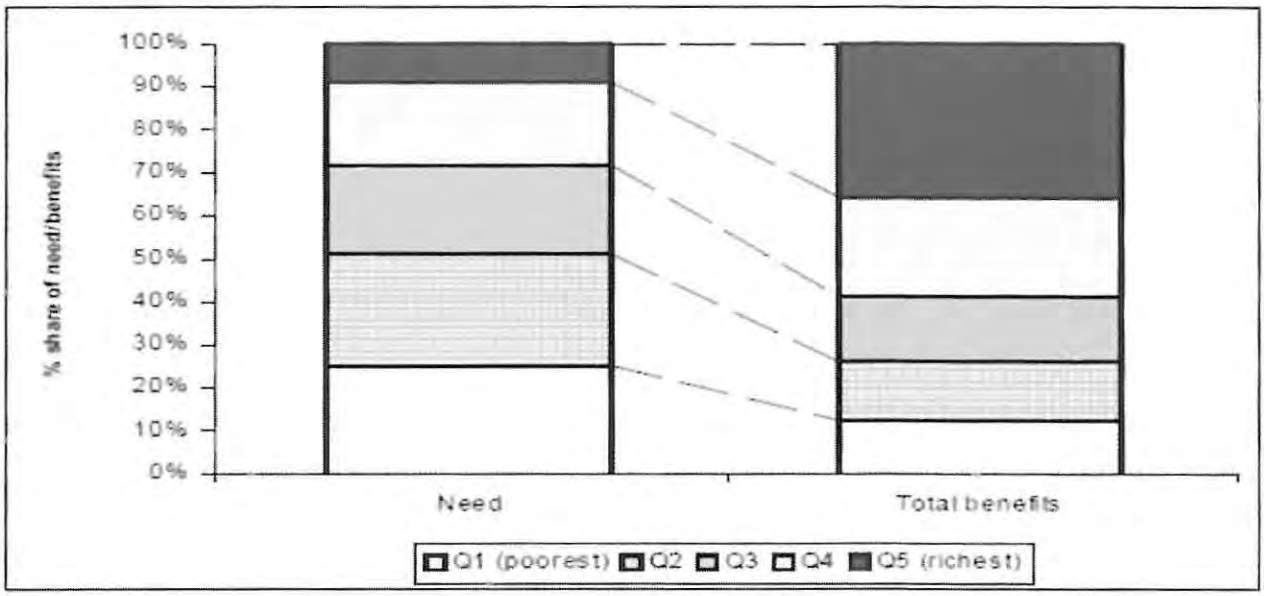
Table 5 Distribution of total health care benefits in South Africa




*Source: Ataguba and McIntyre: 2009*

Table 6 (Ataguba & McIntyre: 2009) below indicated that the share of health care benefits received by each quintile was not in line with the needs of each quintile.

Table 6 Compares total benefit incidence with levels of health care needed




*Source: Ataguba and McIntyre: 2009*

Ataguba and McIntyre (2009) state that the conclusions reached from the above financing incidence and benefit incidence analyses indicated a definite lack of income and risk cross-subsidising in the overall health system in South Africa, resulting in an unequal distribution of health resources across the socio economic groups (based on their need).

## 2.3 Macro-economic analysis

The World Health Organization (2001) stated that evidence exists which confirms that there is a clear and definite link between health, poverty reduction and economic growth, confirming the notion that "health is wealth". The health sector within any economy is shaped by the country's economic development. This is particularly relevant when the country's health sector is funded primarily by general tax revenue. Data obtained from Sanders & Chopra (2006) revealed that South Africa contributes almost half of the total economic output of Sub-Saharan Africa and its per capita Gross Domestic Product makes it an upper middle-income country. The South African population was estimated to be approximately 50 million in 2010 (Statistics South Africa: 2010). Gross Domestic Product has grown steadily over the past decade and is projected to be 3.4% in 2011, rising to 4.4% in 2013 (National Treasury: 2011b; OECD: 2010b). Gross Domestic Product growth in South Africa was negative in 2009 for the first time in ten years as a result of the global recession (National Treasury: 2010b). In 2010 South Africa contributed 0.6% to the global Gross Domestic Product and was invited in December 2010, to join the BRICS grouping of countries, comprising Brazil, Russia, India and China and now South Africa, which, it is hoped, will provide new opportunities for trade and investment (National Treasury: 2011b). South Africa is continuing its efforts to improve representation on the International Monetary Fund board, to provide the country with access to financial resources and technical assistance to support growth (National Treasury: 2011b).

Income in South Africa is considered to be very unequally distributed, and in 2006, Statistics SA revealed that the richest 10% of the population accounted for 51% of the income and the poorest 10% of the population accounted for 0.2% of the income (Statistics South Africa: 2008). Seekings (2007) describes the Gini index as a widely used index that measures the degree of inequality in the distribution of family income in a country. If income is perfectly equal, the Gini index would be zero and if income is perfectly unequal, the Gini index would be 1. South Africa had a Gini index of 0.70 in 2005, ranking it in the top 10 countries in the world for unequal distribution of income. In the 2011 Budget Review, the Minister of Finance (National Treasury: 2011b) commented that overall inequality in South Africa remained high and may have widened further. With the emphasis currently being on job creation in South Africa, it is envisaged that income inequality should

decrease. It is also the South African government's view that higher levels of economic growth, together with sustainable job creation initiatives, can reduce poverty and inequality directly (National Treasury: 2011b), which will have a direct effect on the country's health status and the equitable funding of its health care system.

High levels of poverty would appear to have a direct bearing on the need for healthcare. Poor people are especially vulnerable to disease as they lack access to basic needs such as safe drinking water, proper housing, food, education and decent housing. The percentage of South Africans currently living below the national poverty line of R283 per month has fallen from 38% in 2000 to 22% in 2008 (National Treasury: 2011b), but is still unacceptably high. Poverty is reduced largely through economic growth by lifting average incomes (National Treasury: 2011b). Progress made by South Africa between 2003 and 2008 in reducing poverty was largely undone by the 2009 recession (National Treasury: 2011b). This level of poverty places a tremendous burden on the country's public health care system in terms of infrastructure availability, health care usage, financial resources and health sector staffing requirements.

The Minister of Finance (National Treasury: 2011b), in the 2011 Budget Review, stated that South Africa is faced with a high rate of unemployment and a large informal sector. There are currently 13.1 million South Africans who have regular work (41% of the working-age population). Overall unemployment was 24% at the end of 2010 (National Treasury: 2011b). The decrease in employment in South Africa over the past two years was a larger percentage than any other OECD member country, apart from Spain, Ireland and Iceland (National Treasury: 2011b). This level of unemployment is considered to be one of the greatest threats to economic stability in the country. Unemployment has a direct impact on the level of financing available for health care. Personal income tax and corporate tax form the largest share of the country's tax revenue base, from which public sector funding for health care is derived.

### 2.4 Health status indicators

Developing countries (including South Africa) are considered by the World Health Organisation (2000) to bear 93% of the world's disease burden, while only accounting for 18% of the world income and 11% of the global health spending.

According to a report published by the World Health Organization (2008b), South Africa has the highest number of HIV-infected people worldwide, accounting for 17% of the global HIV burden. This report indicated that South Africa together with many other countries, particularly low- and

other middle-income countries are not only plagued by communicable diseases (such as HIV/AIDS and tuberculosis), but are experiencing a steady increase in non-communicable diseases (chronic diseases) such as cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. The World Health Organization estimated that 60% of all deaths globally are due to non-communicable diseases, with 80% of those deaths being in low- and middle-income countries. It is also estimated that non-communicable diseases will increase by 17% over the next 10 years. The rapidly increasing burden of these diseases is affecting poor and disadvantaged populations disproportionately, contributing to widening health gaps within countries. The primary risk factors associated with these non-communicable diseases is smoking, alcohol, an inactive lifestyle and an unhealthy diet. The report concluded by stating that the non-communicable diseases identified together with their risk factors, are closely linked to global social and economic development such as poverty and also contribute to poverty.

According to information published by the OECD (2010a), life expectancy (measured at birth) has decreased sharply in South Africa over the last two decades to 50.5 years (in 2008), while increasing in OECD member countries to an average of 79.4years. Infant mortality has remained stable in South Africa over the last two decades at 44.6 deaths per 1,000 live births (in 2008), while decreasing in OECD countries to an average of 4.7 deaths in 1 000 live births.

According to information published by the National Department of Health (2007) and the OECD (2010a) the proportion of daily smokers among adults has declined over the past two decades in many countries. The smoking rate in South Africa stood at 8.4% for females and 31.5% for males in 2003, the most recent year available. The average for OECD countries was 18.6% for females and 28.1% for males in 2008.

According to information published by the National Department of Health (2007) and the OECD (2010a), obesity rates have increased in recent decades in all member countries of the OECD, although there are notable differences. In South Africa, the obesity rate among adults was 27.4% for females and 8.8% for males in 2003, the most recent year available. The average across the thirteen member countries of the OECD was 21.0% for men and women combined in 2008. It was noted that obesity often results in increases in the occurrence of other health problems such as diabetes, cardiovascular diseases and asthma and higher health care costs in the future.

## 2.5 Conclusion

Evidence exists and is mounting to confirm that there is a clear and definite link between health, poverty reduction and economic growth, confirming the notion that "health is wealth" (World Health Organisation: 2001). The desire to achieve to universal health coverage cannot, however, be looked at in isolation. The macro-economic context of a country influences its ability to achieve universal coverage and influences the financing mechanisms selected to fund its health care. Based on the challenges faced by South Africa and described in this chapter, the introduction of a mandatory National Health Insurance is considered a necessary health reform, aimed at addressing the country's poor health status indicators (namely the increase in mortality and decrease in life expectancy) as well as improving access for all citizens to quality health services, while at the same time offering financial protection to the poor. This proposed reform is in line with the desire of international policy makers who are calling for *equitable* access for *all* citizens to *adequate* health care at *affordable costs* (offering financial protection to the poor). Although the proposed National Health Insurance will be mandatory for all citizens, it does not preclude membership of private medial schemes. Instead, government recommends that private medical schemes should be optional for those who can afford it and are seeking additional medical cover, possibly for services not included in the national package of services on offer. The goals for any health system, according to the World Health Organisation, are good health, responsiveness to the expectations of the population, and fair contribution (World Health Organisation: 2000). That is also the objective of universal health care. South Africa, with many other developing countries, is attempting to meet the universal challenge.

The next chapter will discuss how South Africa is responding to the local and global health care challenges explained in this chapter with the implementation of a National Health Insurance system. The financing mechanisms currently under consideration for funding the National Health Insurance system will also be discussed.

# CHAPTER 3
# PROPOSED FINANCING MECHANISMS FOR NATIONAL HEALTH INSURANCE IN SOUTH AFRICA

## 3.1 Introduction

The previous chapter described certain challenges currently facing South Africa's health sector. These challenges contributed to the need for health reform in South Africa. In response, the Minister of Health introduced the ten-point plan for restructuring public health care in South Africa. One of the items in the ten-point plan was the implementation of a mandatory National Health Insurance in South Africa.

The introduction of a National Health Insurance will require additional funding, which is to be borne by both government and South African citizens. This chapter will therefore identify and discuss the financing mechanisms currently under consideration for funding National Health Insurance in South Africa. The proposed financing mechanisms will then, in the following chapter, be compared with international trends for financing health care and against financing mechanisms used by selected countries with National Health Insurance. This comparison will be made to identify differences and similarities in funding models, to ensure that the proposed mechanisms are in line with international trends and "best practice" for achieving universal coverage, to ensure the mechanisms are appropriate in relation to South Africa's economic profile and to be able to make a recommendation for a sound funding system for National Health Insurance in South Africa.

## 3.2 National Health Insurance in South Africa

### 3.2.1 Introduction

In the 2011 Budget Speech, the South African Minister of Finance (National Treasury: 2011a) announced that the 2011 Budget would be taking the first steps in implementing National Health Insurance as part of the Minister of Health's ten-point plan for restructuring public health care. Earlier, in September 2010, the African National Congress (2010) stated that National Health Insurance would be publicly funded, publicly administered and would provide all South African citizens and legal residents with access to quality health care, which would be free at the point of service. To facilitate the administration of funding for National Health Insurance, a National Health Insurance Fund would be established, whose main responsibility would be to receive funds, pool these resources and purchase services on behalf of the entire population. The National Health Insurance Fund will be publicly administered and will be a single-payer system. A single-payer system was selected by the African National Congress (2010) as it is considered to be more

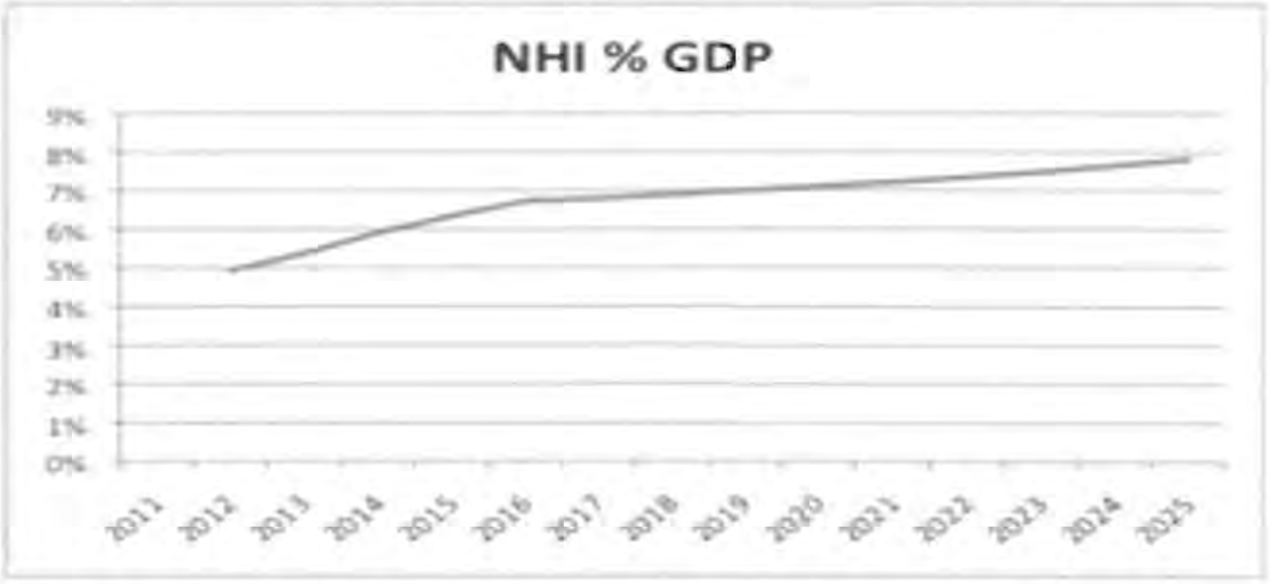
effective in collecting revenue, distributing risks through one large risk pool and offering government a high degree of control over total expenditure on health. By providing mandatory health insurance for all South African citizens and legal residents, regardless of income level and employment status, the National Health Insurance will be providing citizens with universal health care coverage. According to the African National Congress (2010) the universal coverage will entitle individuals to a defined, comprehensive package of health care services, available through accredited and contracted public and private health care service providers. The African National Congress (2010) stated further that the package of services would include services at all levels of care namely: primary, secondary and tertiary. The package of services would, however, exclude medically unnecessary services and expensive therapies.

### 3.2.2 Funding requirements

The preliminary funding requirements for implementing National Health Insurance were estimated by the African National Congress (2010) using a costing model recommended by the International Labour Office. The model estimated that the funding requirements would increase from R128 billion in 2012 to R267 billion in 2020 and R376 billion in 2025, expressed in real terms (2010 financial terms) if phased in over fourteen years. This equates to 7.8% of Gross Domestic Product in 2025. Data collected by the African National Congress (2010) on current spending levels on health care in South Africa were estimated to be a total of over R200 billion in 2010, equivalent to 9.7% of Gross Domestic Product. The eventual level of spending on the National Health Insurance (once fully implemented) of R376 billion (or 7.8% of Gross Domestic Product) was therefore still expected to be less than current total health care spending (by government, medical schemes and private individuals) of 9.7% of Gross Domestic Product. Although total health care expenditure (estimated at R376 billion) currently exceeds the estimated funding requirements for National Health Insurance, public health care in South Africa is still considered to be under-funded, relative to the population it serves. Although private funding may be sufficient, it does not benefit the entire population. For these reasons, the African National Congress (2010) confirmed that the introduction of a mandatory National Health Insurance (which will benefit the entire population) would require a significant increase in the level of government spending (public spending) on health care.

Table 7 (African National Congress: 2010) below indicates the National Health Insurance funding requirements from its current level of government spending of 4.9% of Gross Domestic Product in 2012 to the total expected spending level of 7.8% of Gross Domestic Product in 2025. This represents an increase in spending of 2.9% of Gross Domestic Product over the next fourteen years.

Table 7 National Health Insurance funding requirements as a percentage of Gross Domestic Product




*Source: (African National Congress: 2010)*

The funding estimate made by the African National Congress for National Health Insurance appears to be slightly understated when compared with the findings of a high-level study conducted by McIntyre (2010a), initiated in 2006 and ending in September 2010. This study estimated that the funding needed by South Africa to achieve universal health care coverage would need to grow to approximately 8.6% of Gross Domestic Product over the next fifteen years. This study therefore concluded that universal coverage would grow in line with expected Gross Domestic Product growth, which was projected by National Treasury to be 3.4% in 2011, rising to 4.4% in 2013 (National Treasury: 2011a).

The primary financing mechanism proposed by the Minister of Finance (National Treasury: 2011b) for funding National Health Insurance was general tax revenue. This means that National Health Insurance in South Africa will be a tax-based National Health Insurance system, rather than a Social Health Insurance system. The main difference between National Health Insurance and Social Health Insurance (also referred to as Employment-Based Health Insurance) is that a Social Health Insurance system relies heavily on mandatory contributions from formal sector workers (either employers, employees or both), calculated according to their ability to pay. As this system is heavily reliant on contributions from formal sector workers, it places less of a financial burden on government as less health care expenditure needs to be funded from government expenditure. The South African National Health Insurance system is envisaged to provide universal coverage to all citizens and legal residents through a combination of mandatory contributions (made by those that are employed and earning above the income tax threshold) and general tax revenue contributions

(on behalf of the unemployed, poor and those earning below the taxable income threshold). Health care provided in South Africa will not be dependent on income level or employment status. The Minister of Finance (National Treasury: 2011b) also stated that South Africa would be a single-payer health care system. A single-payer health care system, according to Wikipedia (2011b) is a system whereby the financing of health care is from a single insurance pool, which is government run. Under this system, universal health care for the entire population is financed from one pool of funds, into which various parties such as employers, employees and the state have contributed.

The African National Congress (2010) also stated that the increased spending requirements for the National Health Insurance would be partially offset by the likely decline in spending by individuals on medical schemes as free public health care would be available, as well as the removal of tax subsidies (by means of allowing a deduction for income tax purposes) currently granted for medical scheme contributions made by individuals. According to the African National Congress (2010) these subsidies mostly benefit high-income earners. In the 2011 Budget Review (National Treasury: 2011b), this benefit was estimated at R6.8 billion in 2008/2009. This practice of granting tax subsidies, in the opinion of the Minister of Finance (National Treasury: 2011b), has resulted in a substantial loss of tax revenue and is not considered to be equitable and for this reason, deductions for medical contributions and out-of-pocket expenses incurred by individuals that are claimed as deductions from income tax, will be converted to tax credits during the 2012/2013 tax year. A tax credit is viewed as more equitable tax relief, as the relative value does not increase as the marginal tax rate of the individual increases.

The fiscal and financial implications for funding the National Health Insurance are still under consideration and will only be refined in the year ahead. The Minister of Finance (National Treasury: 2011b) indicated that the actual funding mechanisms to be used will be announced in the 2012 Budget. The funding mechanisms currently under consideration will be discussed in the remainder of this chapter (to the extent that information is available). International trends and financing mechanisms in place for funding National Health Insurance within other selected countries will be discussed in the following chapter.

## 3.3 Proposed financing mechanisms

### 3.3.1 Introduction

The African National Congress (2010) stated that the current level of government expenditure allocated to health is considered insufficient to meet the health needs of all South African citizens and will need to be increased significantly in order to meet the funding requirements of the

proposed National Health Insurance. The African National Congress (2010) estimated that the health sector's share of government expenditure would need to increase to approximately 14% to 14.5% of total government expenditure, from its current level of 11% projected for 2013/2014. The Minister of Finance (National Treasury: 2011b) stated that the funding required for National Health Insurance is to be primarily from general tax revenue, supplemented by either a surcharge on the individual's taxable income, a mandatory payroll tax or contribution (payable by employers and/or employees) which will be progressively structured, and/or an increase in the VAT rate, earmarked for National Health Insurance.

South Africa's target of allocating between 14% to 14.5% of total government expenditure to the health sector, is in line with a commitment, made in September 2000, by the 189 heads of state (including South Africa). In September 2000 the 189 heads of state made a pledge to allocate at least 15% of their annual budget to improve the health sector in their respective countries in an attempt to meet the Millenium Development Goals (African Union: 2006). This target is also in line with the high-level study conducted by McIntyre (2010a), which concluded that financing from government expenditure would need to account for 6.4% of Gross Domestic Product (currently 4.9%) and financing from medical schemes should account for approximately 2.2% of Gross Domestic Product. This study also estimated that in order for government expenditure to reach 6.4% of Gross Domestic Product, general tax revenue dedicated to the health sector should be gradually increased to 15%, in line with the September 2000 commitment made by the African Heads of State (African Union: 2006), which would require an additional tax on income of not more than 4% (shared by employers and employees). Progress made by South Africa in meeting the Abuja commitment of allocating 15% to the health sector has been limited to date. The level of spending on health care is particularly critical in South Africa when taking the effects of HIV/AIDS, tuberculosis and malaria into consideration. One of the reasons provided by McIntyre (2010a) for increasing the level of public funding on health care is the need for substantial improvements to be made to the quality of health services available for the entire population. McIntyre (2010a) stated that if such improvements were to be made, they would have to be funded from public funds as funding from medical schemes only benefited those who contributed to the schemes and not the entire population.

The Minister of Finance (National Treasury: 2011b) indicated in the Medium Term Expenditure Framework that government expenditure on health was expected to increase from R113 billion (11% of the total government budget) in 2012/2012 to R127 billion in 2013/2014 (11% of the total government budget). According to information from National Treasury (2011b) government

expenditure on health as a percentage of the total government budget has remained relatively constant at approximately 11% over the period 1997/1998 to 2013/2014. National Treasury (2011b) also projected real Gross Domestic Product growth in South Africa of 2.3% in 2010, increasing to 3.2% in 2011 and 3.6% in 2012. The increase in government spending (through general tax revenue and mandatory National Health Insurance contributions) is expected to increase more rapidly than projected Gross Domestic Product growth. The ability of government to award the health sector a greater share of the total government budget will be a challenge on its own, but ultimately the National Department of Health will have the responsibility of ensuring that it provides good budgetary evidence to command the additional funds from National Treasury.

The African National Congress (2010) does not anticipate co-payments and out-of-pocket expenditure to be a source of financing for the National Health Insurance.

McIntyre (2007c) stated that financing mechanisms selected should be judged according to the extent to which they are feasible, equitable, efficient and sustainable. In order to be feasible, stakeholders need to support the mechanism and there should be adequate administrative capacity to implement it successfully. To be equitable, the mechanism should allow for cross-subsidisation from the wealthy to the poor. To be efficient, the mechanism needs to generate sufficient revenue so that multiple mechanisms may not be required, resulting in low collection and administration costs, leaving as much revenue as possible for actual health services. Finally, to be sustainable, the mechanism needs to be stable and predictable and have the potential to generate additional revenue in the long term as the need for health care grows (McPake & Kutzin: 1997). The African National Congress (2010) indicated that the various mechanisms would be evaluated in terms of their revenue generation potential and their potential impact on economic growth, employment, savings and income distribution.

The remainder of this chapter will discuss the financing mechanisms currently under consideration for funding National Health Insurance and a discussion of the factors which may be relevant in deciding whether each mechanism is feasible, equitable, efficient and sustainable.

### 3.3.2 General tax revenue

The African National Congress (2010) stated that general tax revenue will be the main financing mechanism for National Health Insurance. Most low and middle-income countries (including South Africa) cannot increase government spending on heath (through general tax revenue), without increasing tax revenue. This is especially the case if the country is already operating on a deficit

budget, as is the case in South Africa (National Treasury: 2011b). Generally, tax revenue increases as the economy grows and is particularly sensitive to the economic performance of the country. This was evident from the adverse effect that the recent global crisis and subsequent recession had on revenue collections in South Africa (South African Revenue Service: 2010a). The effects of the global crisis and recession were evident when revenue collections in 2009/2010 were reported by the South African Revenue Service (2010a) to have fallen year-on-year for the first time in the history of the South African Revenue Service.

An increase in government expenditure on health as a percentage of Gross Domestic Product will require a growing tax base or higher tax rates. In order to grow or broaden the tax base (by increasing the number of entities registered for tax), government will need to encourage enterprise growth and development and job creation, while the South African Revenue Services will need to focus on ensuring that taxpayers are registered, that all tax owing is collected and that collection costs are contained.

Both government and the South African Revenue Services have embarked on a number of initiatives to broaden the tax base. Government (National Treasury: 2011b) has committed itself to the New Growth Path aimed at creating job opportunities, implementing programmes and tax relief measures to improve investment and growth in the small business sector and strengthening rural development and emerging farmer support. The South African Revenue Service (2011b) has introduced initiatives to strengthen taxpayer compliance including penalties for non-compliance, improved its administrative processes aimed at reducing the administrative costs and timeframes for collecting revenue, a voluntary disclosure programme to allow taxpayers with undisclosed tax liabilities to correct their affairs, closer scrutiny of cash-intensive businesses to identify income tax and VAT avoidance, increasing forensic audits with revenue authorities in other countries to identify suppressed sales, focusing on tax avoidance schemes that are aimed at obtaining undue tax benefits as well as increased use of information from third party sources to identify false information or tax not paid over.

Table 8 (South African Revenue Services: 2010a) below shows that the number of registered taxpayers has grown from 2008/2009 by an average of 3.5% to 9.65 million taxpayers (19% of the estimated population of 50 million individuals) in 2009/2010.

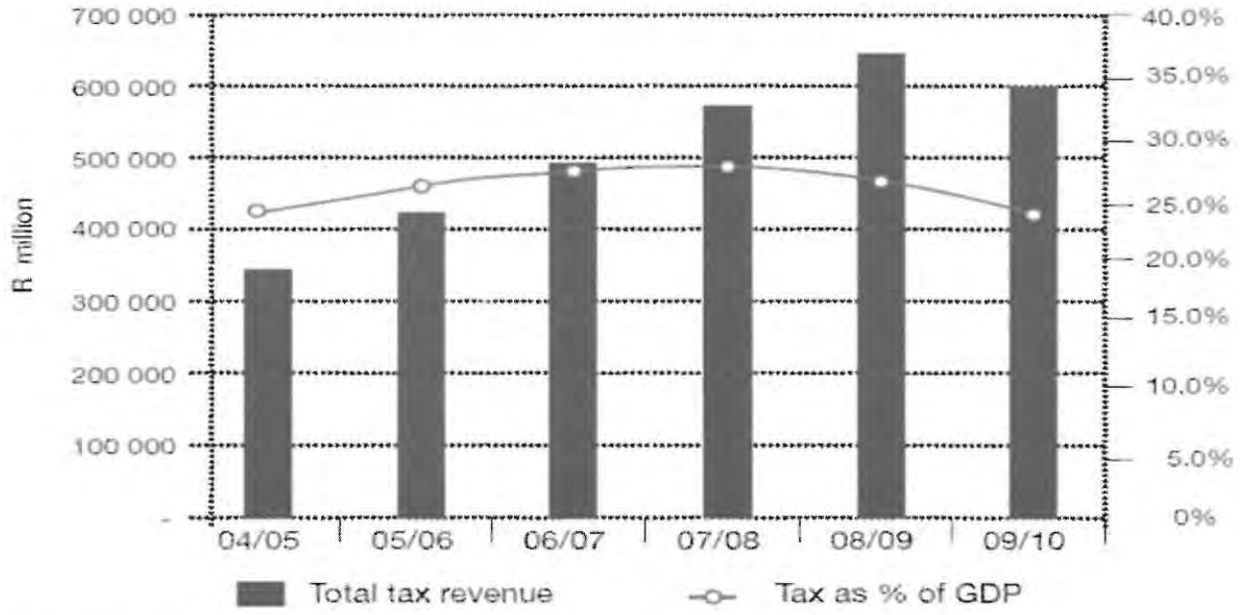
Table 8: Tax register 2008/09 to 2009/10 of registered taxpayers

| Registered Taxpayers | 2008/09 | 2009/10 | % Growth |
|---|---|---|---|
| Income Tax | 7 766 915 | 8 131 422 | 4.69% |
| Individuals | 5 540 646 | 5 920 612 | 6.86% |
| Trusts | 392 260 | 331 954 | -15.37% |
| Companies | 1 834 009 | 1 878 856 | 2.45% |
| Value Added Tax | 737 885 | 685 523 | -7.10% |
| Pay As You Earn | 393 974 | 395 575 | 0.41% |
| Customs | 422 636 | 439 065 | 3.89% |
| Importers | 228 350 | 229 442 | 0.48% |
| Exporters | 194 286 | 209 623 | 7.89% |
| **Total Register** | **9 321 410** | **9 651 585** | **3.54%** |

*Source: South African Revenue Services: 2010a.*

Key contributors (from Table 8 above) responsible for broadening the tax base have been a 6.9% growth in the individual tax register and a 7.9% growth in the exporter tax base. According to the South African Revenue Service (2010a) its costs incurred in collecting revenue amounted to 1.2% of total tax revenue in 2009/2010, which compares favourably with member countries of the OECD.

Table 9 Total tax revenue compared to tax revenue as a percentage of GDP 2004/05 to 2009/10




*Source: South African Revenue Service: 2010a*

Table 9 above reveals that tax revenue represented 24.5% of Gross Domestic Product in 2009/2010. The Minister of Finance (National Treasury: 2011b) indicated that tax revenue as a percentage of Gross Domestic Product is expected to increase to 26.2% in 2013/2014 as the economy continues

its recovery from the recession. This continued recovery should have a direct effect on government's ability to dedicate additional resources to the health sector.

Tax revenue in South Africa comprises personal income tax (PIT), corporate income tax (CIT), secondary tax on companies (STC), VAT, fuel levy, customs duty and other less significant taxes.

Table 10 (South African Revenue Service: 2010a) below sets out the percentage contribution of the various taxes to total taxes collected.

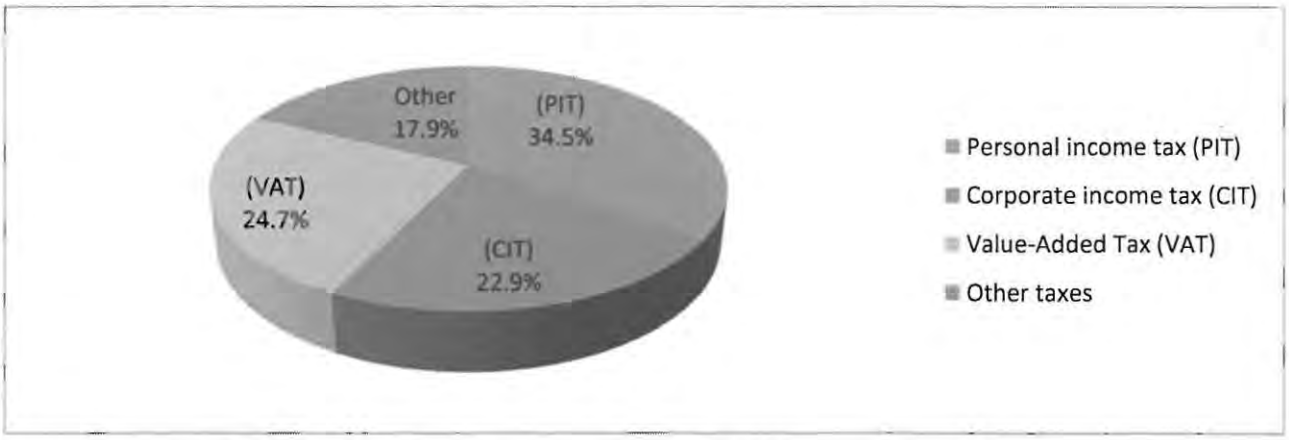
Table 10: Breakdown of tax revenue collected from 2004/05 to 2009/10

| Year | PIT | CIT | STC | VAT | Fuel levy | Customs | Other | Total tax revenue |
|---|---|---|---|---|---|---|---|---|
| | R million | R million | R million | R million | R million | R million | R million | R million |
| 2004/05 | 111 697 | 71 629 | 7 487 | 98 158 | 19 190 | 12 888 | 33 929 | 354 979 |
| 2005/06 | 126 416 | 87 326 | 12 278 | 114 352 | 20 507 | 18 303 | 38 013 | 417 195 |
| 2006/07 | 141 397 | 120 112 | 15 291 | 134 463 | 21 845 | 23 697 | 38 744 | 495 549 |
| 2007/08 | 169 539 | 141 635 | 20 585 | 150 443 | 23 741 | 26 470 | 40 401 | 572 815 |
| 2008/09 | 196 068 | 167 202 | 20 018 | 154 343 | 24 884 | 22 751 | 39 834 | 625 100 |
| 2009/10 | 206 484 | 136 978 | 15 468 | 147 941 | 28 833 | 19 577 | 43 425 | 598 705 |

*Source: South African Revenue Services: 2010a.*

Table 11 (South African Revenue Service: 2010a) below, reveals what percentage of total tax revenue the main tax contributors represented in 2009/2010

Table 11 Main tax contributors as a percentage of total tax revenue, 2009/2010




*Source: Adapted from South African Revenue Services: 2010a.*

From Table 11 above it is evident that during the 2009/2010 tax year, personal income tax comprised the largest share of tax revenue (34,5%), followed by VAT (24,7%) and then corporate

income tax (22,9%). Since 2004/2005, personal income tax has represented between 28% and 31% of total tax revenue, corporate income tax has represented between 20% and 26% of total tax revenue and VAT has represented between 24% and 27% of total tax revenue.

General tax revenue may be a feasible and efficient financing mechanism for funding National Health Insurance as it has the ability to generate sufficient revenue for health care, although the extent of public support may vary based on how the increase is to be funded (by means of an increase in personal or corporate tax rates or an increase in VAT). It would also appear that the South African Revenue Service has the administrative capacity to cope with an increase in revenue collections. Revenue collection costs may increase with an increase in tax revenue, but systems appear to exist which would contain and manage the increase to acceptable levels. General tax revenue may be an equitable financing mechanism for funding National Health Insurance, providing taxes such as personal income tax and corporate taxes bear the bulk of the increase as these are largely progressive in nature and an increase would hopefully allow for adequate cross-subsidisation from the wealthy to the poor. The sustainability of general tax revenue as a financing mechanism is largely dependent on the stability and predictability of the economy. Should the economy continue to grow, the use of general tax revenue has the potential to generate additional revenue for the National Health Insurance in the long-term as the need for health care grows.

### 3.3.3 Value-Added Tax

VAT is an indirect tax, levied in South Africa on the consumption of domestic goods and services, including imported goods and services. The Minister of Finance (National Treasury: 2011a) indicated that funding required for the National Health Insurance is anticipated to be primarily from general tax revenue, but will need to be supplemented possibly by an increase in the VAT rate, earmarked for National Health Insurance. The debate relating to whether or not taxes to fund specific priorities such as health care, should be earmarked, appears to be largely political in nature. On the positive side, if government spending on health care is generally too low or unstable, an earmarked tax could increase and stabilize funding for health care in that the health sector would not need to compete with other government funded priorities. Buchanan (1963, in McIntyre: 2007c) is also of the opinion that earmarked taxes may achieve greater support from stakeholders, who may be more willing to pay taxes and comply with tax provisions if the population is aware that the tax will be devoted entirely to health services. The earmarked tax should not, however, be off-set by a corresponding reduction in the health sector's share of other general tax revenue. The Minister of Finance (National Treasury: 2010b) indicated in the 2011 Budget Review that earmarked taxes reduce budget flexibility and government's ability to respond to changing priorities.

According to a study performed by Ataguba and McIntyre (2009) VAT in South Africa has been shown to be regressive, as both wealthy and poor individuals pay the same amount of tax, levied at the same rate (currently 14%). Poor households therefore pay a larger portion of their income as VAT than wealthy households, thus placing a greater financial burden on the poor. Any increase in the VAT rate affects the entire population, regardless of the individual's income level. It is therefore suggested that the decision to increase VAT as a financing mechanism for funding National Health Insurance would need to be analysed in more detail to determine what effect the increase would have on poorer households. Considerations that should be taken into account in this decision would include the unequal distribution of income which currently exists in South Africa, the high levels of unemployment, the number of households currently living below the poverty line as well as how VAT actually impacts the poor. Poorer households currently receive a certain amount of relief from VAT in terms of Schedule 2 of the VAT Act, 1991 (Act No. 89 of 1991) in that basic foodstuffs are zero-rated for VAT purposes. Poor households however tend to subsist largely on home-grown crops or foods purchased in local, informal markets (such as street vendors) that are beyond the reach of the VAT net. In the 2011 Budget Review (National Treasury: 2011b) it was estimated (based on the 2005/2006 Income and Expenditure Survey conducted by Statistics South Africa ) that the poorest 20% of households in South Africa accounted for approximately 7.9% of total expenditure on food and non-alcoholic beverages, and the wealthiest 20% of households accounted for 39.9%. An estimate was then made which revealed that the monetary benefit that accrued to poorer households from the zero-rating of "basic food items" in 2008/2009 was R1.4 billion and that which accrued to the wealthiest households was R5 billion. It was therefore argued that the zero-rating of "basic food items" was not the most effective form of relief for the poor (National Treasury: 2011b).

According to the South African Revenue Service (2010a) VAT represented R147,9 billion and was the second highest contributor of total tax revenue (24,7%) in South Africa during the 2009/2010 tax year. VAT is a fairly stable and predictable tax, but influenced by the state of the economy. This was evident by the decrease in VAT collections as a result of the recent global crisis and recession experienced by South Africa (South African Revenue Service: 2010a). This decrease resulted from a decline in the demand for domestic and imported goods and services.

An increase in the VAT rate earmarked for National Health Insurance as a financing mechanism for funding National Health Insurance may be a feasible, efficient and sustainable financing mechanism. The potential effect that this increase would have on the poor would appear to require

more research. It is not anticipated that an increase in the VAT rate would affect the administrative capacity of the South African Revenue Service. It is however debatable whether an increase in the VAT rate would be considered equitable by stakeholders as it is regressive in nature and the potential for cross-subsidisation from the wealthy to the poor would require further investigation. This financing mechanism may be considered an efficient mechanism as it has the ability to generate a significant amount of revenue for health care, depending on the actual increase government had in mind. A simplified high-level calculation based on a 2% increase on the current VAT revenue raised, would result in additional revenue of R21 billion (calculated as R147,9 billion divided by 14 and multiply by 2). The sustainability of VAT as a financing mechanism is largely dependent on the stability and predictability of the economy. Should the economy continue to grow, resulting in an increase in the demand for domestic and imported goods and services, an increase in the VAT rate may have the potential to generate additional revenue for the National Health Insurance in the long-term as the need for health care grows.

### 3.3.4 Mandatory payroll tax or contributions earmarked for National Health Insurance

The main rationale provided by the African National Congress (2010) for introducing a mandatory contribution is to establish a link between the contribution made by an individual or company and the benefit to which they will be entitled. Furthermore, it is also viewed as a mechanism to cement social solidarity and will be imposed on all formal sector employers and employees. The payroll tax or contribution will be collected by the South African Revenue Service as is the case with all other taxes. The African National Congress (2010) also stated that everyone earning above the income tax threshold (adjusted annually) would be required to contribute and that the contribution would be shared between employers and employees. The African National Congress (2010) stated that contributions would be progressively structured (implying that contributions will be calculated as a percentage of income rather than a fixed amount and the rates used would be adjusted to the level of income so that higher income groups pay a higher percentage of their income). Taxpayers who are self-employed and eligible for tax would also be required to contribute their share to the National Health Insurance Fund. The African National Congress (2010) have suggested that mandatory contributions will be structured from less than 1% (0.5% for employees and 0.5% for employers) for the lowest income earners to a maximum of 7% to 8% (3.5% to 4% for employees and 3.5% to 4% for employers) for the highest income earners. These contribution levels are considered to be lower than the average level of contributions currently made by individuals to medical schemes, which was estimated to be 9% based on a 2005/2006 Income and Expenditure Survey conducted in South Africa. Data obtained from this survey (African National Congress: 2010) found that the lowest income earning medical scheme members contributed over 14% of their income to medical

schemes, while the highest income earning medical scheme members contributed 5.5% of their income to medical schemes.

The study performed by McIntyre (2010a) and discussed in the preceding chapter suggested that if government spending from general tax revenue was increased gradually to 15%, it would require an increase in additional income taxes of approximately 1% of taxable income by the second year, increasing to 3.6% in the sixth year and thereafter. This would result in less of an increase for the lower income earners, but a significant increase for higher income earners. High income earners would end up paying tax a maximum marginal rate of about 44% - 45%.

Carrin *et al* (2004; in McIntyre: 2007c) identified certain factors necessary to achieve a speedy transition to universal coverage through mandatory contributions, namely: that income levels and economic growth are high enough to enable employers and households to make mandatory contributions without risking impoverishment, a formal sector that is larger than an informal sector, a population that is more urban than rural, adequate administration capacity to successfully run a mandatory insurance system, high levels of social solidarity and government stewardship that is trusted by the population. It was also emphasised that there should be an explicit commitment to achieving universal coverage in the shortest possible time. In a South African context the following factors may affect the speed at which National Health Insurance is implemented as well as affecting the revenue-generating potential of mandatory contributions, namely: the level of economic growth subsequent to the recession, the number of non-contributing individuals due to the level of unemployment, the size of the informal sector relative to the formal employment sector, the unequal distribution of income among households and the ability of employers and individuals to cope with an additional mandatory tax. It is possible that government may compensate elsewhere for the additional tax such as exempting either partially or fully, certain companies and/or households from the mandatory tax. McIntyre (2007c) suggests that one way to determine which taxpayers should be exempt from contributing, could be based on the number of employees in a company or the size (in terms of net worth) of the company.

Savedoff (2004) is of the opinion that individuals and companies that tend to evade general taxes or do not comply with taxation provisions may be willing to contribute to an earmarked tax if they believe that a valuable service such as health care will be received in return. This may be particularly relevant in South Africa where taxpayers are often not sure how their tax revenue is used, they do not agree with government spending proprieties or there is perceived wastage of government revenue or corruption.

Norman and Weber (1994, in McIntyre:2007c) suggested that concerns are sometimes raised whether mandatory health insurance will increase the cost of labour, thereby increasing unemployment, which would result in opposition by both employers and trade unions. The consensus reached in this study was that if employees see mandatory health insurance contributions as a form of forced savings (borne by both themselves and their employers), which translates into health service benefits, they may be less opposed to the idea.

The introduction of a mandatory payroll tax or contribution earmarked for National Health Insurance may be considered to be feasible, equitable, efficient and sustainable. Support from employers, employees and trade unions will, however, depend on the extent of progressivity and whether relief will be offered elsewhere. It is uncertain how this tax will be collected and administered. It may be collected by the South African Revenue Service or may require that contributions be made directly to the National Health Insurance Fund (similar to the current Unemployment Insurance Fund). A mandatory contribution may be considered equitable as it would allow for cross-subsidisation from the wealthy to the poor due to it being progressively structured. Although a mandatory contribution has the ability to generate a significant amount of revenue, it is dependent on the size of the formal sector and economic growth. Should the economy continue to grow and should individuals employed in the formal sector increase as a result of new growth initiatives, the use of mandatory contributions has the potential to generate a significant amount of additional revenue for the National Health Insurance in the long-term as the need for heath care grows.

### 3.3.5 Surcharge on taxable income

Very little information has been released regarding the use of a surcharge on an individual's taxable income as a financing mechanism to supplement the funding requirements for National Health Insurance. All that has been stated to date is that the use of such a financing mechanism will be considered. A surcharge is an additional tax (over and above the usual income tax) chargeable against high income earning individuals that earn above a certain pre-determined taxable income level. As with the proposed mandatory National Health Insurance contribution discussed above, it is uncertain exactly how the surcharge will be applied, although it would seem likely to be progressively structured as with the mandatory contribution. It is unclear whether there will be a ceiling on the surcharge (a maximum). As with the other financing mechanisms discussed in this chapter, the use of a surcharge will depend on the extent to which it is considered to be feasible, equitable, efficient and sustainable.

The income-generating ability of a surcharge on taxable income is dependent on the number of high-income earners in the country and their level of income. In the 2011 Budget Review (National Treasury: 2011b) it was estimated that in 2011/2012, 14,3% of individual taxpayers (those with an annual taxable income of between R270 000 and R580 000) will account for 33% of revenue from personal income taxes, while 5,7% of individual taxpayers (those with an annual income in excess of R580 000) will account for 39% of revenue from personal income taxes. Based on these estimates, it would appear that a surcharge on taxable income may have the potential to generate a fair amount of income for National Health Insurance as a fairly large portion of individual taxpayers are in the high income brackets and contribute significant amounts of revenue in the form of personal income tax.

## 3.4 Conclusion

This chapter described the proposed National Health Insurance system envisaged by the African National Congress and discussed the financing mechanisms currently under consideration for funding National Health Insurance in South Africa. The financing mechanisms described were limited to those identified from documentation that is available in the public domain.

The next chapter will discuss current international trends for financing health care. This will be supported by an analysis of the financing mechanisms used to fund National Health Insurance in the countries benchmarked by the African National Congress in their business case. This analysis will be performed to determine whether the financing mechanisms in the selected countries can be viewed as "best practice" and whether the countries are comparable with South Africa in terms of certain basic economic indicators.

Differences and similarities that exist between the financing mechanisms proposed for funding the South African National Health Insurance system and the financing mechanisms that exist in the selected countries will also be discussed.

# CHAPTER 4

# COUNTRY COMPARISONS USING DEMOGRAPHIC, MACRO-ECONOMIC, HEALTH CARE EXPENDITURE AND HEALTH STATUS INDICATORS

## 4.1 Introduction

The goal of this thesis is to compare the financing mechanisms currently under consideration for funding National Health Insurance in South Africa, with financing mechanisms currently used by both developed and developing countries with National Health Insurance, to determine whether the proposed mechanisms are in line with international trends and "best practice" for achieving universal coverage and appropriate in relation to South Africa's economic profile. The countries used in this comparison are those used in their business plan by the African National Congress (2010), namely Japan, Taiwan (China), Chile, Thailand, South Korea, Mexico, Vietnam and Colombia. These countries were identified by the African National Congress (2010) as examples of countries that demonstrated economic and social benefits as a result of a properly implemented National Health Insurance, including examples of middle-income countries that had adopted National Health Insurance quickly and innovatively, which was widely accepted by their respective populations. In order to determine whether the health systems and financing models of the countries selected as benchmarks can be applied in or compared to South Africa, it is necessary to establish their comparability in terms of their macro-economic profiles. The remainder of this chapter will therefore analyse the countries used as benchmarks by the African National Congress, in an attempt to provide an understanding of the countries in terms of their demographic make-up, their global economic status, the health of their populations and the amount spent on health care; and to identify in what way these countries are similar to or differ from South Africa.

## 4.2 Demographic indicators

Population ageing, changes in family structure, fertility levels, urbanization and migration are some of the demographic factors affecting the need for health reform, the depth of health care services required and the financing mechanisms selected for funding health care. While it is acknowledged that demographic factors are not the only factors contributing to a country's choice of health care system and financing mechanisms, they need to be acknowledged as possible explanations for selected health care strategies. An ageing population, for example, is a concern that affects sustainable development as it reduces the economically active population, it holds back economic growth, it narrows the tax base, and can lead to tension between generations. This has a "knock-on" effect in that strong and sustained economic growth has been identified in previous chapters as a key factor when considering a country's ability to implement successful, sustainable health reform. Countries with younger populations need to invest more in schools, while countries with older

populations need to invest more in the health sector. Information from the Central Intelligence Agency (2011) revealed that the age structure of a country can also be used to help predict potential political issues such as unemployment for a rapid growth in young adult populations, which may lead to unrest. A country's population growth rate is also, according to the Central Intelligence Agency (2011), a factor in determining the changing needs of its people for infrastructure (e.g., schools, hospitals, housing, roads), resources (e.g., food, water, electricity), and employment.

### 4.2.1 Country analysis – Demographic indicators

Table 12 presents certain demographic information relating to the nine selected countries, these being Japan, South Korea, Taiwan, Chile, Colombia, Mexico, South Africa, Thailand and Vietnam.

Table 12 Demographic indicators

| Country | Population size (2011) | Annual population growth (%) (2011) | Birth rate (number of births per 1,000)(2011) | Population living in urban areas (%) (2010) |
|---|---|---|---|---|
| **High-income** | | | | |
| Japan | 126 475 664 | -0.28 | 7.31 | 67 |
| South Korea | 48 754 657 | 0.23 | 8.55 | 83 |
| Taiwan (China) | 23 071 779 | 0.19 | 8.9 | 78 |
| **Upper middle-income** | | | | |
| Chile | 16 888 760 | 0.84 | 14.33 | 89 |
| Colombia | 44 725 543 | 1.16 | 17.49 | 75 |
| Mexico | 113 724 226 | 1.10 | 19.13 | 78 |
| South Africa | 49 004 031 | -0.38 | 19.48 | 62 |
| **Lower middle-income** | | | | |
| Thailand | 66 720 153 | 0.57 | 12.95 | 34 |
| Vietnam | 90 549 390 | 1.08 | 17.07 | 30 |

*Source: Adapted from Central Intelligence Agency: 2011*

Table 12 reveals that the nine countries analysed differ vastly when comparing the size of their populations. Three of the selected countries, namely Japan, Mexico (also referred to as the United Mexican States) and Vietnam (officially referred to as the Socialist Republic of Vietnam) are ranked in the top ten largest countries in the world in terms of population size (Central Intelligence Agency: 2011). Four of the selected countries, namely South Korea (also referred to as the Republic of Korea), Colombia (Republic of Colombia), South Africa and Thailand (also referred to as the

Kingdom of Thailand) are ranked in the top thirty largest countries in the world in terms of population size (Central Intelligence Agency: 2011). Taiwan is also referred to as the Republic of China or "Chinese Taipei" in international events such as the Olympic Games where the People's Republic of China (China) is also a party (Wikipedia: 2011d). Taiwan is ranked in the top fifty largest countries in the world in terms of population size and Chile (Republic of Chile) in the top sixty largest countries in the world (Central Intelligence Agency: 2011). The size of a country's population (and in particular the size of its tax-paying population) is important, particularly if tax revenue is the primary financing mechanism to be used for funding health care (as in the case of South Africa). If tax revenue is to be the main financing mechanism for National Health Insurance, the tax base should be large enough to ensure financing is sustainable.

According to the Central Intelligence Agency (2011), approximately 73% of Japan is unsuitable for agricultural, industrial, or residential use, resulting in the coastal areas in Japan being faced with extremely high population densities. As a result, Japan is one of the most densely populated countries in the world (Central Intelligence Agency: 2011). As with Japan, Taiwan is also extremely densely populated and ranked slightly lower than Japan in terms of population densities (Central Intelligence Agency: 2011).

The Central Intelligence Agency (2011) stated that the birth rate of a country is usually the dominant factor in determining the rate of population growth and depends on both the level of fertility and age structure of the population. In the case of South Africa, life expectancy is also considered an important factor affecting population size. The deteriorating trend in life expectancy is affecting several aspects such as household spending patterns (including health care). This aspect is addressed later when discussing health status indicators. A report by McKinsey and Company (2008) indicated that the Japanese population is ageing at an unprecedented rate compared with other developed countries. This was confirmed by the Central Intelligence Agency (2011). According to the World Bank (2008) Thailand has been undergoing a demographic transition for the past four decades. The population growth rate dropped from 3.2% in 1970 to 0.57% in 2010 (Table 12). The demographic structure has changed toward a higher proportion of elderly and fewer children. Information from the Central Intelligence Agency (2011) indicated that Japan's birth rate in 2011 was the second lowest in the world, with South Korea's birth rate being ranked as the seventh lowest and Taiwan's the twelfth lowest. All three of these high-income countries have birth rates of less than 9 births per year per 1 000 people mid-year (Table 12). According to the World Bank (2008) Chile experienced a significant 45% decrease in birth rate during the 20$^{th}$ century, which saw the average age of the population increasing by nearly five years, from 26 years to 31

years between 1952 and 2002. Information from the World Bank (2008) also indicated that Vietnam has pursued a strict family planning policy over the past two decades in an attempt to slow population growth and the government actively encourages a maximum of two children per family. Mexico and South Africa have the highest birth rates compared to the other selected countries, with birth rates above 19 births per year per 1 000 people mid-year (Table 12), ranking these countries 102 and 92 respectively in terms of the highest birth rates in the world out of a total of 222 countries that were represented (Central Intelligence Agency: 2011). Despite its high birth rate, South Africa has a negative population growth rate, largely due to the scourge of HIV/Aids and the related diseases (particularly tuberculosis) and high infant and maternal mortality rates (refer to Table 12). As with the size of a country's population, a country's population growth rate, birth rate and ageing are important considerations when deciding on suitable health care financing mechanisms. Health care that is financed predominantly from health insurance contributions or general tax revenue demands an economically active working-age population that is large enough to ensure the financing mechanism is sustainable in the long term.

Of the nine selected countries, two countries, being South Korea and Chile, have more than 80% of their population living in urban areas (Table 12). Taiwan, Colombia and Mexico have more than 70% of their population living in urban areas (Table 12). Japan and South Africa have more than 60% of their population living in urban areas (Table 12). The two lower middle-income countries, being Thailand and Vietnam, have less than 35% of their population living in urban areas (Table 12). The World Bank (2008) expressed the view that urban migration is increasing in Thailand. Rapid economic expansion in South Korea during the 1970's, 1980's and 1990's resulted in rapid migration from the countryside (Central Intelligence Agency: 2011). The fact that South Africa has a high percentage of its population living in rural areas poses challenges for a National Health Insurance system. The rural population earn mainly subsistence wages and the potential to collect revenue from this sector is very limited, while the problem of accessibility of people to health care poses problems and costs for the provision of universal health care.

### 4.3 Macroeconomic indicators

Macroeconomic indicators assist economists to understand how economies function. They are indicators that focus on an economy as a whole and can be used for comparative purposes across different countries. These indicators are also used by investors to judge the overall health of an economy. From the previous chapters it is clear that the ability to achieve universal health coverage and be able to offer financial protection to the poor is directly linked to, amongst other things, a country's economy, sustained growth, level of unemployment and poverty. The World Bank (2006)

discussed the interplay between economic growth, unemployment, poverty and income inequality and stated that economic growth has a greater impact on poverty reduction when income is more equally distributed.

The World Bank has, for operational and analytical purposes, classified all 187 World Bank member countries and all economies with populations of more than 30, 000 as either low-income, middle-income (sub-divided into lower middle- and upper middle-income) or high-income economies. This classification is based on the country's Gross National Income (GNI) per capita (in U.S. dollars) using the World Bank Atlas method. Low-income and middle-income economies are sometimes referred to as developing economies. Low-income economies have a Gross National Income per capita of $995 or less, lower middle-income economies $996 to $3,945, upper middle-income $3,946 to $12,195 and high-income $12,196 or more. Table 13 below classifies the nine selected countries according to their economic classification and provides a comparison of selected macro-economic indicators.

Table 13 Macro-economic indicators

| **Country** | **Economic classification (Based on GNI per capita, Atlas method, in $) (2010)** | **GDP (PPP in US$) (2010)** | **GDP per capita (PPP, US$) (2010)** | **GDP real growth rate (%) (2010)** | **Gini index (2000 – 2010)** | **Unemployment (Percentage ( %) of population) (2010)** | **Poverty (Population below poverty line)(%) (2000 – 2010)** |
|---|---|---|---|---|---|---|---|
| Japan | High-income | $4.31trillion | 34 000 | 3.9 | 37.6 (2008) | 5.1 | 15.7 (2007) |
| South Korea | High-income | $1.459trillion | 30 000 | 6.1 | 31.4 (2009) | 3.3 | 15.0 (2006) |
| Taiwan (China) | High-income | $821.8billion | 35 700 | 10.8 | 32.6 (2000) | 5.2 | 1.16 (2010) |
| Chile | Upper middle-income | $257.9billion | 15 400 | 5.3 | 52.4 (2009) | 8.7 | 11.5 (2009) |
| Colombia | Upper middle-income | $435.4billion | 9 800 | 4.3 | 58.5 (2009) | 11.8 | 45.5 (2009) |
| Mexico | Upper middle-income | $1.567trillion | 13 900 | 5.5 | 48.2 (2008) | 5.6 | 18.20 (2008) |
| South Africa | Upper middle-income | $524billion | 10 700 | 2.8 | 65 (2005) | 23.3 | 50.0 (2000) |
| Thailand | Lower middle-income | $586.9billion | 8 700 | 7.8 | 43 (2006) | 1.2 | 9.6 (2006) |
| Vietnam | Lower middle-income | $276.6billion | 3 100 | 6.8 | 37 (2004) | 2.9 | 10.6 (2010) |

*Source: Adapted from World Bank: 2011; Central Intelligence Agency:2011; United Nations Development Report: 2010*

Table 13 reveals that of the nine countries selected, including South Africa, three are categorised by the World Bank as high-income, four as upper middle-income and two as lower middle-income countries.

### 4.3.1 Economy

Japan is a major economic power, a high-income developed country and the world's fourth largest economy by purchasing power parity (Central Intelligence Agency: 2011). South Korea and Taiwan, together with Hong Kong and Singapore, are members of the Four Asian Tigers. These countries were the first newly-industrialized countries that achieved exceptionally high growth rates and rapid industrialization between the early 1960s and 1990s. By the 21st century, all four graduated into high-income economies (Central Intelligence Agency: 2011). South Korea and Taiwan are both high-income countries (Table 13) , have very high standards of living and are ranked as the world's thirteenth and nineteenth largest economies in the world respectively by purchasing power parity (Central Intelligence Agency: 2011). Mexico is a firmly established upper-middle income country (Table 13) and the world's twelfth largest economy by purchasing power parity (Central Intelligence Agency: 2011). Colombia and South Africa (both upper middle-income countries) as well as Thailand (an emerging economy and newly industrialized lower middle-income country) are ranked in the top thirty largest economies by purchasing power parity (Central Intelligence Agency: 2011). Chile (an upper middle-income country) and Vietnam (a lower middle-income country) are ranked in the top forty-five largest economies in the world, by purchasing power parity (Central Intelligence Agency: 2011).

### 4.3.2 Economic growth

Economic growth is obviously extremely important, especially for developing countries. Sustained growth, together with a focus on job creation, should eventually decrease unemployment and poverty. Economic growth helps to upgrade the living standard and general heath of people, placing less financial strain on governments.

After sustaining several consecutive years of growth earlier this decade, the Japanese economy began to slow in line with global economic conditions. South Korea was one of the fastest growing developed countries in the 2000s, together with Hong Kong, Singapore, and Taiwan, and was one of the few developed countries that were able to avoid a recession during the 2008 global financial crisis (Freedman & Lee: 2010). Growth in Taiwan averaged more than 4% in the 2002 to 2006 period and was estimated at 10.8% in 2010 (Table 13). Unlike its neighbours, South Korea and Japan, the Taiwanese economy is dominated by small and medium sized businesses and

entrepreneurs, rather than large business groups and as a result, escaped the 1997 Asian Financial Crisis, but did go into a recession in 2001 with the global financial crisis. After a decade of impressive growth rates, Chile experienced an economic downturn in 1999, as a result of the Asian financial crisis, but started showing signs of recovery in 2003. Colombia's economy grew steadily in the latter part of the twentieth century, with Gross Domestic Product increasing at an average rate of over 4% per year between 1970 and 1998. Colombia suffered a recession in 1999 and recovery was slow. Mexico's Gross Domestic Product declined 6.5% in 2009, but it managed to achieve positive growth in 2010 (Table 13). South Africa experienced impressive growth from 2004 to 2007 as it reaped the benefits of macroeconomic stability and a global commodities boom, but began slowing in the second half of 2007 due to the electricity crisis and the subsequent global financial crisis (Central Intelligence Agency: 2011). According to the World Bank (2008) Thailand enjoyed the world's highest economic growth between 1985 and 1995, averaging 9.4% annually. The economic crisis in 1997 saw Thailand's economic growth dramatically decline to –1.7% and –10.8% in 1997 and 1998 respectively (Wibulpolprasert: 2004, in World Bank: 2008).

Forecasts conducted in 2007 by Goldman-Sachs (2007) and in 2008 by PricewaterhouseCoopers (2008), revealed that the Vietnamese economy is one of the fastest growing emerging economies, which may result in the economy of the country being approximately 70% of the size of the UK economy by 2050. The recent global recession impacted on Vietnam's export-oriented economy, with Gross Domestic Product in 2009-10 growing less than the 7% per annum average achieved during the last decade (Central Intelligence Agency: 2011).

Inequality, underemployment, drug trafficking and poor infrastructure remain significant challenges to sustaining economic growth in Colombia (Central Intelligence Agency: 2011). Mexico faces many economic challenges, including improving the public education system, upgrading infrastructure, modernizing labour laws and fostering private investment in the energy sector (Central Intelligence Agency: 2011). Unemployment (which remains high in South Africa) and outdated infrastructure have constrained growth in South Africa (Central Intelligence Agency: 2011).

South Africa's low GDP growth rate (the lowest of the countries analysed) raises questions about its ability to create employment and consequently its ability to raise funds for a National Health Insurance fund through general tax revenue and a payroll levy. This calls into question the sustainability of the funding for National Health Insurance.

### 4.3.3 Income or wealth distribution (Gini index)

Economic growth and economic reforms have, in a number of countries, resulted in the unequal distribution of income or wealth. For the purposes of this thesis, the Gini index has been selected as the measure of equality in terms of income or wealth distribution, as it is one of the most commonly used measures. The Gini index (as a measure of income distribution) has been used, *inter alia*, in reports published by the United Nations Development Programme (2010b), Central intelligence Agency (2011), National Treasury (2011b) and the International Labour Office (2010). Of the nine countries analysed in Table 13, South Africa experienced the most unequal distribution of income with the highest Gini index. In 2010 the Central Intelligence Agency (2011) ranked South Africa as the country with the 2nd most unequal distribution of income in the world (Central Intelligence Agency: 2011). South Africa was followed closely by Colombia, which was ranked 8th and Chile, which was ranked 16th. Mexico was ranked it in the top 30 countries with the most unequal distribution of income. South Korea, on the other hand, had fairly equally distributed income and was ranked as the 31st lowest country in terms of having the most equal distribution of income (Central Intelligence Agency: 2011).

South Africa's Gini index indicates the measure of cross-subsidisation required to provide universal health care and the degree of progressivity of the taxes required to be levied on income earners and salaried persons to fund it.

### 4.3.4 Unemployment

Economic growth and unemployment have an inverse relationship (increased economic growth creates employment opportunities, which decreases unemployment) and *vice versa*. Increased employment results in decreased poverty. Increasing employment is a priority for South Africa, which faces extremely high unemployment levels (Table 13). These high levels of unemployment prompted the introduction of 'The Accelerated and Shared Growth Initiative for South Africa' (Republic of South Africa: 2009), which was launched by Deputy President Phumzile Mlambo-Ngcuka in February 2006 and finalised in 2009. This initiative's target was to halve unemployment and poverty between 2004 and 2014. This initiative stated that the target could be achieved if the economy grew at an average rate of at least 4.5% in the period to 2009, and by an average of 6% in the period 2010 to 2014. The initiative was wound up in 2009 and its components absorbed and adapted by various economic sector ministries.

Table 13 reveals that countries that experienced high economic growth experienced relatively lower levels of unemployment and poverty. All the countries selected, with the exception of Chile,

Colombia and South Africa, experienced relatively low levels of unemployment in 2010 (Table 13). All three high-income countries, being Japan, South Korea and Taiwan, experienced favourable employment levels in 2010 (Table 13) and were ranked in the top fifty countries in the world with the lowest levels of unemployment according to Central Intelligence Agency (2011) information. Thailand and Vietnam, the two lower middle-income countries, also enjoyed favourable employment levels and were ranked in the top twenty five countries in the world with the lowest levels of unemployment, according to Central Intelligence Agency (2011) information. South Africa, an upper middle-income country (Table 13), experienced extremely high levels of unemployment with 23.3% of the population being unemployed in 2010. South Africa had the twenty-seventh highest unemployment rate in the world in 2010, according to Central Intelligence Agency (2011) information.

The level of unemployment in South Africa poses a threat to the potential sources of funding for universal health care and the sustainability of National Health Insurance.

### 4.3.5 Poverty

The inter-relationship between economic growth, unemployment and poverty has already been discussed. This paragraph therefore serves to analyse and compare the poverty levels of the nine selected countries represented in Table 13. All the high-income countries enjoyed fairly low levels of poverty, but Taiwan in particular, enjoyed very low levels of poverty in 2010. Two of the upper middle-income countries also enjoyed relatively low levels of poverty, with the exception of South Africa and Colombia, which had very high levels of poverty. Noticeably, countries that had fairly equal income distribution (as measured by the Gini index) also had relatively low levels of unemployment and poverty and *vice versa*. South Africa and Colombia had the most unequal income distribution and also experienced the highest levels of unemployment and the highest poverty rates. Although South Africa is reflected in Table 13 as having 50% of its population living below the poverty line in 2000, this has been reduced significantly according to National Treasury (2011b) and, although still at critical levels, currently stands at approximately 22% in 2008. Both lower middle-income countries experienced fairly low levels of poverty.

As with the unequal distribution of income or wealth that exists in South Africa (as reflected by the Gini index), the high levels of poverty also provide an indication of the extent of cross-subsidisation required to provide universal health care to the South Africa population and the degree of progressivity of the taxes required to be levied on income earners and salaried persons to fund it.

### 4.4 Health care expenditure

The level of health care expenditure varies significantly between countries. The proportion of health care expenditure funded by government and the private sector also varies significantly between countries. Van Der Heever (2010) is of the view that the proportion of health care expenditure funded by government and the private sector is unrelated to the type of health care system selected. Van Der Heever (2010) does, however, believe that total health care expenditure (particularly expenditure related to luxury healthcare goods) increases as Gross Domestic Product per capita increases. Taiwan appears to be an exception to this view, as despite being a high-income country with high Gross Domestic Product per capita, its health spending per capita is exceptionally low (Table 13). The level of health care expenditure also provides little information about the equity or efficiency of spending or the extent of financial protection offered to individuals. High levels of health care expenditure also do not guarantee good health indicators or outcomes. Both these statements are supported by the current state of the health sector in South Africa, which currently spends more on health (as a percentage of Gross Domestic Product) than all three of the high-income countries discussed in this thesis, but experiences very poor health outcomes, inefficiency in spending and unequal distribution of health resources.

Table 14 (below) analyses health care expenditure at a country-level and by income category, based on 2009 information (the latest year for which data is available from the World Health Organization Global Health Observatory Repository).

Table 14 Key health care expenditure indicators by economic classification, 2009

| | Per capita total expenditure on health at average exchange rate (US$) | Per capita government expenditure on health at average exchange rate (US$) | Total health expenditure (% of Gross Domestic Product) | Government health expenditure (% of Gross Domestic Product) | Government health expenditure (% of total health expenditure) | Private health expenditure (% of total health expenditure) | Government health expenditure (% of total government expenditure) | Social security expenditure on health (% of government expenditure on health) | Out-of-pocket expenditure (% of private expenditure on health) | Private prepaid plans (% of private expenditure on health) |
|---|---|---|---|---|---|---|---|---|---|---|
| **High-income average** | **4 460** | **NA** | **12.00** | **7.0** | **63.0** | **36.0** | **NA** | **NA** | **38.0** | **NA** |
| South Korea | 1 108 | 600 | 6.5 | 3.5 | 54.1 | 39.9 | 12.3 | 78.8 | 87.1 | 10.8 |
| Japan | 3 321 | 2 657 | 8.3 | 6.6 | 80.0 | 18.5 | 17.9 | 81.5 | 80.6 | 13.8 |
| Taiwan (China)[a] | 824 (2003) | 523 (2003) | 6.5 | NA | 57.2 | 42.8 | 18.4 (2003) | 63.5 (2003) | 91.7 (2003) | NA |
| **Upper-Middle income average** | **512** | **NA** | **7.0** | **4.0** | **56.0** | **44.0** | **9.0** | **NA** | **70.0** | **NA** |
| Chile | 787 | 368 | 8.2 | 3.8 | 46.8 | 53.2 | 15.6 | 14.7 | 64.6 | 31.5 |
| Colombia | 323 | 272 | 6.4 | 5.4 | 84.2 | 15.8 | 17.9 | 68.0 | 50.0 | 50.0 |
| Mexico | 515 | 248 | 6.5 | 3.1 | 48.3 | 51.7 | 11.9 | 54.6 | 92.3 | 7.7 |
| South Africa | 485 | 195 | 8.5 | 3.4 | 40.1 | 59.9 | 9.3 | 2.9 | 29.6 | 66.1 |
| **Lower-Middle income average** | **106** | **NA** | **4.0** | **2.0** | **47.0** | **53.0** | **NA** | **NA** | **83.0** | **NA** |
| Thailand | 168 | 127 | 4.3 | 3.3 | 75.8 | 24.2 | 14.0 | 9.1 | 68.1 | 24.2 |
| Vietnam | 80 | 31 | 7.2 | 3.3 | 38.7 | 61.3 | 8.9 | 31.4 | 90.2 | 2.7 |

*Source: Adapted from World Health Organization Global Health Observatory Data Repository (2011), World Bank (2011) and Hong Kong Bureau of Food and Health (2011).*

[a] Taiwan's national health accounts are not formally reported by the World Health rganization, the data reported by the Hong Kong Bureau of Food and Health and the Taiwanese Department of Health was therefore used (www.fhb.gov.hk). A 2008 breakdown was used.

NA - Information was not available.

General observations from Table 14 include the fact that total health care expenditure as a percentage of Gross Domestic Product as well as total health care expenditure per capita, increases as a country's income per capita increases, hence high-income countries tend to spend more on health care (as a percentage of Gross Domestic Product and per capita) than middle- and low-income countries. It is also evident that government expenditure (as a percentage of Gross Domestic Product and as a percentage of total health care expenditure) is higher in high-income countries than middle- and low-income countries. Governments also allocate more of their budgets to the health sector in high-income countries. Private health care expenditure (as a percentage of total health care expenditure) is lower in high-income countries than in middle- and low-income countries. A further analysis of private health care expenditure revealed that out-of-pocket expenditure (as a percentage of private health care expenditure) is lower in high-income countries than in middle- and low-income countries, but expenditure from private prepaid plans and medical schemes (as a percentage of private health care expenditure) is higher in high-income countries than in middle- and low-income countries. This observation is understandable as private prepaid plans and medical schemes tend to be costly and generally only accessible to those individuals that can afford it, hence the extent of spending on private prepaid plans and medical schemes is directly related to population income levels. The general observations are also consistent with the findings of the OECD (2010a), the World Bank (2008) and McIntyre (2007c). A more detailed country-level analysis of Table 14 follows.

### 4.4.1 Total health care expenditure (as a percentage of Gross Domestic Product)

All three high-income countries (Japan, South Korea and Taiwan) spent less on health care than the average for high-income countries. South Korea and Taiwan (both high-income countries) spent less than the average for upper middle-income countries. Two of the upper middle-income countries (Chile and South Africa) spent more than the average for upper middle-income countries, while two (Colombia and Mexico) spent less than the average. Vietnam (a lower middle-income country) spent more than the average for upper middle-income countries. Both lower middle-income countries spent more than the average for lower middle-income countries. Noticeably, South Africa (an upper middle-income country) spent more on health care (as a percentage of Gross Domestic Product) than the other eight countries, but still has very poor health indicators. This provides further support for the view that the level of spending on health care is not an indication of equity or efficiency of spending, the extent of financial protection offered to individuals and does not guarantee good health indicators or outcomes.

### 4.4.2 Government health care expenditure (as a percentage of Gross Domestic Product)

Both high-income countries, for which information was available, spent less on health care than the average for high-income countries. Of the four upper middle-income countries, only Colombia spent more than the average for upper middle-income countries. Both lower middle-income countries spent more than the average for lower middle-income countries. In South Africa, 3.4% of Gross Domestic Product was spent by the Government on health care. This is less than the average for upper middle-income countries and almost in line with the spending of the two lower middle-income countries. Government spending on health care is expected to increase more rapidly than projected Gross Domestic Product growth with the introduction of National Health Insurance, questioning the country's ability to generate sufficient funding.

### 4.4.3 Government health care expenditure (as a percentage of total health care expenditure)

Only one high-income country (Japan), one upper middle-income country (Colombia) and one lower middle-income country (Thailand) spent more than the relevant averages on health care. Japan, Colombia and Thailand are funded quite heavily by government (in excess of 75%). Government funded 40% of total health care expenditure in South Africa, which was significantly lower than the average for both upper- and lower middle-income countries. As mentioned in the previous paragraph, this expenditure is expected to increase significantly with the introduction of National Health Insurance and is expected to represent the primary funding source for the National Health Insurance (through general tax revenue and mandatory National Health Insurance contributions). The sustainability of Government funding as the primary source of funding should be considered, in light of the high levels of unemployment and poverty and the unequal wealth or income distribution that currently exist in the country.

### 4.4.4 Private health care expenditure (as a percentage of total health care expenditure)

The countries that spent more than the average on government health care expenditure (as a percentage of total health care expenditure) consequently spent less than the average on private health care expenditure for their respective levels of economic development. In South Africa (an upper middle-income country) and Vietnam (a lower middle-income country) health care expenditure is funded predominantly by private expenditure (approximately 60%), which is significantly higher than that of the other seven countries. A significant amount of the private health care expenditure in South Africa, to the extent of 66%, is spent on contributions to private prepaid health care plans. The percentage spent on private prepaid medical plans in South Africa far exceeds that spent by the other eight countries. This level of spending on private prepaid plans (made predominantly by wealthy individuals) is expected to reduce with the introduction of

National Health Insurance and be replaced with mandatory contributions to the National Health Insurance, indicating the cross-subsidisation from the wealthy to the poor. In order for this to be achieved and to encourage solidarity and confidence in the National Health Insurance, Government will need to ensure that the quality of health care services and the extent of the package of benefits offered by the National Health Insurance compares favourably with those currently offered by private prepaid plans.

### 4.4.5 Government health care expenditure (as a percentage of total government expenditure)

South Africa was the only upper middle-income country that spent less than the average for upper middle-income countries spending. According to the information in table 14, South Africa spent 9.3% of the Government budget on health care. South Africa, together with the other African heads of State committed to allocating 15% of their budget to the health sector, a level yet to be reached. This level of spending on health care is considered necessary when taking into account the additional funding requirements for those suffering from HIV/AIDS, tuberculosis and malaria in Africa. The additional government funding is to be raised predominantly through general tax revenue and a payroll levy (Social Security contribution), both of which are dependent on sufficiently high employment levels and equal distribution of income or wealth.

### 4.4.6 Social Security expenditure on health (as a percentage of government expenditure on health)

Social security expenditure on health care was lowest in South Africa, when compared to the other eight countries, at less than 3%. This source of funding is expected to become one of the primary funding sources (in the form of a payroll levy) for National Health Insurance in South Africa, after general tax revenue. The sustainability of National Health Insurance is therefore largely dependent on this source of funding, which in turn is dependent on sufficiently high employment levels, equal distribution of income or wealth and low poverty. Should this funding mechanism not generate sufficient funding, it will place a larger burden on government to fund the shortfall.

### 4.4.7 Out-of-pocket expenditure (as a percentage of private expenditure on health)

Out-of-pocket expenditure (as a percentage of private expenditure on health) exceeded 50% in seven of the eight countries (with South Africa being the exception). Out of pocket expenditure in South Africa (29% of private expenditure on health, equating to 17% of total expenditure on health) was far lower than the average for upper middle-income countries and far lower than the expenditure in the other eight countries. The Minister of Finance (National Treasury: 2010b) stated that little or no out-of-pocket payments would be required as a source of financing for National

Health Insurance. This view, however, is not shared by many authors (Drechsler & Jutting: 2005; McIntyre: 2007; Preker & Carrin: 2004; Uchimura & Jutting: 2006; World Health Organization: 2000; World Health Organization: 2005a) who claim that while this source of financing may be a financial burden for many households, it is one of the most widely used mechanisms to finance health care around the world (Savedoff: 2004 and Carrin, James and Evans: 2005). These views are supported by the findings in table 14. An attempt to reduce or eliminate the use of out-of-pocket expenditure as a source of funding for National Health Insurance would appear unrealistic on the basis that all countries examined incur such expenditure and may pose an additional threat to the sustainability of National Health Insurance.

### 4.4.8 Private prepaid plans (as a percentage of private expenditure on health)

Expenditure on private prepaid health care plans was very similar for both high-income countries (for which information was available). Among the upper middle-income countries, expenditure was highest in South Africa (66.1%), which also far exceeded all other seven countries (for which information was available). Expenditure was also relatively high in Colombia (50%). Noticeably, South Africa and Colombia experienced the highest Gini indexes (representing the extent to which income is unequally distributed in the country), the highest unemployment levels and highest poverty rates (Table 13). Health care expenditure was lowest in Vietnam (a lower middle-income country) at 2.7% and Mexico (an upper middle-income country) at 7.7%.

Despite the high level of expenditure on private prepaid health care plans in South Africa, these resources are estimated to benefit only 14% of the population, who are generally high-income earners and low-risk (from a health perspective). This provides further evidence of the lack of income and risk cross-subsidising that exists in the overall health system in South Africa, resulting in an unequal distribution of health resources across the socio economic groups. Government's plans to reduce the need for extensive use of private prepaid health care plans will require a significant commitment of public funds and a significant amount of income cross-subsidisation in order for National Health Insurance to be sustainable.

## 4.5 Health status indicators

Although health status indicators are not necessarily an indication of the effectiveness of a country's health care system or the efficiency of a country's health care financing model, they do provide insight into the level of well-being or illness present in a population. Significant differences in health status indicators exist between developed and developing countries, due to a lack of basic necessities within developing countries. Significant differences in health status indicators may also

exist within a country between wealthy and poor segments of the population as well as urban and rural segments of the population for the same reason. The health of a country is also influenced by many non health-related factors, including education, employment and working conditions, quality of life and income levels. Health status indicators may, however, indicate the need for different strategies to health care or different financing models. Certain key health status indicators are widely used by the World Health Organization and other organisations for global reporting on the health status of countries or health risks present in populations. Certain of these key health status indicators were presented in Table 15 for the nine selected countries.

Table 15 Health status indicators, 2009

| Country | Life expectancy at birth (both sexes) | Adult mortality rate (per 1 000 adults 15 – 59 years) | Under 5 mortality rate (per 1 000 live births) | Maternal mortality ratio (per 100 000 live births) | Prevalence of HIV (among adults 15 – 49 yrs) (% of population) | Prevalence of Tuberculosis (TB) (per 100 000 population) | Literacy rate (% aged 15 and over that can read and write) |
|---|---|---|---|---|---|---|---|
| **High-income average** | **80** | **88** | **7** | **15** | **0** | **17** | **NA** |
| Japan | 83 | 64 | 3 | 6 | Less than 0.1 | 26 | 99 |
| South Korea | 80 | 78 | 5 | 18 | Less than 0.1 | 114 | 97.9 |
| Taiwan (China) | 74 | 116 | 19 | 38 | 0.1 | 138 | 96.1 |
| **Upper middle-income average** | **71** | **184** | **22** | **82** | **1.6** | **105** | **NA** |
| Chile | 79 | 87 | 9 | 26 | 0.4 | 15 | 95.7 |
| Colombia | 76 | 123 | 19 | 85 | 0.5 | 49 | 90.4 |
| Mexico | 76 | 122 | 17 | 85 | 0.3 | 19 | 86.1 |
| South Africa | 54 | 496 | 62 | 410 | 17.8 | 808 | 86.4 |
| **Lower middle-income average** | **68** | **176** | **57** | **230** | **0.3** | **225** | **NA** |
| Thailand | 70 | 205 | 14 | 48 | 1.3 | 189 | 92.6 |
| Vietnam | 72 | 139 | 24 | 56 | 0.4 | 333 | 94 |

*Source: World Health Organization Global Health Observatory Data Repository: 2011; World Bank (2011) and Hong Kong Bureau of Food and Health (2011).*

NA - NA Information was not available.

### 4.5.1 Life expectancy and literacy rates

The World Bank (2008) reported that there is an association between high levels of education, as reflected in literacy rates, and increased life expectancy. Japan (a high-income country) had the highest life expectancy of all nine countries represented in Table 15 and was ranked by the Central Intelligence Agency (2011) as the country with the fiftieth longest life expectancy in the world. South Korea and Taiwan (the other two high-income countries) also enjoyed long life expectancies, being ranked forty-one and fifty-one respectively in the world by the Central Intelligence Agency (2011) in terms of the longest life expectancies. Life expectancy rates in three of the upper middle-income countries, being Chile, Colombia and Mexico were all above 75 years and compared favourably with the high-income countries. Chile in particular, with an average life expectancy of 79 years, currently enjoys one of the highest life expectancy rates in Latin America (World Bank: 2008). According to the World Bank (2008), life expectancy in Colombia was six years less for males than for females as a result of male mortality due to violence. Life expectancy in South Africa was estimated at 54 years, which was considerably lower than all eight of the other selected countries and has deteriorated significantly over the last decade primarily due to the effects of HIV and AIDS. Information from the Central Intelligence Agency (2011) revealed that South Africa currently has the 7$^{th}$ lowest life expectancy in the world (from a total of 222 countries). Noticeably, South Africa, with Mexico, also had the lowest literacy rates. Although providing universal health care to all citizens is a necessary reform, aimed at improving quality of life and increasing life expectancy of a population that is currently deteriorating, it cannot be successfully implemented in isolation. As already mentioned, health is influenced by many non health-related factors, including education, employment, working conditions and income levels, which also need to be addressed for long-term sustainability of the National Health Insurance fund.

### 4.5.2 Mortality rates

Japan and South Korea (both high-income countries) enjoy very low adult mortality rates, infant mortality rates and maternal mortality rates. Japan's infant (younger than 5 years) mortality rate was, according to the Central Intelligence Agency (2011), the fourth lowest in the world. Chile (an upper middle-income country) also enjoys favourable mortality rates, on a par with the high-income countries. A report by the World Bank (2008) revealed that infant mortality in Chile has been gradually decreasing since 1940, with the most significant decrease reported between 1940 and 1950, when the infant mortality rate decreased by 58%. The 2008 World Bank report went on to state that the decreased infant mortality rate correlated with a number of other factors, namely improved living conditions, better delivery of public services, better education, greater availability

of food and better access to health care. Chile currently enjoys one of the lowest infant mortality rates in Latin America (World Bank: 2008). Infant mortality and maternal mortality rates in Thailand have declined significantly since the 1960's according to Wibulpolprasert (2007) in World Bank (2008). South Africa experienced significantly higher mortality rates compared to the other eight countries. Information from the United Nations Development Programme (2010a) referred to the fact that mortality rates in South Africa were increasing, while the trend internationally was that they have been decreasing. The increase in South Africa was primarily due to the impact of Human Immunodeficiency virus (HIV) and Acquired immune deficiency syndrome (AIDS) (United Nations Development Programme: 2010a). The United Nations Development Programme (2010a) stated further that South Africa desperately needed to address the health profile and basic health needs of its children to prevent a cycle of poverty, social marginalisation, chronic poor health and under-nutrition. The health needs or treatment costs of people infected with HIV, AIDS and Tuberculosis (TB) in South Africa, which is having a significant effect on South African mortality rates, needs to be carefully considered as it directly affects the level of funding required for a sustainable National Health Insurance.

### 4.5.3 HIV and Tuberculosis prevalence rates

The HIV prevalence rate was very low in seven of the nine countries analysed. Thailand has the second highest HIV prevalence rate (of the nine countries analysed) with South Africa having the highest. Thailand has the highest HIV prevalence rate in Asia according to Central Intelligence Agency (2011) data. According to the Central Intelligence Agency (2011) South Africa currently has the fourth highest HIV adult prevalence rate in the world.

South Africa also had the highest tuberculosis (TB) prevalence rate of the other eight selected countries, which can be expected since HIV and AIDS are closely related to TB and people with TB are often co-infected with HIV (United Nations Development Programme: 2010a). The TB prevalence rates in the two lower middle-income countries were the highest after South Africa.

As mentioned above, the high HIV/AIDS and TB prevalence rates in South Africa play a significant role in establishing the level of funding required for National Health Insurance. The effects of people infected and affected with HIV/AIDS and TB also has far reaching effects, not only for health care, but for the demographics and economy of the country as a whole.

## 4.6 Conclusion

In this chapter the eight countries referred to by the African National Congress (2010) were compared to South Africa to determine similarities and differences in terms of certain key indicators namely demographic, macro-economic, health status and health care expenditure.

The analysis provided insight into challenges facing South Africa, which impact the need to provide improved health care services and financial protection for the poor. Government's response to the need for improved health care services and financial protection for the poor is the introduction of a National Health Insurance, funded primarily through general tax revenue and a mandatory payroll levy or contribution. The analysis also identified the possible effect that these challenges will have on the cost of providing improved health care services, as well as factors facing South Africa that affect its ability to raise sufficient funding for National Health Insurance, making it sustainable in the long term.

South Africa has an estimated population of 49 million, ranking it in the top thirty largest countries in the world in terms of population size. South Africa has a high birth rate, ranking it in the top 100 countries in terms of birth rates. Despite the high birth rate, South Africa has negative population growth rate, low life expectancy rates (the lowest of the nine countries analysed and the 7$^{th}$ lowest in the world) and high mortality rates (which are increasing in South Africa while the trend internationally is that they are decreasing). These deteriorating trends are largely due to HIV/AIDS and related diseases such as tuberculosis. Negative population growth rates, low life expectancy rates and high mortality rates may in the long term result in a declining working-age population which may have an effect on already low employment levels. This, is turn, would raise questions about the sustainability of financing for National Health Insurance, which is expected to be financed predominantly from health insurance contributions (made by income earners and their employers) and general tax revenue.

HIV/AIDS and related diseases affect not only the size of the working-age population, but also the level of funding required for National Health Insurance. South Africa has the highest HIV prevalence rate and TB prevalence rate of the nine countries analysed and the fourth highest HIV adult prevalence rate in the world, implying that its financing needs to treat people infected with these diseases are equally high.

South Africa has a high percentage of its population living in rural areas, which poses a challenge to the National Health Insurance system. The rural sector of the population earns mainly subsistence wages making the potential to collect revenue very limited. Poor infrastructure makes it difficult for people to access health care services, which also poses a challenge to the National Health Insurance system as poor access increases costs for the provision of universal health care.

In 2010 South Africa had an unemployment level of 24% (of those eligible to work), which represented the twenty-seventh highest unemployment rate in the world. South Africa also has 22% of the population living below the poverty line. High unemployment and outdated infrastructure have constrained economic growth in South Africa. In the 2009/2010 tax year there were 9.65 million registered taxpayers (19% of the estimated population) according to the South Revenue Services. The ability to achieve universal health coverage and to offer financial protection to the poor is directly linked to, amongst other things, a country's economy, sustained growth, level of unemployment and poverty. If National Health Insurance is to be financed predominantly from health insurance contributions and general tax revenue, this demands an economically active working-age population that is large enough to ensure the financing mechanism is sustainable in the long term. The high level of unemployment in South Africa and the low GDP growth rate (the lowest of the nine countries analysed) raises questions about the country's ability to create employment and consequently its ability to raise funds for a National Health Insurance fund through general tax revenue and a payroll levy. This calls into question the sustainability of the funding for National Health Insurance. South Africa's unequal distribution of income (the highest of the nine countries analysed) also illustrates the extent of cross-subsidisation (from the wealthy to the poor) that will be required to provide universal health care and the degree of progressivity of the taxes required to be levied on income earners and salaried persons to fund it.

South Africa spent more on health care (as a percentage of Gross Domestic Product) than the other eight countries analysed, but still had very poor health indicators, experienced inefficiency in health care spending and unequal distribution of health care resources. The introduction of National Health Insurance is expected to result in an increase in government spending on health care, which will increase more rapidly than projected Gross Domestic Product growth. This raises questions regarding the country's ability to generate sufficient funding. The Minister of Finance also does not anticipate out-of-pocket payments being a major source of financing for National Health Insurance, although it is one of the most widely used mechanisms to finance health care around the world. This may pose an additional threat to the sustainability of financing for National Health Insurance.

The challenges currently facing South Africa require not only improved health care services and financial protection for the poor, but are more far-reaching. Government's response will need to address basic education, employment and economic growth, poverty and income equality, to mention a few. While the introduction of National Health Insurance is commendable and certainly progress in the right direction, further research needs to be undertaken to ensure estimates of the funding costs are accurate, the most appropriate financing mechanisms are selected and the effect these will have on those contributing, to ensure the country is able to raise sufficient, sustainable funding for National Health Insurance.

The next chapter analyses the health care systems and financing mechanisms of the eight countries identified by the ANC in their business case. What the present chapter has highlighted is that, in terms of macro-economic indicators, South Africa is not directly comparable to these countries and suggests that their systems and financing mechanisms may not be entirely appropriate.

# CHAPTER 5

# INTERNATIONAL TRENDS IN FINANCING HEALTH CARE AND COUNTRY COMPARISONS OF HEALTH CARE SYSTEMS AND HEALTH CARE FINANCING MODELS

## 5.1 Introduction

The previous chapter analysed the eight countries referred to by the African National Congress (2010) in relation to South Africa to determine similarities and differences in terms of certain key indicators namely demographic, macro-economic, health status and health care expenditure. The analysis provided insight into challenges facing South Africa, which impact on the need to provide improved health care services and financial protection for the poor. The analysis also identified the possible effect that these challenges will have on the cost of providing improved health care services, as well as factors facing South Africa that affect its ability to raise sufficient funding for National Health Insurance, making it sustainable in the long term.

The financing mechanisms currently under consideration for funding National Health Insurance in South Africa include general tax revenue (the primary source), mandatory health insurance contributions (Social Health Insurance contributions) levied against employers and employees, a surcharge on the taxable income of individuals and/or an increase in the VAT rate earmarked for National Health Insurance. Individuals will still have the option to "top-up" their medical insurance by voluntarily contributing to private medical schemes (for services not covered by the public health system).

This chapter will identify and discuss the current international trends for financing health care and compare the health care financing models of the eight countries used as benchmarks by the African National Congress (2010). An understanding of the respective countries' health care systems and financing models is necessary in order to evaluate whether the financing models adopted by these countries can be considered "best practice" models, worthy of being used as a benchmark for South Africa in order to achieve universal coverage and if so, what the similarities and differences are between the health systems and financing models adopted by these countries to that proposed in South Africa.

## 5.2 International trends in financing health care

### 5.2.1 Pre-payment system

The consensus and trend internationally is that health care should be financed through pre-payment systems (Kirby: 2009b; Drouin: 2007; McIntyre: 2007c; Preker & Carrin: 2004; World Health

Organization: 2000; World Health Organization: 2005a; Glied: 2008; Ataguba & Akazili: 2010). According to Carrin *et al* (2005) countries that have achieved universal coverage have financed health care predominantly through pre-payment systems. According to McIntyre (2007c) a pre-payment system is one where people contribute regularly to the cost of health care through tax payments on income, purchases, property capital gains, etc. and/or health insurance contributions rather than paying for heath care only when utilising health services. McIntyre (2007c) concurs with the need for pre-payment financing mechanisms and adds that mechanisms selected should be judged according to the extent to which they are feasible, equitable, efficient and sustainable (discussed in the previous chapter). A pre-payment system allows for the pooling of resources from the entire population regardless of health status, income or occupation and funds can then be used to benefit the entire population, offering greater financial protection to vulnerable households. This pooling mechanism should allow for cross-subsidisation from the wealthy to the poor and from the healthy to the ill, but requires a certain amount of "buy-in" or social "solidarity" from the population to be successful. This social solidarity is most often achieved by making health care contributions mandatory for the entire population according to their ability to pay. Most pre-payment systems are financed by a combination of general taxation revenue and mandatory contributions (Kirby: 2009b; Drouin: 2007; McIntyre: 2007c; Preker & Carrin: 2004; World Health Organization: 2000; World Health Organization: 2005a; Glied: 2008; Ataguba & Akazili: 2010).

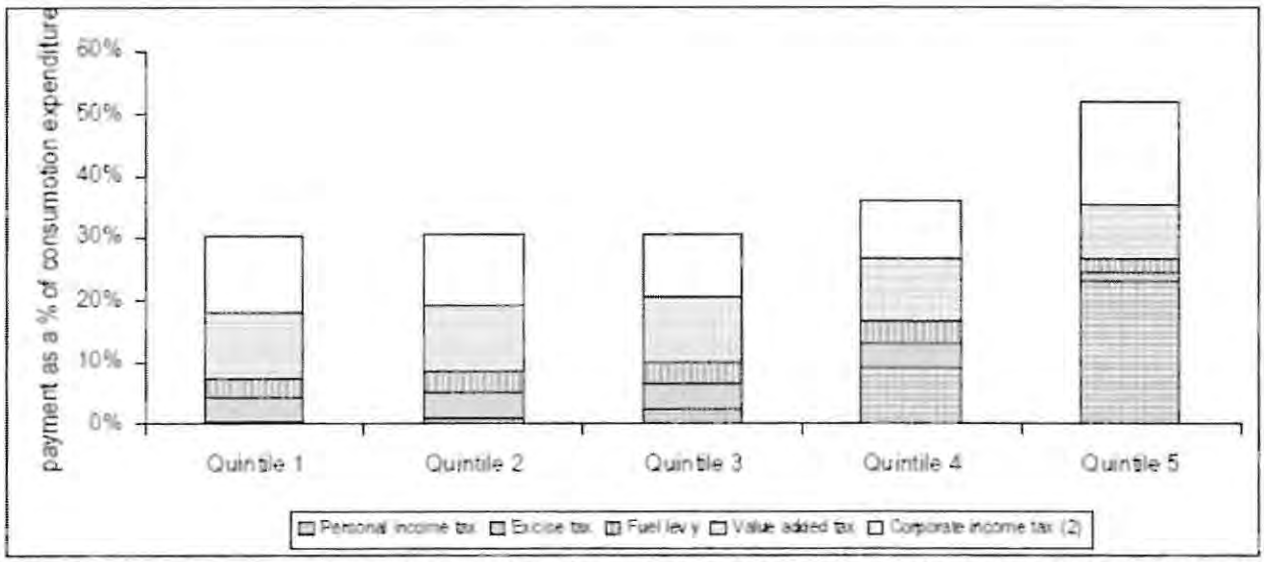
Savedoff (2004) and Carrin *et al* (2005) are of the view that despite the recent trend towards using predominantly pre-payment systems to finance health care, out-of-pocket payments, which do not represent a pre-payment system and do not allow for cross-subsidisation, are still one of the most widely used mechanisms to finance health care around the world, although these payments are generally smaller in countries that have attained universal coverage. Out-of-pocket payments are not desirable as they often result in households being faced with catastrophic health care expenditure. McIntyre (2007c) defined health care expenditure as catastrophic when expenditure is at such a high level that households are forced to reduce spending on other basic goods such as food and water, to sell assets or to incur high levels of debt and ultimately risk impoverishment.

### 5.2.2 Progressive system

Numerous authors (McIntyre: 2007c; Drouin: 2007; Ataguba & Akazili: 2010 and Glied: 2008) are of the view that progressive financing mechanisms, which ensure equitability, are preferred to regressive mechanisms. According to McIntyre (2007c) a financing mechanism is progressive if high-income households contribute a higher percentage of their income to health insurance than low-income households. A regressive financing mechanism is one in which low-income households

contribute a higher percentage of their income to health insurance than high-income households, while a proportional financing mechanism is where everyone contributes the same percentage of income to health insurance, irrespective of income level. A study conducted by Ataguba and McIntyre (2009) based on 2006 real terms, was performed in an attempt to analyse the relative progressivity of the different taxes in South Africa. This analysis is useful as National Health Insurance in South Africa is to be financed by one or more of these taxes. The results are presented in Table 16 below.

Table 16 Tax payments as a proportion of consumption taxes across socio-economic groups (quintile 1 being the poorest and quintile 5 the richest)




Note: here we assume that corporate income tax is distributed equally across households (based on reported consumption expenditure on manufactured goods) and shareholders (based on receipt of dividends).

*Source: Ataguba and McIntyre:2009.*

Table 16 (above) indicates that in South Africa, general tax revenue (comprising primarily personal income tax, corporate income tax, excise taxes, fuel levy and VAT) is progressive overall. Personal income tax in South Africa is very progressive, whereas excise taxes and the fuel levy are regressive. VAT was found to be almost proportional. The progressivity of personal income tax is offset to a considerable extent by the regressivity of the other taxes. Table 16 (above) was prepared on the basis that the burden of corporate tax is equally shared by shareholders and consumers (as it is not possible to determine with complete accuracy the distribution of corporate tax across socio-economic groups). This study revealed that the progressivity of general tax revenue as a whole is related to the mix of direct and indirect taxes making up general tax revenue.

McIntyre (2007c) suggests that for countries with a substantial degree of income inequality (as is the case in many low- and middle-income countries, including South Africa) there is a strong case for progressive health care financing to ensure equitability and adequate cross-subsidisation. The extent of cross-subsidisation that can be achieved depends on the health care financing base that exists within a country. The larger the financing base available for health care, the more scope there is for cross-subsidisation. To provide the entire South African population with free and universal access to health care services (irrespective of the ability to pay) will naturally require a significant amount of income cross-subsidisation from wealthy individuals who have the ability to pay, to poor individuals who cannot afford to pay for healthcare.

### 5.2.3 Tax-Based financing or General Government revenue

Numerous authors (Savedoff: 2004; Glied: 2008; OECD: 2010a) agree that, while out-of-pocket spending is one of the most frequently used methods of financing health care, general government revenues is the most widely used pre-payment financing mechanism for health care in almost every country. Evidence of this is found in the fact that general government revenue was the main source of health care financing in 106 out of 191 World Health Organisation member countries in 2004 (Savedoff: 2004). Despite the high level of government funding, health care in most high-income countries is still financed by means of a combination of general government revenue in the form of general tax revenue and mandatory Social Health Insurance contributions or premiums charged against employers or employees or both and topped up with the option for voluntary medical scheme insurance (for services not covered by the public health system). The African National Congress (2010) reported that in the European Monetary Union member countries, 73% of health care expenditure was from public funding (in the form of general tax revenue and Social Health Insurance contributions). The African National Congress (2010) reported further that private insurance in most high-income countries is usually available to supplement only a handful of discretionary medical services or extras. According to McIntyre (2007c) the use of general government revenue (in the form of general tax revenue) as a financing mechanism allows individuals access to health care regardless of their health status or income level; it provides for effective pooling of risks and resources and enjoys the benefits of economies of scale regarding administration costs, risk management and purchasing power. Despite the benefits of financing health care by means of general tax revenue, many authors (Inter-American Development Bank: 1996; World Bank: 2004 and Birdsall & Hecht: 1997 in Savedoff: 2004) also believe that the use of general tax revenue as a financing mechanism may suffer from weaknesses such as inefficiencies from serving multiple government objectives, political pressure to serve privileged groups, ineffective management within the public service, weak accountability and instability.

The choice of whether to tax income or tax consumption in order to generate tax revenue is also an issue which is heavily debated in many countries. According to Savedoff (2004) member countries of the OECD tend to rely heavily on income taxes, while developing countries rely more heavily on consumption taxes. Savedoff (2004) believes that income taxes are more progressive than consumption taxes and capture larger shares of income, while consumption taxes capture similar shares of household income. This finding was confirmed in a study conducted in South Africa by Ataguba and McIntyre (2009). Savedoff (2004) is of the opinion that using consumption taxes is better for economic growth and long-term well-being as it does not penalize savings or investment, but admits that the trend globally still favours the use of income taxes, as is seen by the use of income taxes to fund health care in wealthier, institutionally stronger countries.

Despite general tax revenue being the preferred financing mechanism for health care globally, underfunding in the health sector is common, largely due to the fact that government's allocation to the health sector is a collective political decision and the health sector is required to compete for funding from other government functions and priorities. McIntyre (2007c) found that government spending (via general tax revenue) on health frequently accounts for more than 15% or well above 10% of total government spending in most high-income countries but in most low- and middle-income countries is frequently below 10% (refer to Table 14). In 2000, South Africa, together with the heads of state of African Union countries (African Union: 2006) attempted to address underfunding in the health sector by pledging to allocate at least 15% of government's annual budget to improve the health sector in their respective countries. Progress has, however, been slow in South Africa and the health sector currently receives only 11% of the total government budget (National Treasury: 2011b).

## 5.3 Country analysis - Japan

### 5.3.1 The Japanese health care system

McKinsey and Company (2008) described the Japanese as one of the healthiest populations in the world, with a universal health care system that is considered to be one of the most efficiently run in the world. Japan's impressive health status indicators bear testament to the relative health of its nation (Table 15).

Lee *et al.* (2008) are of the opinion that while Japan's health system is classified as a Social Health Insurance system, the level of state intervention is higher than that found in typical Social Health

Insurance models and the state's role in financing is relatively strong, implying that Japan's system is a hybrid model of a Social Health Insurance system and a National Health Insurance system.

Van Den Heever (2008) also describes the Japanese health system as a multi-payer system. McKinsey and Company (2008) stated that there are a total of eight health insurance systems in Japan, with the health schemes (insurers) divided into two categories, namely Employees' Health Insurance and National Health Insurance. National Health Insurance covers almost all medical treatments and drugs available and is generally reserved for self-employed people and students (both of whom are not eligible to be members of any employment-based health insurance programme), whereas Employee's Health Insurance is normally for corporate employees in the formal employment sector. Private health insurance is only available to cover co-payments or costs not covered by National Health Insurance or Employee's Health Insurance schemes. All Japanese citizens, permanent residents, and any non-Japanese residing in Japan with a visa lasting one year or longer are required to be enrolled in either National Health Insurance or Employees' Health Insurance.

Japan has a higher proportion of privately owned medical institutions (almost all general practices and hospitals), than most developed countries, but citizens are permitted access to any institution that receives reimbursement from the National Health Insurance. Japan has approximately three times as many hospitals per capita as the United States.

### 5.3.2 The Japanese health care financing model

According to McKinsey and Company (2008) government-funded health insurance covers most residents and covers 70% or more of the cost for medical services and prescribed drugs. Patients are responsible for the remaining 30% as a co-payment which is subject to a limit (determined by the income earned by the person) with a lower rate (between 10% and 20%) being applied to the elderly. Personal catastrophic health care expenditure is unheard of in Japan. Government funds are centrally pooled and payments to health care funds (medical schemes) and providers (practitioners and hospitals) for medical services and drugs are strictly regulated and controlled. This practice has allowed Japan to control costs in order to meet its national health care budget and has contributed to the relatively low total health care expenditure. Japan's focus on controlling the cost of all medical services and drugs differs from other developed countries, which often focus more on restricting the type of medical services or drugs that are regulated, rather than on restricting the cost of all medical services and drugs.

McKinsey and Company (2008) stated that government health care expenditure was received from mandatory earmarked Social Health Insurance contributions to the extent of 81% in 2009 (Table 15), calculated as a percentage of income (of between 6% and 9%), which is shared between employers and employees. Furthermore, McKinsey and Company (2008) stated that large employers can have their own medical fund, requiring contributions of 7.4% of income (3.3% paid by employees and 4.1% by employers). Medium to small employers contribute 8.2% of income (4.1% paid by employees and 4.1% by employers). National Health Insurance contributions are made at an annual average of 151,301 yen. Civil servants and private school employees contribute between 6.1% and 9.1% of income.

Government subsidises the shortfall between total health care revenue and spending. The government subsidy (for the shortfall in health care revenue and spending) is funded through a 5% consumption tax, a dedicated income tax of between 5% and 40% of income, a residential tax of between 2% and 6% of income and by a reduction in other government spending. Despite contributions (by employees) being compulsory, a number of individuals are still not covered by insurance.

Japan, like many other developed countries, is faced with rising health care costs and will need to address its current financing mechanisms in order to keep up with the demand for health care. A study conducted by McKinsey and Company (2008) estimated that Japan's health care costs would rise to 10.2% of Gross Domestic Product by 2020 and 13.8% of Gross Domestic Product by 2035. Such an increase over such a short time would prove fiscally unsustainable and increases in domestic taxes would prove onerous to both employers and households. McKinsey and Company (2008) stated that in order to meet this rising demand, Japan was considering increasing mandatory payments (such as taxes, contributions or co-payments). In addition to increasing funding for health care, McKinsey and Company (2008) stated that Japan would also be considering other ways to contain healthcare costs such as limiting or excluding coverage of unnecessary procedures, setting caps or ceilings on certain medical services and drugs and encouraging voluntary, top-up payments (to supplement funding).

### 5.4 Country analysis – South Korea

#### 5.4.1 The South Korean health care system

In 1976, Korea adopted a policy that universal health care coverage would be achieved by 1989. South Korea achieved its goal of universal health care insurance by 1988 (thirteen years later). During this period South Korea went from private voluntary health insurance to government-

mandated universal coverage and public health improved dramatically as a result. Lee (2003) also maintains that during this period South Korea experienced the most rapid growth in per capita income of any country in the world, growing from $800 in 1976 to $2,813 in 1987.

Lee (2003) is of the opinion that South Korea adopted Japan's health insurance system as a model and indicated that this influence was evident in the administrative structure of the South Korean health care system, the way coverage was increased and the financing model adopted. Unlike the Japanese single-tiered health system, Korea has a multi-tiered health system according to Van Den Heever (2008). A multi-tiered health system is one where there is a basic health care system financed by government providing medically necessary but sometimes quite basic health care services, and a secondary tier of care for those with access to more funds who can purchase additional health care not covered by the publicly financed system or which permits better quality or faster access. Van Den Heever (2008) is of the opinion that different tiers arise as a consequence of the level of economic development of a country, hence industrialised countries are predominantly single-tier, whereas even relatively affluent countries such as South Korea and Taiwan are multi-tier. Van Den Heever (2008) also stated that, as countries such as Columbia, Mexico and Chile develop, their health systems will naturally evolve over time into single-tier systems, with or without a National Health Insurance system.

The South Korean health insurance system (as it was in 1977) was described by Lee (2003) as a Social Health Insurance system. At that time it was only compulsory for employees and their dependents in large firms (with more than 500 employees) to be members of the health care system and was funded by member's contributions (the Employee Scheme). This health system has, however, migrated from a Social Health Insurance system to a National Health Insurance system. In 1979 coverage was expanded to government employees, private school teachers and industrial workplaces with more than 300 employees (the Civil Servant Scheme). In 1981 coverage was expanded to industrial workplaces with more than 100 employees and in 1989, 13 years after the introduction of the Employee Scheme, the National Health Insurance (NHI) system covering the whole population was accomplished. In the late 1980s, health insurance expansion was regionally based, being rolled out first to rural residents in 1988 and then to urban residents in 1989. In 1976 less than 10% of the Korean population had any health insurance and by the end of 2008, 96% of the Korean population were covered by the National Health Insurance, while the rest (1.8 million people) were benefiting from the Medical Aid programme. Lee, Chub, Lee, and Seo (2008) stated that the new features of the integrated Korean National Health Insurance system resembled the Taiwanese National Health Insurance system.

The National Health Insurance in South Korea is therefore divided into employee health insurance and self-employed health insurance. Employee health insurance covers employees, employers, public servants and teachers. Self-employed health insurance covers all residents and their dependents in rural areas and the self-employed in cities, excluding those covered by employee insurance.

### 5.4.2 The South Korean health care financing model

Lee (2003) noted that the National Health Insurance system in South Korea was financed mainly by employer and employee contributions, together with government subsidies, including the National Health Promotion Fund. The contribution for insured employees was calculated by multiplying the employee's standard monthly wage earned by the employee over a specific period of time, by the health insurance contribution rate, which ranged from 3% to 8% of wages (Lee: 2003). Fifty per cent (50%) of the contribution was paid by the employee and 50% by the employer. For the self-employed, Lee (2003) noted that contributions were calculated per household unit, determined by considering the insured person's assets, income and other factors.

Since the introduction of the self-employed health insurance scheme in 1998, the government subsidized health care benefits and programmes with annual contributions of 14% of the expected insurance premium for the year (out of government revenue) and 6% out of the National Health Promotion Fund. Patients were still required to pay a fee-for-service (FFS) for all services at all referral levels.

According to Lee (2003) South Korea originally had a multi-payer system where administration was decentralized, but then converted to a single-payer system, where administration was centralised. Both systems had their challenges. Despite the challenges, Lee *et al* (2008) noted that South Korea's administrative costs prior to the National Health Insurance model were significantly higher than the period after the introduction of the National Health Insurance model.

The introduction of the National Health Insurance involved higher total health care costs, which resulted in the National Health Insurance running at an annual deficit from 1997 and had a cumulative deficit from 2001 (with total health care expenditure exceeding total income). Measures taken to reduce the deficit included greater government contributions from general tax revenues, higher individual contributions, a newly introduced cigarette tax, control of fee increases and stricter monitoring of medical fraud in claims processing. Researchers believed that the factor

contributing most toward the lack of financial sustainability was the use of new drugs and ever increasing drug expenditure as well as uncontrolled and expensive new medical technologies. Lee (2003) also maintained that the National Health Insurance financial crisis was as a result of three factors. Firstly, Korea had an excessive number of medical specialists practicing as medical doctors who performed high-technology, expensive tests and treatments. Secondly, delivery of medical services was dominated by for-profit private sector hospitals and clinics that also used high-technology medical equipment. Thirdly, government did not contain pharmaceutical expenditure and allowed the use of high-cost drugs.

## 5.5 Country analysis – Taiwan (China)

### 5.5.1 The Taiwanese health care system

Health care in Taiwan is managed by the Bureau of National Health Insurance. According to Cheng (2003) the Taiwanese health system has migrated from a number of separate Social Health Insurance schemes to a multi-tiered, government run, single-payer National Health Insurance system. Before the establishment of the National Health Insurance in 1995, Taiwan had ten different public insurance schemes, each covering a particular subset of the population, including Labour Insurance, Government Employees Insurance, Farmer's Insurance, Low-Income Household Insurance and so on. Together the ten programs provided health care coverage to 59% of Taiwan's population. National Health Insurance was introduced to provide equal access to health care for the entire population, greater financial risk protection and equity in health care financing. Cheng (2003) also stated that the percentage of the population with health insurance coverage increased from 59% in 1995 to 99% by 2004. The Taiwanese National Health Insurance system offers a comprehensive health care benefit package to its entire population regardless of income level or employment status. The benefit package is much broader than that of the United States Medicare program (Cheng: 2003).

### 5.5.2 The Taiwanese health care financing model

National Health Insurance, according to Cheng (2003), is financed through a mix of taxes and premiums, but primarily through mandatory premiums in the form of payroll taxes as opposed to general tax revenue. Health care revenue is supplemented with out-of-pocket payments (for services not covered by the National Health Insurance, user fees and co-payments for certain National Health Insurance services) and direct government funding. Co-payments have a maximum ceiling and are reduced for disabled and certain elderly people.

Cheng (2003) stated that working individuals contribute by means of a mandatory premium split between themselves, their employers and the government. The premium was originally 4.25% of income, but was increased to 4.55% of income in 2002. The income on which the premiums are levied was capped at US$2,576 per month from September 2002. For employees in public or private enterprises, the employee pays 30% of the premium (through a payroll deduction), while their employer pays 60% and the government pays the remaining 10%. The non-poor self-employed persons pay the entire premium themselves, while government subsidizes the entire premium for veterans, military personnel and those in the lowest income groups. In 2002 the Supreme Court ruled that no one in Taiwan could be denied health care because of an inability to pay. For those temporarily unable to pay premiums (for example, those who lose their jobs), the Bureau of National Health Insurance has a fund from which such people may take out interest-free loans to pay the premiums.

Cheng (2003) confirmed that despite its many successes, Taiwan, like many other countries, was and is faced with increasing budgetary deficits as health care revenue has been overtaken by rising medical costs, causing serious shortfalls. During the first three years of having National Health Insurance, the program ran at a surplus, but since 1998 expenditures have outstripped revenues. By mid-2002 the cash reserves accumulated during the first three years had dwindled and the Bureau of National Health Insurance was forced to borrow from banks to pay claims. The National Health Insurance addressed this shortfall in 2002 (when faced with imminent bankruptcy) firstly by increasing premiums (after seven years of unchanged premiums) from 4.25% of assessable income to 4.55%. Secondly, co-payments were increased for certain types of services and drugs. Thirdly, the Bureau of National Health Insurance implemented price reductions and payment reforms for health care service providers in an attempt to decrease excessive visits to hospitals and clinics. Prices of drugs were cut, the Bureau of National Health Insurance improved its claims review process to eliminate fraud, it eliminated subsidies for medical education and introduced diagnosis-related groups for hospitals. Lastly, it introduced global budgeting for dental care in 1998, traditional Chinese medicine in 2000, primary care in 2001, and, finally, hospitals in mid-2002, completing its phased-in program toward comprehensive global budgeting for the entire health system, in an attempt to control costs.

## 5.6 Country analysis – Chile

### 5.6.1 The Chilean health care system

According to Van Den Heever (2008) the Chilean health system underwent a drastic reform in the 1980s and currently operates a multi-tiered mandatory Public Health Service (for those without

income) combined with a mandatory Social Health Insurance system (for income earners). According to a report by the World Bank (2008) the entire population is guaranteed access to the public health system, whether or not they have the resources to pay the premiums. The report goes on to state that the public system is the main provider of health insurance in Chile, covering approximately 70% of the population in 2005, with private insurers covering approximately 16%, other insurers covering 3% and the remaining 10% having no form of health insurance. Since 2005, all insurers (public and private) were legally required to provide a similar basic benefit package covering certain legally defined health problems.

The World Bank (2008) also found that the public insurer was required by law to purchase most of its covered health services from public hospitals and public health care providers (centres) but provides modest subsidies to beneficiaries wishing to purchase services from private health care providers. Public health care providers are also required by law to sell most of their services to the public insurer and are limited in terms of the services that may be provided to private patients and beneficiaries of private insurers. Public health care beneficiaries may obtain health care from any public or private provider, as long as the provider is registered with the public insurer. If the provider used is public, co-payments are small or nil. If the provider is private, co-payments are larger. Beneficiaries of the private schemes have similar choices but almost always opt for private care.

### 5.6.2 The Chilean health care financing model

According to a World Bank (2008) report, all formal sector workers who are not self-employed, retired workers with a pension or self-employed workers with a retirement fund are required to contribute to the mandatory health insurance system and make monthly contributions equal to 7% of their income or pension, up to a monthly ceiling of US$2,000 to either the public insurer or a private insurer. The World Bank (2008) report stated that these monthly contributions accounted for approximately a third of public funding, with almost half of public funding coming from the state. The private health sector, in contrast, is funded mainly by their beneficiaries' monthly contributions (often in excess of the 7% of income as beneficiaries may voluntarily make extra contributions to purchase additional coverage). Private health insurers also receive generous government budget allocations and subsidies (Apablaza, Pedraza, Roman & Butala: 2006). Middle-income individuals who opt out of the public health system are still required to make mandatory health contributions of 7%, which are paid over to one of the private health insurers rather than the public provider. According to a study conducted in 1995 (Bitrán: 1997, in World Bank: 2008), government subsidies for health are well targeted, with 90% of funds reaching the indigent and 7.5% reaching low-income

individuals. Between 32% and 40% of the contributions of higher-income public provider beneficiaries cross-subsidize funding for the poorer beneficiaries, indicating that the public provider's internal funding structure is progressive. The World Bank (2008) also stated that indigents also receive the most benefits per capita each year.

## 5.7 Colombia

### 5.7.1 The Colombian health care system

A study conducted by Clavijo (2009) and The World Bank (2008) revealed that health standards and health care coverage in Colombia has improved greatly since the 1980's, partly as a result of the ambitious health reforms which began in 1993. The World Bank (2008) stated that before the reform in 1993, health care was fragmented, access to basic health services was limited, health spending was inequitable and inefficient, and health care quality was inconsistent. The World Bank (2008) also stated that the reform introduced was a form of subsidized National Social Health Insurance system, which sought to achieve solidarity between different population groups and extend health coverage across the population. According to Clavijo (2009) legislation passed in 1993 was aimed at attaining universal health coverage in Colombia by 2012. The World Bank (2008) described the reformed health care system as two separate health insurance schemes, designed with target populations, financing sources and compulsory health plans or benefit packages. This structure of having two schemes was introduced to allow time for funds to become available to gradually expand insurance coverage and benefits for the population eligible for subsidies. The first scheme (the contributory scheme) offered health care benefits for formal sector workers, informal sector workers (self-employed) and pensioners. Health care plans within the contributory scheme were administered by private for-profit organisations, private non-profit organisations or public organisations. As the premium paid for the scheme was the same, health care organisations could not compete on cost. The second scheme (the subsidised scheme) provided less comprehensive benefits for the poor, which were subsidised by government. In 2004 a sub-scheme was introduced within the subsidised scheme to provide temporary health insurance coverage to certain categories of the urban population who were not covered by the subsidised scheme because of a lack of funds. Since 2001, both schemes offered the same level of universal health care insurance and benefits. The subsidised health care plans were administered by the same organisations as the contributory health care plans, but offered two other types of plans, namely community-based health plans and health plans serving indigenous populations.

Clavijo's (2009) study revealed that at the beginning of the 1990's approximately 28% of the Colombian population (mostly high income individuals) had health care coverage, while in 2006,

approximately 86% of the population had some form of coverage. Of the 86%, approximately 45% of the members were contributing and 55% of the members were subsidised by government. A further 5% of the population were covered by special health programs (ie. for military and education personnel). Private health insurance policies were purchased by individuals who wanted additional medical services not covered by the package of benefits or who wanted additional amenities. Approximately 5% of the population purchased these private policies in 2006.

### 5.7.2 The Colombian health care financing model

According to The World Bank (2008) individuals with the ability to pay and belonging to the contributory scheme, contributed 12% of their income to the central fund that then on-distributed the funds. The health care system in Colombia was thus a multi-payer system. The financing model described by The World Bank (2008) stated that for formal workers, the 12% contribution was shared 8% by the employer and 4% by the employee. For independent workers, the entire 12% was financed by the individual. In order to finance the subsidized scheme, 1% of the payroll contributions made by employers and employees were used to subsidise the poor and paid into a solidarity fund. An amount of 0.41% of the total revenues were used to finance health promotion and prevention activities, 0.25% were used to fund sick leave payments and 0.25% were used to fund maternity leave payments. In addition to the 1% used to subsidise the poor, the Colombian government supplemented this by allocating funds from the general budget. The subsidised system was financed in 2005 from national government transfers (56.3% of total resources), the 1% solidarity contribution from the contributing scheme (34.4% of total resources), local tax revenues from "sin taxes" (8.8% of total resources), and contributions from family benefit funds (0.5% of total resources). Despite the funding received, resource constraints meant that not all persons were eligible for the full subsidised health insurance and priority was given to the most vulnerable. The sub-scheme introduced in 2004 (within the subsidised scheme) provided some cover for those not covered by the subsidised scheme due to a lack of funds. According to The World Bank (2008) the subsidised scheme in Colombia experienced financial constraints for a number of reasons, including less than expected contributions from individuals, the effects of the recession on economic growth, unemployment levels, poverty levels, fraud and contribution evasion.

## 5.8 Mexico

### 5.8.1 The Mexican health care system

Health care coverage and access to quality health care services in Mexico became a legal right when an amendment was made to the Mexican Constitution in 1983. Frenk, Gómez-Dantés and Knaul (2009) stated that in the mid-1990s, more than half of the total health care expenditure in Mexico

was out-of-pocket expenditure as approximately half of the population lacked health insurance. Research conducted by Frenk *et al* (2009) also showed that these high levels of out-of-pocket spending were exposing Mexican households to catastrophic financial events and in 2000, an estimated 3 to 4 million Mexican families incurred catastrophic or impoverishing health care expenditure. Prior to the 2003 health reform, Mexico offered a Public Health Service (a federal government operated, tax-funded public health system for the poor and those without income) combined with a regulated multi-payer Social Health Insurance system for income earners (Kinney: 2009; Van Den Heever: 2010). Large employers had their own social welfare organisations for their employees, which included health insurance. Two government sponsored Social Health Insurance programs were available for formal sector workers. The first program was for employees working for private companies and the second was for government employees. For the population not covered by one of the government sponsored Social Health Insurance systems, private health insurance was available if the individual could afford it. However, because of high unemployment rates, many Mexicans become self-employed or sub-employed and were therefore not eligible for health insurance. In 2003, the System for the Social Protection in Health was launched for uninsured individuals who were not otherwise eligible for coverage under the two existing government sponsored Social Health Insurance programs. Membership of the System for the Social Protection in Health was voluntary and was financed jointly by the federal government and the states. Gradually, the impoverished in Mexico were incorporated into the new System for the Social Protection in Health. Frenk *et al* (2009) provided evidence suggesting that, since 2003, public health care resources increased and were distributed more equitably; the number of beneficiaries on the state subsidised health scheme (previously not protected by any other public insurance scheme as they were either self-employed, out of the labour market or in the informal sector of the economy) reached 20 million in 2007; the availability of health personnel, facilities and drugs increased; access and utilisation of health-care services was expanded; and financial protection indicators improved.

### 5.8.2 The Mexican health care financing model

According to Frenk *et al* (2009) the System for the Social Protection in Health which was implemented in 2003, was funded by increasing public funding on health by 1% of the 2003 Gross Domestic Product (GDP) over seven years. Frenk *et al* (2009) also stated that the System for the Social Protection in Health was phased-in over a period of seven years. According to Frenk *et al* (2009) existing Social Health Insurance programs in Mexico are financed through social contributions, based on the right of citizenship, obtained through (i) general taxes, (ii) the employer, and (iii) the employee (in the form of an amount tied to income). The new System for the Social

Protection in Health, as described by Frenk *et al* (2009) had a similar financial structure to the existing Social Health Insurance programs, but with contributions being shared between the federal and state governments. Social contributions were made by the federal government (a so-called federal and state solidarity contribution) and a contribution from families (linked to income earned). Very poor families did not contribute. Annual family contributions ranged from US$60 to US$950. The Fund for Protection against Catastrophic Expenditures received 8% of the federal government's social contribution plus the federal and state solidarity contributions. Another fund (receiving 2% of the sum of the social quota and the federal and state contributions) was used to build health infrastructure in poor communities. A third reserve (receiving 1% of the total contributions) was designed to cover unexpected and temporary overdue interstate payments. These three funds were managed at the federal level to ensure risk pooling. A comparison performed by Frenk *et al* (2009) revealed that total health expenditure in Mexico was low when compared to the Latin American average, but had risen slowly and consistently over the last two decades. The substantial increase in public funding was believed by Frenk *et al* (2009) to be closing the gap between public and private financing of the national health system. According to the OECD (2010a), Mexico, together with the United States of America, are the only member countries of the OECD whose health care is not funded primarily by government. With the anticipated increase in funding required for the expansion of the System for the Social Protection in Health, Frenk *et al* (2009) believe that public health care expenditure will continue to increase at a higher rate than private expenditure.

## 5.9 Country analysis - Thailand

### 5.9.1 The Thailand health care system

According to The World Bank (2008) and Drouin (2007), Thailand provides universal access to health care and coverage to almost its entire population (approximately 98% in 2007) through an integrated, multi-tiered system, which combines public health services, national health insurance, community-based insurance schemes and private health insurance. Thailand health reforms began in 2001 in an attempt to achieve universal health coverage, becoming one of only a handful of lower-middle income countries to do so (World Bank: 2008). A combination of universal coverage, a relatively comprehensive health care benefit package and relatively high levels of tax funding to support good quality public sector health services has led to a more equitable distribution of health service benefits in favour of the poor.

The World Bank (2008) reported that the main public health insurers in Thailand are the Civil Servant Medical Benefit Scheme (CSMBS) which covers civil servants, public employees and their dependants; the Social Security Scheme (SSS) which covers private employees and temporary

public employees (other than for work-related injuries or illnesses); the Universal Coverage Scheme (the "30 Baht Scheme") which has, since October 2001, combined the previous Medical Welfare Scheme and the Voluntary Health Card Scheme and covers all Thai citizens who are not covered by another public health scheme. The Universal Coverage Scheme covered almost 75% of the population (World Bank: 2008) in 2007. According to Na Ranong, Na Ranong, and Vongmontha (2005, in World Bank: 2008), the Thailand Development Research Institute reported that the Universal Coverage Scheme brought at least one million Thais out of poverty. The Private Health Insurance Scheme is a voluntary scheme and available to supplement health care benefits for high income individuals and only covers approximately 2% of the population (World Bank: 2008).

### 5.9.2 The Thai health care financing model

Van den Heever (2010) stated that although Thailand spends relatively little on public health, it has improved its health status indicators significantly over the last 30 years. According to the World Bank (2008) and Drouin (2007) the Thai health care system makes use of pluralistic methods of financing. Health care is dominated by the public sector, particularly in the rural areas, where approximately two-thirds of the people live (Table 12). Total health expenditure is funded primarily by general taxation revenue, out-of-pocket user fees, and some private insurance (Table 14). Information from the World Bank (2008) revealed that both public schemes, being the Civil Servant Medical Benefit Scheme and the Universal Coverage Scheme are funded totally from general tax revenue and require no out-of-pocket expenditure from patients. Co-payments are required on the Universal Coverage Scheme if an individual uses non-emergency services from unregistered providers. Co-payments are also required on the Civil Servant Medical Benefit Scheme for some in-patient care and private hospitals. The Social Security Scheme is funded by means of a tripartite payroll tax, whereby employers, employees and the central government each contribute 1% of the employees' payroll cost, up to Baht 15,000. Co-payments are required on the Social Security Scheme for maternity and emergency services that exceed the budget ceiling. Private health insurers are funded by means of out-of-pocket expenditure and co-payments vary depending on the insurance plan selected.

## 5.10 Country analysis - Vietnam

### 5.10.1 The Vietnamese health care system

According to the World Bank (2008) Vietnam's health system is performing relatively well compared to other countries in a similar economic situation, considering its limited financial resources. The World Bank (2008) also stated that Vietnam's health care reforms were focused on

achieving good health, eradicating health-related poverty and making health care affordable for the poor.

According to Van Den Heever (2010), Vietnam has a multi-tiered, Social Health Insurance system, providing universal access to all citizens. According to the World Bank (2008) Vietnam's health reforms included compulsory Social Health Insurance (introduced in 1992), the Health Care Fund for the Poor (introduced in 2003) to provide health care insurance for the poor, disadvantaged and provide assistance for those faced with unexpected and catastrophic health expenditures; and free health care for children under the age of six (introduced in 2004). The World Bank (2008) stated further that compulsory Social Health Insurance covers all employees with contracts of at least three months as well as pensioners and people on disability, while voluntary health insurance covers individuals who need health insurance but are not covered under the compulsory scheme (such as self-employed or non-working individuals) or individuals who have compulsory health insurance but want to contribute to voluntary health insurance to supplement their coverage. Most of the beneficiaries covered under voluntary health insurance are school pupils and students. In addition to the compulsory Social Health Insurance, several private and public insurance companies offer health insurance, usually as an add-on to life insurance products including policies for pupils and students as well as older working people to cover hospitalization, surgery, and emergency transport.

### 5.10.2 The Vietnamese health care financing model

Although Vietnam's total health care expenditure (as a percentage of Gross Domestic Product) is high for a lower middle-income country and even comparable with some high-income countries, government spending on health care is low and health care is funded primarily by private expenditure, with out-of-pocket expenditure representing the largest share of private expenditure (Table 14). According to the World Bank (2008), the trend of funding health care primarily through private out-of-pocket expenditure is consistent with other lower middle-income countries. Although government is the primary financing source for government health services, government funding is inadequate. As a result, user fees and co-payments are necessary to fill the funding shortfall. The introduction of the Health Care Fund for the Poor in 2003 increased government's spending commitments on health care according to the World Bank (2008). Individuals eligible for compulsory Social Health Insurance (paid through the government budget instead of an employer) include individuals who have served the government or provided meritorious service to the country and "vulnerable" members of the population (including the elderly aged 90 and older, the disabled, orphans, etc). According to the World Bank (2008) compulsory health care contributions were 3% of contractual salary and basic allowances, pension, social insurance payments, scholarships, or

minimum wage, depending on what the individual received. Formally employed workers paid 1% of their salary and their employers paid 2%. For retirees and people receiving social insurance benefits, the contributions were paid by the Vietnam Social Security. For other groups, the state budget covered the contributions. For the poor and elderly (aged 90 and older), the contribution was a fixed amount of US$3.10 per person per year (and paid from the state budget) and US$4.70 per child per year (for children under six years). The Health Care Fund for the Poor required provinces to allocate US$4.40 per eligible beneficiary, with 75% paid in from the state budget and most of that used to buy health insurance. Any remaining amount could be used to assist individuals (not eligible for membership), who were confronted with catastrophic health care costs. In the past, the Health Care Fund for the Poor ran at a surplus, but since revised health insurance regulations in 2005, there has been concern about the solvency of the fund as contributions remained low while the benefits package was expanded to include additional medicines and expensive high-technology services. In 2005, the Vietnam Social Security estimated that health insurance reimbursements to service providers exceeded total contributions by US$8.6 million, an amount equivalent to 4.3% of total health insurance contributions. This shortfall was financed from accumulated reserves, but the Vietnam Social Security warned that these reserves would become exhausted.

## 5.11 Conclusion

In an attempt to determine whether the proposed financing mechanisms currently under consideration for funding National Health Insurance in South Africa are appropriate in relation to South Africa's economic profile and in line with international trends, it was necessary to identify current international trends for financing health care and to analyse countries with health care systems and financing models, that were considered "best practice" examples. Eight countries, being Japan, Taiwan, Chile, Thailand, South Korea, Mexico, Vietnam and Colombia were referred to by the African National Congress (2010) in their business case, as representing countries with health care systems and financing mechanisms that can be viewed as "best practice" in order to achieve universal coverage. The health care systems and financing models of these eight countries were therefore analysed in this chapter to determine whether the financing models used by these countries could in fact be viewed as "best practice" examples that complied with international trends and were suitable for consideration in a South African context.

This analysis revealed that all the countries analysed have either undergone or are undergoing health reform in one way or another in order to be able to offer universal health care to their people and offer financial protection to the poor (from health care expenditure). The reforms undergone have either been an attempt to provide additional health coverage to those most in need or providing

more comprehensive health care benefits to ultimately improve the health outcomes and standards of living of their population. Each country's health care system was relatively unique as were the health care financing models used. All the financing models examined exhibited elements of "good performance" and complied, to a large extent, with international trends.

Most countries experienced similar challenges related to the ability to generate sufficient revenue to cover increasing health care costs, the sustainability of funding and the ability to keep up with increasing demand for healthcare services. Japan, South Korea, Taiwan, Colombia and Vietnam have all expressed concern regarding solvency problems in funds, funding deficits and rising health care costs. Factors identified include the rising costs of medical drugs, use of expensive medical technologies, shortfalls in expected revenue from government and individuals, higher than expected administrative costs, unfavourable economic conditions affecting employment and poverty, the cost of expanding benefit packages, fraud and contribution evasion. These problems will therefore undoubtedly be experienced, if not to a greater extent, by South Africa as well. What these challenges highlight for South Africa (in its plan to phase in National Health insurance over a fourteen year period) is the need for careful planning, accurate cost forecasting and analysis, the building in of strict regulatory controls over medical drugs covered, health care services offered, health care provider fee structures, claim payment procedures and revenue collection policies.

# CHAPTER 6

## CONCLUSION

In the 2011 Budget Speech, the Minister of Finance (National Treasury: 2010a) announced that South Africa would be introducing National Health Insurance, to ensure that all South Africans had access to affordable, quality health care services regardless of their ability to pay or their socio-economic status. The Minister stated that National Health Insurance would be phased in over a fourteen year period and described the various financing mechanisms that would be under consideration for funding National Health Insurance. The primary source of funding was expected to be general tax revenue, but other sources under consideration included a mandatory payroll tax (payable by employers and/or employees), an increase in the VAT rate earmarked for National Health Insurance, a surcharge on taxable income and co-payments. The Minister of Finance (National Treasury: 2010a) referred to eight countries, namely Japan, South Korea, Taiwan, Chile, Colombia, Mexico, Thailand and Vietnam as being examples of countries which had successfully implemented universal health coverage.

The goal of this study was to analyse the financing mechanisms currently under consideration for funding National Health Insurance in South Africa in order to compare them with financing mechanisms currently used by both developed and developing countries with National Health Insurance, to determine if the proposed mechanisms are in line with international trends and "best practice" for achieving universal coverage and appropriate in relation to South Africa's economic profile. In addressing this main goal, the health systems and financing models of the eight countries referred to by the Minister were analysed to determine: whether the countries were comparable with South Africa in terms of certain basic economic indicators; whether their financing mechanisms could be viewed as "best practice", worthy of being used as a benchmark for South Africa; what the similarities and differences were between South Africa's proposed financing model and the financing models used in the eight countries referred to; and to make recommendations for a sound funding system for the South African National Health Insurance system.

Chapter 2 provided an overview of the challenges currently facing the existing South African health care system. The South African public health care system is inadequate for the needs of the people (in terms of the deteriorating public health infrastructure and quality of care provided as well as government's inability to fund health care adequately, considering the size of the population it serves). Financial resources within the public health care system are inequitably distributed, leaving

the poorest sectors of the population without health care coverage and vulnerable to catastrophic health-related expenditure. The public health system is ineffective, as it is not able to adequately address deteriorating health outcomes in the country. The private health care system on the other hand is adequately funded, with good infrastructure and provides good quality care, but is unsustainable (in view of the premiums being charged relative to the size of the population it serves). The introduction of National Health Insurance in South Africa is therefore an attempt at addressing the country's health system woes and an attempt to meet the desire of international policy makers, who are calling for *equitable* access for *all* citizens to *adequate* health care at *affordable costs*. Ultimately, all countries are attempting to meet the Millennium Development Goals.

Chapter 3 described the proposed National Health Insurance system, the estimated funding requirements as well as the financing mechanisms under consideration for funding National Health Insurance. National Health Insurance will provide mandatory health insurance to all South African citizens and legal residents, regardless of income level and employment status. National Health Insurance will be publicly funded and publicly administered. A National Health Insurance Fund will be established to receive funds, pool these resources and purchase services on behalf of the entire population (as a single-payer system). Universal coverage will entitle individuals to a defined, comprehensive package of health care services at all levels of care namely: primary, secondary and tertiary (excluding medically unnecessary services and expensive therapies) and will be available through accredited and contracted public and private health care service providers. Preliminary calculations of funding requirements for implementing National Health Insurance revealed that expenditure is expected to increase from R128 billion in 2012 to R267 billion in 2020 and R376 billion in 2025, expressed in real terms (2010 financial terms) if phased in over fourteen years. General tax revenue has been identified as the primary revenue source or financing mechanism to fund health care expenditure, with mandatory payroll taxes, VAT and a surcharge on taxable income being considered as supplementary financing mechanisms. Out-of-pocket payments, user charges and co-payments are not envisaged as a significant financing mechanism for National Health Insurance.

Chapter 4 compared South Africa's economic profile to eight countries (which the South African Minister of Finance identified and referred to as being examples of countries which had successfully implemented universal health coverage) using various indicators. This comparison was considered necessary in light of findings made by the World Health Organisation (2001), which confirms the existence of a clear and definite link between health, poverty reduction and economic

growth, confirming the notion that "health is wealth". This in turn indicates that the macro-economic context of a country influences its ability to achieve universal coverage, offer financial protection (in relation to health care) to the vulnerable (poor), and also influence the financing mechanisms selected to fund health care. The World Bank (2006) also stated that a country's economic growth has a greater impact on poverty reduction when income is more equally distributed. The comparison of South Africa's economic profile in relation to the other eight countries revealed that it is classified by the World Bank as upper middle-income, together with three other countries, namely Chile, Colombia and Mexico. Three of the countries analysed were categorised as high-income and the remaining two were classified as lower middle-income countries. A country wanting to finance health care through general tax revenue (as in the case of South Africa) needs to ensure it has a wide tax base from which it can generate sufficient tax revenue, while a country wanting to finance health care through Social Insurance contributions needs to ensure it has high employment levels, so that the least possible financial strain is placed on governments (as government will need to subsidise the contributions of those individuals who do not have an income). All nine of the countries analysed (including South Africa) experienced periods of impressive economic growth, but were all, to some extent, affected by the global financial crisis in 2008. South Africa experienced the most unequal distribution of income, highest unemployment levels and highest poverty levels compared to the other eight countries analysed. This would indicate that South Africa still has much to do to ensure its "house is in order" so that it may continue to enjoy sustained economic growth. This will require focusing on increasing employment levels, ensuring a more equal distribution of income and decreasing poverty, so that National Health Insurance is sustainable, does not place unnecessary strain on government revenues at the expense of other much needed government priorities.

A comparison was then made between South Africa and the other eight countries in terms of demographic, macro-economic, health expenditure and health status indicators to identify similarities and differences between the countries, which would explain why different countries adopted the health systems and financing models they did. Health care expenditure per capita increases as Gross Domestic Product per capita increases, with Taiwan being the exception. High levels of total health care expenditure did not guarantee good health indicators, however. Out-of-pocket expenditure, although not a recommended mechanism for financing National Health Insurance in South Africa, is still a significant source of funding in all nine countries analysed, although to a lesser degree in high-income countries. High-income countries tend to spend more on private prepaid plans and medical schemes (as a percentage of private health care expenditure), which is expected, as the level of expenditure is directly related to population income levels.

Although health status indicators are not necessarily an indication of the effectiveness of a country's health care system or the efficiency of a country's health care financing model, they do provide insight into the level of well-being or illness present in a population. Health status indicators may also indicate the need for different strategies to health care or different financing models. The World Bank (2008) reported that there was an association between high levels of education, as reflected in literacy rates, and increased life expectancy. Life expectancy in South Africa was the lowest of all nine countries analysed and mortality rates in South Africa were the highest. The Human Immunodeficiency Virus (HIV) and Tuberculosis (TB) prevalence rates were also highest in South Africa compared to the other eight countries. The literacy rate in South Africa was second lowest compared to the other eight countries. The health status indicators in South Africa provided further evidence of the need for health reform. These indicators, coupled with the unemployment and poverty levels and unequal distribution of income, provided further compelling evidence of the need for National Health Insurance, to ensure that all sectors of the population received access to quality health care, regardless of their socio-economic status.

Chapter 5 identified the international goals and trends that currently exist for financing health care. The goals, according to the World Health Organisation (2000) for any health system, are good health, responsiveness to the expectations of the population and fair contributions. International trends suggest that health care should be financed primarily through pre-payments systems, that financing mechanisms should preferably be progressive in nature and that a relatively large share of health care expenditure should be funded by government revenue (albeit shared between general tax revenue and specific health care contributions) so that access to health care is not determined by an individual's income level or socio-economic status. In South Africa, the proposed use of general tax revenue (as the primary revenue source), mandatory payroll taxes, VAT and a surcharge on taxable income to fund health care complies with international trends for financing health care as these are all pre-payment mechanisms. Personal income tax (being one of the main sources of general tax revenue) is very progressive, as would be the mandatory payroll tax and surcharge on taxable income, making the overall financing system progressive in nature. Although out-of-pocket payments, user charges and co-payments are not envisaged as a significant financing mechanism for National Health Insurance in South Africa, such mechanisms cannot be avoided and are used in almost all countries around the world to finance healthcare.

Chapter 5 also analysed the health systems and financing models adopted by the eight countries. This comparison was made in order to determine whether the eight countries identified were

comparable with South Africa and whether their health systems and health care financing models complied with international trends and "best practice". As in the case of South Africa, all eight of the countries analysed were dissatisfied with their existing health care systems and embarked on extensive health reforms in an attempt to achieve universal health care by either expanding health insurance coverage to those vulnerable segments of the population without any coverage, by providing more comprehensive health care benefits, by providing financial protection from impoverishment as a result of catastrophic health-related expenditure to vulnerable households and by improving the health outcomes and standards of living of the population. Just as the health systems vary among the eight countries analysed, so too did the health care financing models. These models were adopted in support of the health systems and benefit packages offered, the macro-economic situation within the country and numerous other country-specific factors. All the financing models did, however, exhibit elements of "good performance" and complied, to a large extent, with international trends. Not one of the countries analysed utilised only one financing mechanism to fund health care, but invariably used a combination of mechanisms, namely general tax revenue, Social Health Insurance contributions, out-of-pocket expenditure and contributions to private medical plans. This is the expected approach that South Africa will also take, considering the financing mechanisms that are currently in place and the country's current macro-economic situation. It is envisaged that the revenue base selected will be as broad as possible to ensure the lowest possible contribution rates for households, while still generating sufficient funds to supplement the general tax allocation.

The analysis also identified challenges being faced by countries related to the ability to generate sufficient revenue to cover increasing health care costs, the sustainability of funding and the ability to keep up with increasing demand for healthcare services. Countries facing these challenges included Japan, South Korea, Taiwan, Colombia and Vietnam.

Table 17 below provides an overview of the indicators used in chapter 4 when analysing the eight countries in relation to South Africa, as well as a summary of the type of health care system that exists in each of the nine countries (as described in chapter 5).

Table 17 Summary of the demographic, macro-economic, health expenditure and health status indicators and health systems

| **Demographic indicators** | **Japan** | **South Korea** | **Taiwan (China)** | **Chile** | **Colombia** | **Mexico** | **South Africa** | **Thailand** | **Vietnam** |
|---|---|---|---|---|---|---|---|---|---|
| Population size (est. 2011) | 126 475 664 | 48 754 657 | 23 071 779 | 16 888 760 | 44 725 543 | 113 724 226 | 49 004 031 | 66 720 153 | 90 549 390 |
| Annual population growth (%) (est. 2011) | -0.28 | 0.23 | 0.19 | 0.84 | 1.16 | 1.10 | -0.38 | 0.57 | 1.08 |
| Birth rate (number of births per 1,000) (est. 2011) | 7.31 | 8.55 | 8.9 | 14.33 | 17.49 | 19.13 | 19.48 | 12.95 | 17.07 |
| Population living in urban areas (%) (2010) | 67 | 83 | 78 | 89 | 75 | 78 | 62 | 34 | 30 |
| **Macro-economic indicators** | **Japan** | **South Korea** | **Taiwan (China)** | **Chile** | **Colombia** | **Mexico** | **South Africa** | **Thailand** | **Vietnam** |
| Economic classification (2010) | High-income | High-income | High-income | Upper middle-income | Upper middle-income | Upper middle-income | Upper middle-income | Lower middle-income | Lower middle-income |
| GDP (PPP in US$) (2010) | $4.31trillion | $1.459trillion | $821.8billion | $257.9billion | $435.4billion | $1.567trillion | $524billion | $586.9billion | $276.6billion |
| GDP per capita (PPP, US$) (2010) | 34 000 | 30 000 | 35 700 | 15 400 | 9 800 | 13 900 | 10 700 | 8 700 | 3 100 |
| GDP real growth rate (%) (2010) | 3.9 | 6.1 | 10.8 | 5.3 | 4.3 | 5.5 | 2.8 | 7.8 | 6.8 |
| Gini index (2000 – 2010) | 37.6 (2008) | 31.4 (2009) | 32.6 (2000) | 52.4 (2009) | 58.5 (2009) | 48.2 (2008) | 65 (2005) | 43 (2006) | 37 (2004) |
| Unemployment ( % of population) (2010) | 5.1 | 3.3 | 5.2 | 8.7 | 11.8 | 5.6 | 23.3 | 1.2 | 2.9 |
| Poverty (Population below poverty line)(%) (2000 – 2010) | 15.7 (2007) | 15.0 (2006) | 1.16 (2010) | 11.5 (2009) | 45.5 (2009) | 18.20 (2008) | 50.0 (2000) | 9.6 (2006) | 10.6 (2010) |

| Health care expenditure indicators | Japan | South Korea | Taiwan (China) | Chile | Colombia | Mexico | South Africa | Thailand | Vietnam |
|---|---|---|---|---|---|---|---|---|---|
| Per capita total expenditure on health at average exchange rate (US$) | 3 321 | 1 108 | 824 (2003) | 787 | 323 | 515 | 485 | 168 | 80 |
| Per capita government expenditure on health at average exchange rate (US$) | 2 657 | 600 | 523 (2003) | 368 | 272 | 248 | 195 | 127 | 31 |
| Total health expenditure (% of Gross Domestic Product) | 8.3 | 6.5 | 6.5 | 8.2 | 6.4 | 6.5 | 8.5 | 4.3 | 7.2 |
| Government health expenditure (% of Gross Domestic Product) | 6.6 | 3.5 | NA | 3.8 | 5.4 | 3.1 | 3.4 | 3.3 | 3.3 |
| Government health expenditure (% of total health expenditure) | 80.0 | 54.1 | 57.2 | 46.8 | 84.2 | 48.3 | 40.1 | 75.8 | 38.7 |
| Private health expenditure (% of total health expenditure) | 18.5 | 39.9 | 42.8 | 53.2 | 15.8 | 51.7 | 59.9 | 24.2 | 61.3 |
| Government health expenditure (% of total government expenditure) | 17.9 | 12.3 | 18.4 (2003) | 15.6 | 17.9 | 11.9 | 9.3 | 14.0 | 8.9 |
| Social security expenditure on health (% of government expenditure on health) | 81.5 | 78.8 | 63.5 (2003) | 14.7 | 68.0 | 54.6 | 2.9 | 9.1 | 31.4 |

| Health care expenditure indicators | Japan | South Korea | Taiwan (China) | Chile | Colombia | Mexico | South Africa | Thailand | Vietnam |
|---|---|---|---|---|---|---|---|---|---|
| Out-of-pocket expenditure (% of private expenditure on health) | 80.6 | 87.1 | 91.7 (2003) | 64.6 | 50.0 | 92.3 | 29.6 | 68.1 | 90.2 |
| Private prepaid plans (% of private expenditure on health) | 13.8 | 10.8 | NA | 31.5 | 50.0 | 7.7 | 66.1 | 24.2 | 2.7 |
| **Health status indicators** | **Japan** | **South Korea** | **Taiwan (China)** | **Chile** | **Colombia** | **Mexico** | **South Africa** | **Thailand** | **Vietnam** |
| Life expectancy at birth (both sexes) | 83 | 80 | 74 | 79 | 76 | 76 | 54 | 70 | 72 |
| Adult mortality rate (per 1 000 adults 15 – 59 years) | 64 | 78 | 116 | 87 | 123 | 122 | 496 | 205 | 139 |
| Under 5 mortality rate (per 1 000 live births) | 3 | 5 | 19 | 9 | 19 | 17 | 62 | 14 | 24 |
| Maternal mortality ratio (per 100 000 live births) | 6 | 18 | 38 | 26 | 85 | 85 | 410 | 48 | 56 |
| Prevalence of HIV (among adults 15 – 49 yrs) (% of population) | Less than 0.1 | Less than 0.1 | 0.1 | 0.4 | 0.5 | 0.3 | 17.8 | 1.3 | 0.4 |
| Prevalence of Tuberculosis (TB) (per 100 000 population) | 26 | 114 | 138 | 15 | 49 | 19 | 808 | 189 | 333 |
| Literacy rate (% aged 15 and over that can read and write) | 99 | 97.9 | 96.1 | 95.7 | 90.4 | 86.1 | 86.4 | 92.6 | 94 |

| Health care system | Japan | South Korea | Taiwan (China) | Chile | Colombia | Mexico | South Africa | Thailand | Vietnam |
|---|---|---|---|---|---|---|---|---|---|
| Type of system | Social Health Insurance/ National Health Insurance | National Health Insurance | National Health Insurance | Public Health System/ Social Health Insurance | Social Health Insurance | Public Health System/ Social Health Insurance | National Health Insurance (proposed) | Social Health Insurance | Social Health Insurance |

Based on demographic indicators, South Africa was comparable, in terms of population size, to South Korea and Colombia. South Africa's birth rate was the highest of the nine countries analysed although population growth rate was negative. With thirty eight percent (38%) of the South African population still living in rural areas and earning mainly subsistence wages, revenue collection may be a challenge for the National Health Insurance. Poor infrastructure in these areas also makes access to health care services a challenge for the people and costly for the National Health Insurance.

Macro-economic indicators revealed that South Africa is classified as an upper middle-income country, with Chile, Colombia and Mexico. All nine countries analysed were at different stages of economic growth. South Africa experienced the lowest Gross Domestic Product real growth in 2010, the most unequal distribution of income, the highest unemployment and poverty rates compared to the other eight countries, which were also at critical levels on a world-wide scale. This macro-economic situation will limit the ability of the country to generate sufficient, sustainable funding for National Health Insurance. A National Health Insurance fund that is to be funded primarily from general tax revenue and payroll contributions (as envisaged in South Africa) demands a healthy, sufficiently large economically active working-age population.

South Africa's total expenditure on health (as a percentage of Gross Domestic Product) was the highest of the nine countries analysed, with government health care expenditure (as a percentage of total health care expenditure) the second lowest and private expenditure (as a percentage of total health care expenditure) the second highest when compared to the other eight countries. Health care expenditure per capita was comparable with the other three upper middle-income countries, while social security expenditure on health (as a percentage of government expenditure on health) and out-of-pocket expenditure (as a percentage of private expenditure on health) was the lowest of the nine countries analysed. The analysis revealed that health care in South Africa is already at relatively high levels in relation to its economic profile, but has not seen this investment translated into good health status indicators (as described above). The proposed National Health Insurance is therefore going to require a significantly bigger commitment by government and the population at large (at funding levels which may not be achievable or sustainable) to ensure health care resources and benefits are distributed to those most in need of health care and those most in need of financial protection against health care costs.

South Africa's health status indicators do not compare favourably with the other countries analysed. Life expectancy was the lowest and mortality rates and Human Immunodeficiency Virus (HIV) and

Tuberculosis (TB) prevalence rates were the highest when compared to the other eight countries. This analysis highlighted the crippling effect that South Africa's quadruple burden of disease (HIV/AIDS and TB; maternal, infant and child mortality; non-communicable diseases and injury and violence) is having on the health of the South African population, the size of its workforce, its already low employment levels and health care funding and resources.

The health care systems in each of the eight countries (excluding South Africa) were fairly complex to compare in any meaningful, detailed manner and all evolved over different periods of time depending on the health systems that existed in the country before the health reforms were implemented. All eight of the countries analysed had a mix of health care systems but managed to provide some form of universal access to health care, with all except Japan doing so on a multi-tier basis. Japan's health care system was the only single-tiered health care system analysed. Of the eight countries analysed, only South Korea and Taiwan had single-payer National Health Insurance arrangements in place, with the other six countries having multi-payer and/or a mix of public and private multi-payer systems in place. In an attempt to describe the mix of health systems that existed within each of the eight countries, only South Korea and Taiwan had National Health Insurance systems in place (as envisaged for South Africa).

An analysis of the health care financing models adopted by each country revealed that each country had a rather unique model, with one factor common to all, namely that none of the countries utilised only one source of funding, but rather utilised a number of financing mechanisms. This would also be the recommended approach for South Africa, thereby ensuring that the revenue base is broad, the impact on households is limited, but still able to generate sufficient funds to sustain the costs anticipated for National Health Insurance. What also appears evident is that what worked in one country may not necessarily work in another and South Africa should not attempt to "mirror" either the health system or funding model adopted by another country. Despite the uniqueness of each country's health care system and financing model, all of the countries aspired to achieving the same goal of providing all citizens with adequate health care at an affordable cost. The different financing models adopted by the countries complied to a large extent with international trends for financing health care, namely that health care should be funded primarily using pre-payment systems to allow resources and risks to be pooled, to be used to benefit the entire population and offer greater financial protection to vulnerable households. All the countries' financing models utilised government revenue (albeit shared between general tax revenue and Social Health Insurance contributions). Social Health Insurance contributions in certain countries were progressive, while others were proportional. Out-of-pocket expenditure was a significant source of private health care

funding in all the countries analysed. With the exception of Colombia, private health care expenditure in the form of contributions to prepaid health care plans did not represent a significant source of health care funding.

In view of the uniqueness of each country's health care system and health care financing model, it was not possible to conclude on whether or not a country displayed a health system worthy of being labelled "best practice" as there is no definition of "best practice". What was evident however was that all the countries displayed elements of "good performance". According to the World Bank (2008), "good performance" could be seen as expanding health care coverage by increasing the number of individuals with formal health insurance and improving the level of financial protection. "Good performance" could also be viewed as an improvement in health outcomes or the health status of a population, by comparing health spending per capita across comparable income countries (although better heath could very well be attributable to factors outside of the health system).

All the countries analysed displayed certain common characteristics, which included periods of strong, sustained economic growth, political commitment to improved health outcomes and health systems, a well-educated population, specific funding committed to health care, a desire for equity in the distribution of health care services and funding, solidarity among all contributors, risk pooling, a focus on primary health care, continuous assessment of reforms and improvements to the systems, as well as a number of other factors that were beyond the scope of this thesis (related to service delivery and provider payment reforms). Certain of these elements pose certain challenges to South Africa, the most significant being its high level of unemployment, poverty, income inequality, burden of disease, low economic growth and low literacy levels.

What this analysis also suggests is that there is no single suitable solution with regard to the health care system selected or the financing thereof. South Africa will need to embark on its own health care reform "journey" in an attempt to migrate from its current inefficient, inequitable, unsustainable health care system to one which provides comprehensive, affordable, universal health care to all South Africans. By doing this, it may be one step closer to achieving certain of its Millenium Development Goals. Also worth noting was the fact that despite the extensive health reform efforts undertaken in each of the countries, no country was or is satisfied with the current state of health care. All the countries are facing common heath care challenges, including the rising cost of health care, the insufficient revenue, the fact that increased spending cannot "buy" good health outcomes, the moral hazard encountered when health care is free or relatively uncontrolled, the resulting over-use of health care services as well as the challenge of balancing the inter-

relationship between public and private health sector service providers. This would suggest that health reform is a journey and not merely a destination.

The financing mechanisms currently under consideration in South Africa for funding National Health Insurance, namely the proposed use of general tax revenue, mandatory payroll taxes, VAT and a surcharge on taxable income all comply with international trends as these are all pre-payment mechanisms. Although out-of-pocket payments, user charges and co-payments are not pre-payment financing mechanisms, such mechanisms cannot be avoided and are used in almost all countries around the world to finance healthcare, hence it is highly unlikely that such payments would not be a financing source for health care in South Africa. In South Africa, general tax revenue was found to be progressive overall, with personal income tax being very progressive and VAT almost proportional. The Minister of Finance (National Treasury: 2010b) indicated that the mandatory payroll tax would also be progressively structured. The use of a mandatory payroll tax will assist in spreading the burden of financing health care among various partners including employees, self-employed workers and employers.

In conclusion, the findings of this thesis indicate that there are many factors and further research will be required before South Africa will be in a position to announce the most suitable financing model to be used to achieve universal health care through National Health Insurance. Factors that need to be taken into consideration are the country's current burden of disease, anticipated economic growth and initiatives aimed at expanding growth, the size of the formal and informal sectors, the equality of income distribution, the current mix of health care systems and health care financing mechanisms, the fiscal flexibility available to government to change social priority allocations, the capacity and effectiveness of tax collecting agencies, the size of the tax base and the ability to increase that base, the ability to raise external funding if required, the level of debt, the level of poverty and the level of unemployment.

Before detailed recommendations can be provided regarding specific contribution rates, it is necessary for National Treasury and the Department of Health to refine the cost estimates for funding National Health Insurance in South Africa by looking more closely at the comprehensive package of benefits to be offered, the long term fiscal implications and the effect that various contributions would have on households. This is considered a limitation in this thesis and may be an area for future research. A further limitation identified in this thesis is the fact that Taiwan's national health accounts are not formally reported by the World Health Organization and data had to therefore be extracted from the Hong Kong Bureau of Food and Health and the Taiwanese

Department of Health. While demographic and macro-economic indicators were available for 2010 and 2011, key health care expenditure indicators and health status indicators (from the World Health Organization) were only available for 2009. These indicators are therefore slightly outdated and could possibly be distorted due to the global economic crisis and the effect this may have had on that year's information.

Areas relating to the National Health Insurance which are not addressed by this thesis include the implications of a centralised versus decentralised healthcare system (between the three tiers of government) in terms of their responsibility and ability to meet nationally agreed priorities; the implications of having a single-payer system (as proposed); the debate regarding what benefit package will be offered by the National Health Insurance and the cost implications of offering a comprehensive package of benefits; whether the optimistic fourteen year implementation timeframe is realistic; the extent to which private healthcare providers will be used; as well as how Government plans to address the significant human resource scarcity and infrastructure backlogs that exist in the current public health sector.

## REFERENCES


African National Congress (ANC). 2010. **ANC 3rd National General Council – 2010. Road to Health**. Additional Discussion Document: Section 1, National Health Insurance: 3 - 89.

African Union (AU). 2006. **Resolution of the Ministers of Health on health financing in Africa: Special Summit of the African Union on HIV/AIDS, tuberculosis and malaria**. Addis Ababa: African union.

Apablaza, RC. *et al.* 2006. **Changing Health Care Provider Incentives to Promote Prevention: The Chilean Case.** Harvard Health Policy Review. Vol. 7, No. 2. 102 – 112.

Ataguba, J and Akazili, J. 2010a. Health care financing in South Africa: moving towards universal coverage. **Continuing Medical Education.** Volume 28: 74 - 78.

Ataguba, J and McIntyre, D. 2009. Financing and Benefit Incidence in the South African Health System: Preliminary Results. **Health Economics Unit.** Working Paper 09/1. Cape Town: Health Economics Unit, University of Cape Town.

Babbie, E. and Mouton, J. 2009. **The practice of social research.** Cape Town: Oxford University Press South Africa.

Carrin, G. *et al.* 2005. **Achieving Universal Health Coverage: Developing the Health Financing System.** World Health Organisation. Geneva: World Health Organisation.

Central Intelligence Agency. 2011. **World Factbook** [On-line]. Available: https://www.cia.gov/library/publications/the-world-factbook [accessed 9 June 2011].

Cheng, TM. 2003. **Taiwan's new national health insurance program: genesis and experience so far.** Health Affairs. Volume 22:61-76.

Clavijo, S. 2009. **Social Security Reforms in Colombia: Striking Demographic and Fiscal Balances.** International Monetary Fund Working Paper WP/09/58. Washington: International Monetary Fund

Docteur, E. and Oxley, H. 2003. **Health-Care Systems: Lessons from the Reform Experience.** OECD Working Papers. Organisation for Economic Co-operation and Development. Paris: OECD Publishing.

Drechsler, D and Jutting, J. 2005. Private Health Insurance for the Poor in Developing Countries? **Organisation for Economic Co-operation and Development (OECD) Centre**. Policy Insights. No. 11. Paris: OECD Publishing.

Drouin, A. 2007. Methods of Financing health care: A rational use of financing mechanisms to achieve universal coverage. **International Social Security Association.** Technical Report No. 05. September.

Econex. 2011. A Few Practical Considerations of the Proposed NHI. **Econex.** Health Reform Note, No. 10. February: 1 – 9.

Econex. 2010a. Provider Payment Systems. **Econex.** Health Reform Note, No. 6. September: 1 – 15.

Econex. 2010b. The Role of Primary Healthcare in Health Reform. **Econex.** Health Reform Note, No. 1. March: 1 – 6.

Econex. 2010c. Integration of the public and private sectors under a National Health Insurance (NHI) system in SA. **Econex.** Health Reform Note, No. 4. July: 1 – 9.

Econex, 2010d. Patient choice and referral. **Econex**. Health Reform Note, No. 5. August: 1 – 16.

Econex. 2010e. Rationing as a Response to Supply Side Constraints. **Econex**. NHI Note 5. January: 1 – 7.

Econex. 2010f. Estimating the Financial Cost of the NHI Plan. **Econex.** NHI Note 7. February: 1 – 10.

Econex. 2009a. NHI Note 4: Supply Constraints. **Econex.** NHI Note 4. November: 1 – 5.

Econex. 2009b. What does the demand for healthcare look like in SA? **Econex.** NHI Note 3. October: 1 – 7.

Econex. 2009c. South Africa's Burden of Disease. **Econex.** NHI Note 2. October: 1 – 5.

Econex. 2009d. Key Features of the Current NHI Proposal. **Econex**. NHI Note 1. September: 1 – 6.

eNotes.com. **Health Care Financing** [On line]. Available: http://www.enotes.com/public-health-encyclopedia/health-care-financing [accessed 12 March 2011].

eNotes.com [On line]. Available: http://www.enotes.com/public-health-encyclopedia/national-health-insurance [accessed 12 March 2011].

Financial and Fiscal Commission. 2011. **Financial and Fiscal Commission: Briefing on the 2011 Fiscal Frameworks and Revenue Proposals**. March.

Freedman, M and Lee, B.J. 2010 [On line]. **South Korea Survived Recession with CEO Tactics**. Newsweek.10 May.
Available: http://www.thedailybeast.com/newsweek/blogs/wealth-of-nations/2010/05/10/south-korea-survived-recession-with-ceo-tactics.html

Frenk, J. *et al.* 2009. **The democratization of health in Mexico: financial innovations for universal coverage.** Bull World Health Organanisation. Policy & Practice. Volume 87: 542–548.

Glied, S. 2008 [On line]. **Health Care Financing, Efficiency and Equity**: NBER Working paper series. Available: http://www.nber.org/papers/w13881 [accessed 28 March 2011].

Goldman Sachs. 2007. **The N-11: More Than an Acronym**. Global Economics Paper No: 153. 28 March.

Health Economic Unit(HEU). 2009a. Public sector health care spending in South Africa. **Health Economics Unit.** Information Sheet, No. 1: 1 - 4. Cape Town: Health Economics Unit, University of Cape Town.

Health Economic Unit(HEU). 2009b. Medical scheme's spending in South Africa. **Health Economics Unit**. Information Sheet, No. 2: 1 - 4. Cape Town: Health Economics Unit, University of Cape Town.

Health Economic Unit(HEU). 2009c. The Public-Private Health Sector Mix in South Africa. **Health Economics Unit**. Information Sheet, No. 3: 1 - 4. Cape Town: Health Economics Unit, University of Cape Town.

Health Economic Unit(HEU). 2009d. Who pays for health care in South Africa. **Health Economics Unit**. Information Sheet, No. 4: 1 - 4. Cape Town: Health Economics Unit, University of Cape Town.

Health Economic Unit(HEU). 2009e. Who benefits from health care in South Africa. **Health Economics Unit**. Information Sheet, No. 5: 1 - 4. Cape Town: Health Economics Unit, University of Cape Town.

International Labour Office. 2010. **World Social Security Report 2010/2011: Providing coverage in times of crisis and beyond.** Geneva: International Labour Office.

Joumard, I. *et al.* 2010. Health Care Systems: Efficiency and Institutions. **Organisation for Economic Co-operation and Development Economics Department**. Working Papers, No. 769. OECD Publishing.

Kinney, ED. 2009. **Health Care Financing and Delivery in the United States, Mexico, and Canada: Establishing International Principles for Sound Integration.** Wisconsin International Law Journal. Health Care Financing and Delivery. Volume 26, No. 3. April 2009.

Kirby, N. 2011. We can't: American developments in social health insurance. **Werkmans Legal Brief.** February.

Kirby, N. 2010a. Chasing a white rabbit: the legal status of a national health system. **Werkmans Legal Brief.** December.

Kirby, N. 2010b. Nice fit between NHI and constitutional prerogative. **HMR Africa.** May.

Kirby, N. 2009a. The introduction of the National Health Insurance Scheme. **Werkmans Legal Brief.** October.

Kirby, N. 2009b. National Health Insurance Scheme: what we have and what may be. **Werkmans Legal Brief.** July.

Kutzin, J. 2000. **Towards Universal Health Care Coverage: A Goal-oriented Framework for Policy Analysis: Health, Nutrition and Population (HNP) Discussion Paper.** Washington: The World Bank.

Kwon, S. 2009. **Thirty years of national health insurance in South Korea: lessons for achieving universal health care coverage.** Health Policy. Vol 24(1): 63-71.

Lee, JC. 2003. **Health Care Reform in South Korea: Success or Failure?** American Journal of Public Health. Vol 93(1): 48-51.

Lee, SY. *et al.* 2008. **The national health insurance system as one type of new typology: The case of South Korea and Taiwan.** Health Policy. Vol 85: 105-113.

Makawia, S. *et al.* 2010. SHIELD Work Package 3 Report: **An assessment of the distribution of health service benefits in Tanzania.** Cape Town: Health Economics Unit, University of Cape Town. December.

McIntyre, D. 2010a. SHIELD Work Package 5 Report: **Modelling the estimated resource requirements of alternative health care financing reforms in South Africa.** Cape Town: Health Economics Unit, University of Cape Town. October.

McIntyre, D. 2010b. What resources do we need for a universal health system in South Africa and what are the design implications? **SHIELD Health Financing Reform.** Policy Brief No. 1. Cape Town: Health Economics Unit, University of Cape Town.

McIntyre, D. 2010c. Should we pursue a universal health system or something else in South Africa? **SHIELD Health Financing Reform.** Policy Brief No. 2. Cape Town: Health Economics Unit, University of Cape Town.

McIntyre, D. 2007a. SHIELD Work Package 1 Report: **A Critical Analysis of the Current South African Health System**. Cape Town: Health Economics Unit, University of Cape Town. October.

McIntyre, D. 2007b. SHIELD Work Package 1 Report: **Critical Analysis of Ghana's Health System with a focus on equity challenges and the National Health Insurance**. Cape Town: Health Economics Unit, University of Cape Town. April.

McIntyre, D. 2007c. **Learning from experience: Health care financing in low- and middle-income countries**. Geneva: Global Forum for Health Research.

McKerchar, M. 2008. Philosophical paradigms, inquiry strategies and knowledge claims: applying the principles of research design and conduct to taxation. **E-Journal of Tax Research**. Available: http://www.austrlii.edu.au/au/journals/eJTR/2008/1.html [accessed 8 November 2010]

McKinsey and Company. 2008. **The Challenge of Funding Japan's Future Health Care Needs**. March. Publication location and Publisher unknown.

McPake, B and Kutzin, J. 1997. **Methods for evaluating health system performance and the effects of reform**. Geneva: World Health Organisation.

Mtei, G and Borghi, J. 2010. **SHIELD Work Package 2 Report: An assessment of health care financing progressivity in Tanzania.** Cape Town: Health Economics Unit, University of Cape Town. December.

Mtei, G. *et al.* 2007. **As Assessment of the Health Financing System in Tanzania: Report on SHIELD Work Package 1**. Cape Town: Health Economics Unit, University of Cape Town. May.

National Department of Health. 2004. **Strategic Priorities for the National Health System 2004 - 2009**. Pretoria: National Department of Health, Republic of South Africa.

National Department of Health. 2000. **The Primary Health Care Package for South Africa – a set of norms and standards**. Pretoria: National Department of Health, Republic of South Africa.

National Treasury. 2011a. **2011 Budget Speech**. Pretoria: National Treasury.

National Treasury. 2011b. **2011 Budget Review**. Pretoria: National Treasury.

National Treasury. 2011c. **2011 Explanatory memorandum to the Division of Revenue**: Annexure W1. Pretoria: National Treasury.

Organisation for Economic Co-operation and Development (OECD). 2010a. **OECD Health Data 2010**. How does South Africa compare with OECD Countries. Paris: OECD Publishing.

Organisation for Economic Co-operation and Development (OECD). 2010b. **OECD Economic Surveys: South Africa**. July. Paris: Organisation for Economic Co-operation and Development.

Physicians for a National Health Program [On line]. Available: http://www.pnhp.org/publications/proposal-of-the-physicians-working-group-for-single-payer-national-health-insurance [accessed 16 March 2011].

Preker, A. and Carrin, G. 2004. **Health financing for poor people: Resource mobilization and risk sharing.** Washington, D.C.: World Bank.

PricewaterhouseCoopers. 2008 [On line]. Available: http://www.pwc.com/vn/en/releases2008/vietnam-may-be-fastest-growing-emerging-economy.jhtml [accessed 25 June 2011].

Republic of South Africa. 2009. **Accelerated and Shared Growth Initiative for South Africa. Annual Report 2008.** Pretoria: Government Printer.

Republic of South Africa. 2004. **National Health Act (Act No. 61 of 2003)**. Pretoria: Government Printer.

Republic of South Africa. 1996. **The Constitution of the Republic of South Africa (Act No. 108 of 1996)**. Pretoria: Government Printer.

Republic of South Africa. 1962. **Income Tax Act (Act No. 58 of 1962)**. Pretoria: Government Printer.

Republic of South Africa. 1991. **Value Added Tax Act (Act No. 89 of 1991)**. Pretoria: Government Printer.

Sanders, D and Chopra, M. 2006 [On line]. Key challenges to achieving health in an inequitable society: the case of South Africa. **American Journal of Public Health**. January: 73 – 78. Available: http://ajph.aphapublications.org/cgi/reprint/96/1/73.pdf [accessed 31 March 2011].

Savedoff, W. 2004. **Tax-Based Financing for Health Systems: Options and Experiences**. Geneva: World Health Organisation.

Seekings, J. 2007. Poverty and Inequality after Apartheid. **The Centre for Social Science Research**. Working Paper No. 200. September.

South African Revenue Service. 2010a. **South African Revenue Service Annual Report 2009 – 2010**. Pretoria: South African Revenue Service.

South African Revenue Service. 2010b. **South African Revenue Service Strategic Plan 2009 – 2012**. Pretoria: South African Revenue Service.

Statistics South Africa. 2010. **Mid-year population estimates, 2010**. Pretoria: Statistics South Africa.

Statistics South Africa. 2008. **Income and Expenditure of households 2005/2006: Analysis of results**. Pretoria: Statistics South Africa.

Statistics South Africa. 2007. **Community Survey, 2007 (revised version)**. Pretoria: Statistics South Africa.

Theron, N. *et al.* **Financing and Benefit Incidence Analysis in the South African Health System: An Alternative View Finding Significant Cross Subsidisation in the Health System from Rich to Poor** [On line]. Available: http://www.econex.co.za/index.php?option=com_docman&task=cat_view&gid=42&Itemid=60&limitstart=10 [accessed 10 March 2011].

Uchimura, H. and Jutting, J. 2006. Decentralisation in Asian Health Sectors: Friend or Foe? **Organisation for Economic Co-operation and Development (OECD) Centre**. Policy Insights No. 18. May. Paris: OECD Publishing.

United Nations Development Programme (UNDP). 2010a. **South Africa Millenium Development Goals: Country Report**. New York: United National Development Programme.

United Nations Development Programme (UNDP). 2010b. **Human Development Report 2010**. 20th Anniversary Edition. The Real Wealth of Nations: Pathways to Human Development. New York: United National Development Programme.

Van Den Heever, A. 2010. A Financial Feasibility Review of NHI Proposals for South Africa. **South African Health Review 2010**. Durban: Health Systems Trust.

Wikipedia [On line]. Available: http://www.en.wikipedia.org/wiki/Health_care_system [accessed 13 March 2011a.]

Wikipedia [On line]. Available: http://www.en.wikipedia.org/wiki/Single-payer_health_care [accessed 13 March 2011b.]

Wikipedia [On line]. Available: http://www.en.wikipedia.org/wiki/Universal-health_care [accessed 13 March 2011c.]

Wikipedia [On line]. Available: http://en.wikipedia.org/wiki/Republic_of_China [accessed 9 June 2011d]

World Bank Observatory Data Base [On-line]. Available: http://data.worldbank.org/indicator [accessed 31 May 2011]

World Bank. 2008. **Good Practices in Health Financing Lessons from Reforms in Low-and Middle-Income Countries**. Washington DC: The International Bank for Reconstruction and Development / The World Bank.

World Bank. 2006. **World Development Report 2006: Equity and Development.** Washington: The World Bank.

World Health Organization Global Health Observatory Data Repository [On-line]. Available: http://apps.who.int/ghodata/# [accessed 31 May 2011]

World Health Organization. 2010. **The World Health Report - Health systems financing: the path to universal coverage**. Geneva: World Health Organisation.

World Health Organization. 2009. **Country Cooperation Strategy at a Glance**. Geneva: World Health Organisation.

World Health Organization. 2008a. Designing health financing policy towards universal coverage. **Bulletin of the World Health Organization.** Geneva: World Health Organisation.

World Health Organization. 2008b. **2008 – 2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases.** Geneva: World Health Organisation.

World Health Organization. 2005a. **Designing health financing systems to reduce catastrophic health expenditure**: Technical Briefs for Policy-Makers, Number 2. Geneva: World Health Organisation.

World Health Organization. 2005b. **Sustainable health financing, universal coverage and social health insurance**: World Health Assembly resolution WHA58.33. Geneva: World Health Organisation.

World Health Organization. 2001. Macroeconomics and Health: Investing in health for economic development. **Report of the Commission on Macroeconomics and Health.** Geneva: World Health Organization.

World Health Organization. 2000. **The World Health Report 2000 - Health systems: Improving performance**. Geneva: World Health Organisation.