

REPORT ON

**FINANCING A NATIONAL HEALTH INSURANCE
FOR SOUTH AFRICA**

FOR THE MINISTER OF FINANCE

Intended use of this document:

The Davis Tax Committee is advisory in nature and makes recommendations to the Minister of Finance. The Minister will take into account the report and recommendations and will make any appropriate announcements as part of the normal budget and legislative processes.

As with all tax policy proposals, these proposals will be subject to the normal consultative processes and Parliamentary oversight once announced by the Minister.



THE DAVIS TAX COMMITTEE

March 2017

Dear Minister

We, as the Members of the Davis Tax Committee, have the honour and privilege to provide you with this report which has been:

Prepared by:

Dr Tania Ajam

Tania 17/2/2017
Oocolad 17/2/2017

Professor Ingrid Woolard

Reviewed and supported by:

Judge Dennis Davis (Chairperson)

[Signature] 17/2/2017

Professor Annet Oguttu

[Signature] 17/2/2017

Professor Deborah Tickle

[Signature] 17/2/2017

Professor Matthew Lester

[Signature] 17/2/2017

Dr Nara Monkam

[Signature] 17/02/2017

Professor Nirupa Padia

[Signature] 17/02/2017

Professor Thabo Legwaila

[Signature] 9/03/2017

We were ably assisted by the following ex-officio Members:

Cecil Morden (National Treasury)

Kosie Louw (SARS)

And the Secretariat for the Davis Tax Committee

FINANCING A NATIONAL HEALTH INSURANCE (NHI) FOR SOUTH AFRICA

GLOSSARY

ACA	(USA) Affordable Care Act
AUGE	(Chile) Universal Access and Explicit Guarantees
BBP	Basic Benefits Package
BRIICS	Brazil, Russia, India, Indonesia, China and South Africa
CPMF	(Brazil) Contribuição Provisória Sobre Movimentação Financeira
DTC	Davis Tax Committee
FTE	Full time equivalent
GNI	Gross National Income
GP	General Practitioner
GST	(Australia) Goods and Services Tax
HPI	Health Provider Index
HPRS	Health Patient Registration System
HTA	Health Technology Assessment
IMSS	Mexican Social Security Institute
ISSTE	(Mexico) Institute for Social Security and Services
NHC	National Health Commission
NHI	National Health Insurance
NHIS	(Ghana) National Health Insurance Scheme
NHS	(UK) National Health Service
NRCMS	(China) New Rural Cooperative Medical Scheme
OECD	Organisation for Economic Co-operation and Development
OHSC	Office of Health Standards Compliance
OOP(E)	Out Of Pocket (Expenditure)
PHC	Primary Health Care
PIT	Personal Income Tax
PMB	Prescribed Minimum Benefits
PPACA	(USA) Patient Protection and Affordable Care Act
SAPPF	South African Private Practitioners' Forum
SHI	Social Health Insurance
SIS	(Peru) Seguro Integral de Salud
SUS	(Brazil) Sistema Unica de Saude
UCS	(Thailand) Universal Coverage Scheme
UEBMI	(China) Urban Employee Basic Medical Insurance
UHC	Universal Health Coverage
UK	United Kingdom
URBMI	(China) Urban Resident Basic Medical Insurance
USA	United States of America
VAT	Value Added Tax
WHO	World Health Organisation

TABLE OF CONTENTS

1	THE DAVIS TAX COMMITTEE AND ITS MANDATE.....	1
2	DEFINITION OF THE NHI	2
3	RATIONALE FOR THE NHI.....	2
4	PRINCIPLES AND FEATURES OF THE NHI	4
5	NHI INSTITUTIONAL DESIGN AND IMPLEMENTATION.....	6
6	INTERNATIONAL TRENDS IN UHC FINANCING	11
6.1	Selected countries' experience	17
6.2	Cost pressures: international experience	20
6.3	Fiscal sustainability of benefit packages	21
6.4	Earmarking of revenues.....	23
7	EXISTING FINANCING SOURCES OF HEALTH CARE IN SOUTH AFRICA.....	25
8	NHI EXPENDITURE PROJECTIONS AND COST ESTIMATES	26
9	MACROECONOMIC IMPACTS OF NHI	30
10	PRINCIPLES OF GOOD TAX DESIGN.....	32
11	SUMMARY OF NHI FINANCING OPTIONS PROPOSED BY THE WHITE PAPER ON NHI	33
11.1	Potential sources of revenue identified by the White Paper.....	33
11.2	Tax rate scenarios	35
12	DISCUSSION OF FINANCING OPTIONS.....	38
13	TAX CREDITS.....	41
14	CONCLUDING REMARKS.....	42
	Bibliography	45

1 THE DAVIS TAX COMMITTEE AND ITS MANDATE

The Davis Tax Committee (DTC) was established in 2013 by the Minister of Finance to inquire into the role of the tax system in promoting inclusive economic growth, employment creation, development and fiscal sustainability. In so doing, the DTC has had to take recent domestic and international developments into account and, particularly, the long term objectives of the National Development Plan.

As part of its mandate outlined by the Minister, the DTC is required to evaluate proposals to fund, for example, the proposed National Health Insurance (NHI) and long term infrastructure projects to boost the growth potential of [the] economy.

The DTC is advisory in nature, and makes recommendations to the Minister of Finance. The Minister, taking into account the DTC's reports and recommendations, will make any appropriate announcements as part of the normal budget and legislative processes. As with all tax policy proposals, these will be subject to the normal consultative processes and Parliamentary oversight once announced by the Minister.

On 15 December 2015, the Department of Health released a White Paper: Health Insurance for South Africa: Towards Universal Coverage (henceforth "the NHI White Paper"). Chapter 7 of the White Paper discusses various financing proposals for the proposed NHI. The DTC takes these policy objectives, proposed institutional arrangements and cost projections as its point of departure. The NHI implementation is likely to be a long term enterprise, spanning at least 14 years, during which many of the implementation and costing details will be refined.

The financing reforms proposed in the White Paper would be supported by a complete overhaul of health care management, including measures to improve the quality of public health care, revitalisation of health facilities and infrastructure, increased investment in the education and training of health professionals, a review of the medical drugs policy, strengthening research and development and re-engineering PHC, hospital and specialised services. These health policy issues are critical to successful implementation of the NHI but fall outside of the purview of the DTC.

Accordingly, this DTC report concentrates on identifying long term financing principles – the specific operationalisation which will be informed by more detailed implementation and costing plans in order to manage the transition from the status quo to the financing regime envisaged in the NHI.

In October 2015, the DTC called for public submissions on Chapter 7 of the White Paper, which deals with financing and revenue raising issues and received written and oral submissions from a wide range of stakeholders. The DTC process is independent of parallel consultation processes of the Department of Health, the National Treasury and the Financial and Fiscal Commission, which have a much broader remit. It is the hope of the DTC that its independent assessment will enrich the evolving dialogue around the progressive realisation of the right to health care in South Africa.

The next four sections of this report examine the definition, rationale and design of the proposed NHI. Section 6 explores international experience in financing universal health coverage, with a focus on middle income developing countries. Existing sources of health financing in South Africa are analysed in Section 7. Cost estimates and potential macroeconomic impacts are discussed in Sections 8 and 9. The report concludes with an evaluation of options for NHI financing.

2 DEFINITION OF THE NHI

The White Paper defined the NHI as “a health financing system that is designed to pool funds to provide universal access to quality, affordable personal health services for all South Africans based on their health needs, irrespective of their socio-economic status” (p1). The Department of Health envisages that the NHI would be implemented through the creation of a single fund that is publicly financed and publicly administered to provide a uniform package of personal health services. The term “personal health services” refers to individual health care services such as preventive, promotive, curative and rehabilitative services. By contrast, non-personal PHC services include environmental health services (e.g., water and air pollution).

The NHI Fund will not directly manage hospitals, clinics or the practices of general practitioners (GPs), dentists, specialists and other health professionals. Instead, it is anticipated that this Fund would enter into contracts with both public and private hospitals, specialists, public clinics and private GP practices to deliver health services free of charge to every South African citizen and legal resident (i.e., universal free access). Because the intention is that access to health care would be available for free at the point of service, the objective of the NHI in the long term is to ensure that access to health care is determined by an individual’s need, not their financial status and to ensure that everyone has some measure of financial risk protection against catastrophic health events.

In terms of the envisaged national legislation, it would be compulsory for all South Africans to belong to the NHI and make mandatory (compulsory) prepayment to the NHI Fund based on their ability-to-pay (i.e., payments before the health service is actually utilised). This would be different from pre-payments to medical aid schemes which are voluntary (it is possible to opt out of joining a medical aid scheme and hence avoid making the prepayment), and user charges (i.e., out of pocket (OOP) payments made by patients to health care providers at the point of service).

The proposed single NHI Fund would aim to reduce fragmentation in funding pools and promote greater cross-subsidisation in the overall health system, among the young and old, the healthy and the sick, as well as the rich and the poor.

3 RATIONALE FOR THE NHI

The two primary rationales offered by the White Paper for the establishment of an NHI lie, firstly, in the heavy burden of disease which South Africa faces and, secondly, in the structural problems in the health sector.

The White Paper characterises the burden of disease as “quadruple”, in the form of: (1) communicable diseases, notably HIV/AIDS and tuberculosis; (2) non-communicable diseases, such as hypertension and cardiovascular diseases, diabetes, cancer, mental illnesses, chronic respiratory diseases; (3) maternal and child mortality and (4) violence and trauma-related disorders. The cumulative impact of these diseases resulted in the doubling of the death rate in South Africa between 1997 and 2006. While life expectancy has recently increased and mortality rates have declined, the White Paper contends that these gains cannot be sustained in the present health system which is “mainly curative, fragmented and unaffordable”.

The South African health care system has been described as “two tiered”. There is an extensive network of public primary health care (PHC clinics), community health centres and district hospitals as well as secondary, tertiary, central (academic) and specialised hospitals. These public health

facilities serve the vast majority of the South African population and are funded by general tax revenues. Because the income tax system is generally progressive, the public health system is redistributive. Most primary services are free and hospital fees are low or waived for low-income patients.

There is, however, substantial variation in the quality of public health services (in respect of staff attitudes, waiting times, cleanliness, drug stock outs, infection control and safety and security of staff and patients) and improving the quality of public health care remains a formidable challenge. The public health care sector also faces acute shortages of specialist and managerial skills. The White Paper observes that the focus of public health has been placed on curative rather than preventative interventions and on hospitals rather than PHC facilities. Instead of the entry level for accessing health services being at the PHC level, it often occurs at the secondary, tertiary and specialist services levels. Entry at an inappropriate level of care has significantly contributed to the high costs of public health care and the inefficiency of the health system.

The private health care sector consists of several corporate hospital groups, networks of pharmacies, roughly 15 000 independent general practitioners and specialists and other professional service providers. Due to the high costs of private health care, it is affordable mainly to those who are members of medical aid schemes. These members pay membership tariffs as voluntary pre-payment for particular benefit plans. Benefit plans may vary markedly in respect of the comprehensiveness of the package, and the amount of coverage (e.g., the level of co-payment required) to cater for the different incomes and needs of members). Where a service is not included in the benefit plan, the medical aid does not cover the full cost of the service, or scheme benefits have run out, medical aid members may still have to pay additional out-of-pocket (OOP) costs.

Medical schemes are subject to various regulatory requirements of the Medical Schemes Act of 1998, such as prescribed minimum benefits (PMB) and a prohibition on risk-based tariffs. PMBs refer to a set of defined medical benefits that all medical schemes are mandated to cover to ensure that all their members have access to certain minimum health services, irrespective of the particular benefit plan to which they belong. Medical schemes pool the risk of their members, cross-subsidising among the healthy and the sick and among the young and the old, within that particular scheme. There were 85 medical schemes in 2015, fragmented along occupational lines and the ability of members to afford the benefit plans. Accordingly, the White Paper concludes that cross-subsidisation within the private medical schemes environment is limited.

The White Paper attributes escalation in private health care costs (and hence increases in member tariffs) to: (a) a fee-for-service model, especially in relation to PMBs; (b) imbalances in tariff negotiations between health care purchasers and providers; and (c) small and fragmented risk pools in each medical scheme. Under a fee-for-service payment regime there are separate payments to a health care provider for each medical service rendered to a patient. Medical schemes reimburse for all services, regardless of their impact on patient health. This may create an incentive for a health service provider to deliver medically unnecessary services which may inflate costs. (This supplier-induced demand under conditions of information asymmetry between the health service provider and the patient is a form of “moral hazard”¹). According to the White

¹ “Moral hazard” problems arise when two parties to a transaction have different information (i.e. information asymmetry). The more informed party to a contract (the agent) has an incentive to act in ways which undermine the interest of the less informed party (the principal), who cannot effectively monitor or assess the impact of her actions. A professor with tenure (the agent), for instance, has no incentive to remain a diligent

Paper, in addition to the fee for service payment regime, increased levels of hospitalisation associated with treatment and management of PMB conditions have also placed upward pressure on private health care costs.

But the main reason for the NHI put forward by the White Paper lies in the need to eliminate the huge disparities between access to health care services in the public and private sectors. The White Paper points out that South Africa spent 8.5% of GDP on health in 2014/15. Roughly half this amount financed public health service provision, which serves about 80% of the population. The other half financed private health care provision, accessed by only about 20% of the population. As a result, the White Paper argues that the distribution of health care benefits is not aligned with the need for health services: “The benefit incidence of health care in South Africa is very ‘pro-rich’ with the richest 20% of the population receiving 36% of total benefits (despite having a ‘health need share’ of less than 10%) while the poorest 20% receive only 12.5% of the benefits (despite having a ‘health need share’ of more than 25%).” (p. 17).

The Department of Health’s estimation of public and private catchment populations and the distribution of the health care workforce between the two sectors has, however, been contested. Van der Heever (2011) pointed out that the OOP fees paid by public sector patients to access private hospital care (about 1% of GDP) overstate private medical scheme expenditure². Econex estimated that in 2010 61.9% of all GPs in South Africa work in the public sector, serving 2861 people per GP (in comparison with 2723 people per GP in the private sector). Econex also concludes, however, that more specialists (56.2%) work in the private sector, serving 1767 people per specialist (in comparison to 9581 people per specialist in the public sector) (Econex, 2010a). For the same year, Van den Heever (2011) estimated that 61.3% of all GPs work in the public sector, covering 3301 people per GP (compared to 1561 per GP in the private sector) and 56.7% of all specialists work in the private sector, covering 1921 people per specialist (in comparison with 8559 people per public specialist in the public sector).

These somewhat varying estimates of the distribution of specialist health skills in the public and private sectors, and the lack of consensus on among experts on such elementary statistics, are extremely disturbing, since the availability of human resources and their development is crucial to effective implementation planning for the phased introduction of the NHI. However, the White Paper is a strategic document and the more detailed implementation plans which are forthcoming will probably be based on more detailed information.

4 PRINCIPLES AND FEATURES OF THE NHI

The principles underpinning the NHI place emphasis on equitable access to health care as a socio-economic right, which needs to be underpinned by social solidarity (in support of risk pooling and cross-subsidisation of the poor by the rich, the old by the young and so forth). Health care is regarded as a public good and a social investment, different from other tradable commodities. The NHI principles also highlight the need for the provision of health services to be affordable, efficient and effective as well as providing appropriate levels of care to meet local needs.

teacher since she gets her salary irrespective of whether students (the principals) learn or not, and they are not in a position to be able to judge the quality of tuition accurately. Similar medical professionals (the more informed agent) may prescribe unnecessary medical interventions for patients (the less informed principal) under conditions of information asymmetry.

² Bearing in mind that means testing in the public hospitals results in an individual earning above R72 000 per annum or households above R100 000 per annum being liable for full public hospital costs.

Cross-subsidisation amongst the young and the old and among sick and the healthy, is typically able to take place within medical schemes risk pools. Redistribution from rich to poor, however, requires a fiscal mechanism. The NHI will endeavour to integrate the redistributive elements that underpin the public health provision with the risk pooling elements that underlie private sector financing arrangements, in order to achieve universal health cover. The NHI aims to improve health coverage by extending access to people who do not have access to health care (population coverage), by expanding the range of services which they can access, including pharmaceutical, laboratory and radiology services (service coverage) and by reducing the financial burden from cost-sharing or user fees borne directly by health care users (financial coverage).

The seven features of the NHI delineated in the White Paper (pp. 9-10) are listed verbatim below:

- I. **Universal access:** All South Africans will have access to needed promotive, preventive, curative, rehabilitative and palliative health services that are of sufficient quality and are affordable without exposing them to financial hardships. The right to access quality health services will be on the basis of need and not socioeconomic status.
- II. **Mandatory prepayment of health care:** NHI will be financed through mandatory prepayment which is distinct from other modes of payment such as voluntary prepayment and OOP payments.
- III. **Comprehensive services:** NHI will cover a comprehensive set of health services that will provide a continuum of care from community outreach, health promotion and prevention to other levels of care.
- IV. **Financial risk protection:** NHI will ensure that individuals and households do not suffer financial hardship and/or are not deterred from accessing and utilising needed health services. It involves eliminating various forms of direct payments such as user charges, co-payments and direct OOP payments to accredited health service providers.
- V. **Single fund:** This refers to integrating all sources of funding into a unified health financing pool that caters for the needs of the population.
- VI. **Strategic purchaser:** In order to purchase services for all, there should be an entity that actively utilises its power as a single purchaser to proactively identify population health needs and determine the most appropriate, efficient and effective mechanisms for drawing on existing health service providers.
- VII. **Single-payer:** This refers to an entity that pays for all health care costs on behalf of the population. A single-payer contracts for health care services from providers. The term "single-payer" describes the funding mechanism and not the type of provider.

The argument for a single payer is that it would permit the NHI to harness its “monopsony³ power to strategically purchase services” in ways that would “yield the efficiency benefits of economies of scale and ensure that incentive structures for health care providers are integrated and coherent” (p. 60), thereby reducing the costs and increasing the scope for personal health care services available.

There appears to be some disagreement about the definition of universal coverage among stakeholders. Some stakeholders (such as Van der Heever, 2011) contend that South Africa has already achieved universal coverage, since the entire population is already covered by pre-paid health care – either through the tax-funded public health system or through subsidised private medical scheme contributions, but that access is compromised by the poor quality of public

³ A monopsony is a market structure in which only one buyer interacts with many would-be sellers of a particular product, and therefore can exercise considerable market power.

hospital services. Patient fees and cost-sharing have largely been abolished in the South African public health system except for the top 10% of income earners who are covered by a private medical scheme. This argument focuses mainly on the population coverage dimensions of universal coverage, but from a service coverage perspective, coverage shortfalls still exist.

The White Paper does not conclusively define the comprehensive benefit package that will be offered, but the following components have been suggested: (1) preventive, community outreach and promotion services; (2) reproductive health services; (3) maternal health services; (4) paediatric and child health services; (5) HIV, AIDS and tuberculosis services; (6) health counselling and testing services; (7) chronic disease management services; (8) optometry services; (9) speech and hearing services; (10) mental health services including substance abuse; (11) oral health services; (12) emergency medical services; (13) prescription medicines; (14) rehabilitation care; (15) palliative services; (16) diagnostic radiology and pathology services. The White Paper envisages the establishment of a Benefits Advisory Committee which will formulate the “service entitlements” for primary, secondary, tertiary and quaternary levels of care, supported by detailed treatment guidelines, an Essential Medicines List as well as an essential devices and diagnostics list, based on the best available evidence and assessments of cost-effectiveness. These “service entitlements” will reflect the types of services to be provided by the different kinds of accredited providers contracted to the NHI. Without clear parameters and detail on the scope of the benefit package, it is difficult to derive accurate cost projections, as discussed further in Section 8 on page 26.

Hospital health services will be accessed solely through referral from PHC level providers to these higher levels of care. Just those health facilities that meet nationally approved standards will be certified by the Office of Health Standards Compliance (OHSC) established in 2013, and will therefore be eligible for accreditation and contracting by the NHI Fund.

5 NHI INSTITUTIONAL DESIGN AND IMPLEMENTATION

The White Paper envisages a three phased transition over a 14 year period, with an initial pilot phase at PHC level, then extending to higher levels of care which will be “supported by a detailed risk management plan and a monitoring and evaluation plan that will allow close monitoring of progress”. These risk management and monitoring and evaluation plans have not yet been released into the public domain at the time of writing this report, but the sequencing of key implementation activities is reflected in Table 1, below. The initial timeframes may have been overly optimistic, since many of the activities in Phase 1 have not yet been concluded.

The interventions which are being implemented in the pilot districts include: strengthening the service delivery platforms at primary care level (including Municipal Ward-based PHC Outreach Teams), the integrated school health programme, district clinical specialist teams, contracting with private providers, strengthening management and governance at facility and district level and improving management of central hospitals as well as improving the infrastructure of health facilities. The White Paper concedes, nevertheless, that not all pilots have been able to meet core quality standards: “The health facilities in the pilot districts have had variable results with regard to meeting the core quality standards, mostly with poor scores for PHC facilities and slightly better scores for hospitals being recorded” (p. 41). The Office of Health Standards Compliance inspection reports have been used to inform quality improvement interventions, such as Operation Phakisa’s Ideal Clinic Realisation project.

The White Paper envisages that the legislative framework for the NHI Fund and associated public entity would be put in place during Phase 1, through the promulgation of an NHI Act and amendments to other relevant legislation, such as the National Health Act and municipal legislation. An NHI Commission comprising experts in relevant fields such as health financing and economics, public health, health policy, will exercise oversight of the NHI Fund.

Table 1: Summary of NHI phases and implementation milestones

PHASE I: 2012/2013 TO 2016/2017	
	Health system strengthening initiatives
	<i>Implementation of the four streams of PHC Re-engineering including contracting of general practitioners and other private PHC health professionals into public health facilities</i>
	<i>Quality improvement in clinics through the Ideal Clinic Model, public hospitals</i>
	<i>Implementation of the Centralised Chronic Medication Dispensing and Distribution Programme</i>
	<i>Amendments to the National Health Laboratory Act and National Public Health Institute of South Africa Bill</i>
	<i>Implementation of Emergency Medical Services Regulations</i>
	<i>Establishment of hospital and clinic governance Structures</i>
	<i>Implementation of the eHealth Strategy</i>
	<i>Strengthening management and leadership for the overall health system.</i>
	Moving central hospitals to the national sphere
	<i>Amendments to the National Health Act making central hospitals a national competence and regulations for the governance and management of these central hospitals as semi-autonomous institutions will be promulgated. (The South African constitution regards Health as a shared function across national and provincial spheres of government, where health policy is set at national level and implementation – including managing all hospitals – is currently done by the provincial Health Departments as a provincial competence).</i>
	<i>A Transitional Fund will be established for the funding of the functioning of these hospitals.</i>
	Establishment of the NHI Fund
	<i>Work Stream 1: Prepare for establishing the NHI Fund including reviewing other relevant pieces of legislation as well as inter-governmental functions and fiscal framework that will be impacted by the implementation of NHI</i>
	<i>Work Stream 2: Clarification of the NHI benefits and services including the PHC 'Lab'52</i>
	<i>Work Stream 3: Preparation for the purchaser-provider split</i>
	<i>Work Stream 4: Review of medical schemes to define their future role</i>
	<i>Work Stream 5: Completion of NHI Policy paper and NHI Bill</i>
	Establishment of institutions
	<i>The Office of Health Standards Compliance</i>
	<i>District Health Management Offices (DHMO);</i>
	<i>National Health Commission.</i>
PHASE 2: 2017/2018 TO 2019/2021	
	Purchasing of services to be funded by NHI through a Transitional Fund
	Mobilisation of additional resources through alignment of the funds directed at medical benefits for Compensation Funds and state subsidies to medical schemes on behalf of employees
	Establishment of a fully functional NHI Fund
	Establishment of NHI Fund Management and Governance Structures
	Population registration process
	Amendments to the Medical Schemes Act of 1998
PHASE III: 2021/2022 to 2024/2025	
	Introduction of mandatory prepayment for the NHI
	Contracting for accredited private hospital and specialist services
	Finalisation and implementation of the Medical Schemes Amendment Act

Source: Summarised from the NHI White Paper, 2015: pp. 83-86

The proposed functions of the NHI Fund are listed by the White Paper (p. 61) as follows:

1. Pooling of all the financial resources allocated for purchasing personal health services for the entire population;
2. Strategic purchasing of personal health services on behalf of the entire population;
3. Contracting with all accredited NHI public providers and identified accredited private service providers (based on need);
4. Facilitating the procurement of goods and services for all NHI accredited and contracted facilities, whether in the public or private sector, in order to increase the buying power of the Fund at an affordable cost;
5. Administering the funding and purchasing of all personal health services that are provided through accredited and contracted providers;
6. Developing and implementing strategic mechanisms for procuring of goods, including drugs, medical equipment and technology, on behalf of providers that will be contracted.
7. Developing contracting and reimbursement strategies for contracted providers at various levels of care;
8. Undertaking audit and risk management to mitigate moral hazard, collate utilisation data and implement information management systems;
9. Maintaining the national database on the demographic and epidemiological profile of the population;
10. Undertaking health economic analysis, pharmaco-economic analysis, cost-benefit analysis and actuarial research and analysis to ensure the sustainability of the NHI Fund; and
11. Undertaking ongoing research, monitoring and evaluation of the impact of NHI on health outcomes.

The functions related to strategic purchasing are elaborated on in greater detail in Table 2, below.

Table 2: Proposed purchasing functions of the NHI

Key strategic purchasing actions in relation to providers <ul style="list-style-type: none"> • Select (accredit) providers – range and quality of services, location • Establish service agreements/contracts • Develop formulary (of generic drugs, surgical supplies, prostheses etc.) and standard treatment guidelines • Design, implement and modify provider payment methods to encourage efficiency and service quality • Establish provider payment rates • Secure information on services provided • Monitor provider performance and act on poor performance • Audit provider claims • Protect against fraud and corruption • Pay providers regularly and timeously • Allocate resources equitably across areas • Implement other strategies to promote equitable access to services • Establish and monitor user payment policies • Develop, manage and use information systems
Key strategic purchasing actions in relation to citizens / population served <ol style="list-style-type: none"> 1. Assess the service needs, preferences and values of the population, and use the results to specify service entitlements/benefits <ul style="list-style-type: none"> • Inform the population of their entitlements and obligations • Ensure population can access their entitlements 2. Establish effective mechanisms for complaints and other feedback from the population and respond <ul style="list-style-type: none"> • Publicly report on use of resources and other measures of performance
Key actions by government to promote strategic purchasing <ul style="list-style-type: none"> • Establish clear frameworks for purchaser and providers • Fill service delivery infrastructure gaps • Ensure adequate resources mobilised to meet service entitlements • Ensure accountability of purchaser

Source: *White Paper, 2015: p. 65*

During Phase I, the establishment of the NHI Fund entity would entail developing the requisite administrative systems and processes, such as a provider payment system (Diagnostic Related Group system), health patient registration system, health provider registration system and fraud and risk mitigation system. Providers and patients will be registered. It is anticipated that providers will make use of a web based Health Provider Registration System while patients will be registered at designated public facilities using the health patient registration system and be issued an NHI Card using a unique identifier linked to the Department of Home Affairs. The NHI Fund will also begin to accredit providers (ideal clinics, GPs, public hospitals and the like) once they have been certified by the Office of Health Standards Compliance (OHSC) and the relevant health professions' statutory bodies. During Phase I, central hospitals, which are currently provincial competences, will become national competences and gain semi-autonomy. The White Paper proposes that a Transitional Fund be established to finance their operation (p. 84).

At the beginning of Phase II, the Transitional Fund will purchase PHC services from certified and accredited public and private providers at non-specialist level. All Ideal Clinics will be accredited for contracting with the this Fund. Later in this phase, public hospitals certified by the OHSC (including district, regional, tertiary, central and specialised), Emergency Medical Services and National

Laboratory Health Services will be contracted for personal health services by the NHI Fund. The White Paper envisages that the Uniform Patient Fee Schedule would be abolished. Consequently, no fees would be levied at public sector hospitals, except for non-citizens, third-party payers, such as medical schemes, the Road Accident Fund and Compensation for Occupational Injuries and Diseases (p. 29).

Towards the end of Phase II, the White Paper anticipates the amendment of the Medical Schemes Act so that medical schemes provide complementary cover.

The activities to be undertaken in this phase will involve consideration for the creation of an interim single “virtual” pooling arrangement for schemes not funded through the State. Private providers will be required to comply with a uniform information system for registration and reimbursement that complies with the stipulated requirements of the NHI Fund.

In the third, and final stage, the final arrangements for a fully functional NHI would be made and private sector providers at higher levels of care such as private hospitals and specialists would be contracted.

In Phase III, mandatory prepayment from those who are eligible would also be introduced with the intention of mobilising additional revenue for the NHI (p 86). The White Paper indicated that “individuals will not be allowed to opt out of making the mandatory prepayment towards NHI, though they may choose not to utilise the benefits covered by the NHI Fund.” (p.80). Minimal detail is, however, provided as to the nature and level of those mandatory taxes.

Medical benefits from Compensation funds and state subsidies to medical schemes (such as GEMS, Polmed (the police medical scheme), Parmed (the parliament medical scheme) and other private medical schemes to which the state makes contributions as an employer, including state-owned entities) would also be “reallocated to the NHI Fund” (p. 85).

The future role of medical schemes in general is a major area of uncertainty: whether they will be permitted to offer just complementary (‘top-up’) cover for services not covered by the NHI benefit package, or whether they will be allowed to offer comprehensive cover for those who choose such cover in addition to making their mandatory payments to the NHI Fund.

The Competition Commission’s market inquiry into the private health care sector, which was still ongoing as at March 2017, would also be an important factor influencing the proposed NHI dispensation. The uncertainty concerning the changing roles of private medical aids, the extent and timing as to when health services currently reimbursed through private insurance become financed through the NHI and how this impacts on the health system during the transition (e.g., in terms of utilisation and cost) makes forecasting of NHI costs and revenue needs very difficult. The extent to which health care users reduce voluntary health cover and rely on the health services funded by the NHI, is likely to significantly influence the growth in total health expenditure.

The pace and sequencing of implementation of the NHI is likely to be a key variable affecting its costs. By May 2014, while there had been some progress, NHI implementation in the 11 pilot districts appeared to be proceeding at a much slower pace than anticipated. Quality improvement scores allocated by the OHSC remained poor for PHC facilities and only slightly better for hospitals. In addition, GP contracting was also much slower than anticipated. 156 full time equivalent (FTE) doctors were appointed relative to the targeted 450 FTE doctors for 9 NHI districts (Department of Health 2015). A recent study of GPs contracted by the Tshwane District in Gauteng Province highlighted the frustrations GPs encountered with the “lack of appropriate infrastructure and equipment in NHI facilities, difficulties integrating into the facilities and lack of

professional autonomy, as well as unhappiness with contracting arrangements. Despite strong support for the idea of NHI, there was general scepticism that private doctors would embrace the scheme on the scale required” (Surender, Van Niekerk, & Alfes, 2016: 1092). Because of the pervasive infrastructure and medication shortages, GPs were constrained to providing basic nursing services rather than physician care (Surender, Van Niekerk, & Alfes, 2016).

Of the 1427 PHC facilities inspected by the OHSC between March 2012 and March 2016, only 89 had achieved scores of greater than 70%. Of the 110 PHC facilities inspected in the NHI pilot sites, only 25 (22.7%) had increased their scores by 20% or more, the remainder showing little or no improvement (*Business Day*, 24/11/2016).

6 INTERNATIONAL TRENDS IN UHC FINANCING

The World Health Organisation (WHO) has motivated for a global move towards Universal Health Coverage (UHC) (58th World Health Assembly 2005). Diverse approaches have been taken by different countries, some of which have been more successful than others.

It is widely accepted that, for health care reform to take place, reforms to the financing of the system are required. Where financing reform has not accompanied health care reform, these reforms often not been successful, but where finance reform has occurred, results have been more positive, as evidenced in Mexico and Thailand (Department of Health 2015).

Countries that have made significant progress towards or have achieved full UHC, include Brazil, Canada, Costa Rica, Finland, Norway, South Korea, Sweden, Thailand, Turkey and the United Kingdom (Department of Health 2015). Other countries have instituted initiatives to move towards UHC. These include the Patient Protection and Affordable Care Act (PPACA) in the USA, commonly called the Affordable Care Act (ACA) or “Obamacare” and “Seguro-Popular” in Mexico (Department of Health 2015). The former is currently under threat (Sanger-Katz 2017).

Many of these countries have seen a shift from separate private and public funding pools to either a single funding pool for health care or multiple pools which are subject to standard benefit (PMBs) and tariff regulations.

A number of different approaches have been used to finance UHC. These include:

- financing from general revenue (primarily direct and indirect taxes)
- payroll taxes/social security collections
- membership contributions or
- a combination of the above.

Furthermore, the level of earmarking funds from specific taxes, such as levies on foreign exchange transactions, taxes on airplane tickets, solidarity charges on mobile phone calls, petroleum taxes as well as alcohol and tobacco taxes varies from country to country (Giedion, Alfonso and Diaz 2013).

Not only is there international variation as to how health care is financed but also as to the manner in which providers are paid. In some countries a single statutory fund pays providers, while in other countries non-profit or private funds and administrators are allowed to operate separate funding pools, provided that a set of PMBs are covered. In both single-payer and multi-payer systems, UHC relies on a redistributive tax base and pre-funding arrangements that make it possible for a broad range of services to be free at the point of delivery. In some single-payer countries (notably Spain, Sweden and the UK) the bulk of health service delivery is via public sector entities, although

private providers are still part of the system; e.g., in the UK the bulk of PHC is provided by independent general practitioners.

Table 3 records South Africa's health care expenditure as compared to a range of middle income countries, using World Health Organisation data. South Africa spends a far higher percentage of GDP on health care than many of these countries (8.8% of GDP in 2012). This proportion is larger than other BRIICS countries (Brazil, Russia, India, Indonesia, China and South Africa) with just Brazil approaching that of South Africa's spend. So too is South Africa's government health expenditure greater, as a percentage of GDP. The absolute per capita total (and government) health expenditure in South Africa, however, is lower than that of both Brazil and Russia, although higher than China. This is due to differences in per capita Gross National Income (GNI) between these countries. While that of China in 2013 was similar to that of South Africa, that of Brazil was approximately double and that of Russia almost four times higher.

Government's share of the total health care expenditure, although significantly high as a percentage of GDP, comprises less than 50% of total health spending, in contrast to that of Argentina, Costa Rica, Thailand, Turkey and Uruguay – countries which have made significant progress towards UHC. In South Africa, a significant proportion of health care funding is privately funded. Health is accorded significant budget priority in South Africa with 14.2% of general government expenditure devoted to health in 2013, a greater proportion than in Argentina and Thailand, but less than in Costa Rica, Turkey and Uruguay.

South Africa's total health spending per capita was \$601 per annum in 2012, which was greater than that of Thailand, Malaysia and Turkey, but less than that of Argentina, Costa Rica, Mexico and Uruguay. The average per capita government health spend in South Africa was \$288 in 2013.

Despite comparing favourably with other middle income countries, South Africa's life expectancy is much lower. While Argentina, Costa Rica, Thailand, Turkey and Uruguay all had life expectancies of at least 75 years in 2013, South Africa's average life expectancy was only 60 years.

Table 3: Government health expenditure in selected middle income countries

COUNTRY	Gross National Income per capita 2013 (current US\$)	Life expectancy 2013	Total health expenditure (THE) as % GDP 2012	Govt health expenditure as % GDP 2012	Govt health expenditure as % THE 2013	Per capita THE (US\$) 2012	Per capita Govt exp (US\$) 2012	Health as a % of General Govt expenditure
Argentina	14 668	76	5.0	2.7	54.8%	731	401	7.7%
Australia	66 837	83	9.4	6.3	67.0%	6 258	4 194	17.3%
Botswana	6 793	64	5.8	3.5	60.1%	397	238	10.4%
Brazil	11 711	75	8.5	3.8	45.1%	993	448	7.1%
Canada	52 689	82	10.7	7.6	71.0%	5 619	3 992	18.6%
Chile	15 828	80	7.5	3.6	48.2%	1 192	575	15.3%
China	6 966	75	5.4	3.0	55.8%	375	209	10.3%
Colombia	8 028	78	6.8	5.2	76.3%	549	419	18.1%
Costa Rica	10 462	79	9.5	6.9	73.0%	990	723	24.1%
Ghana	1 827	63	4.6	3.2	70.1%	85	59	10.6%
India	1 513	66	4.5	1.3	28.4%	69	19	4.7%
Malaysia	10 628	74	4.0	2.2	54.8%	427	234	5.9%

COUNTRY	Gross National Income per capita 2013 (current US\$)	Life expectancy 2013	Total health expenditure (THE) as % GDP 2012	Govt health expenditure as % GDP 2012	Govt health expenditure as % THE 2013	Per capita THE (US\$) 2012	Per capita Govt exp (US\$) 2012	Health as a % of General Govt expenditure
Mexico	10 703	75	6.3	3.3	51.7%	674	349	11.6%
Morocco	3 104	71	5.9	2.0	33.0%	184	61	5.8%
Namibia	5 511	68	8.5	5.0	59.0%	470	277	13.9%
Nigeria	2 980	55	3.7	0.9	23.8%	110	26	6.5%
Peru	6 623	76	5.2	3.0	58.2%	346	202	14.4%
South Korea	14 438	82	7.2	3.9	54.3%	1 870	1 016	12.3%
Russia	25 985	69	7.1	3.7	52.3%	1 024	535	9.8%
South Africa	6 853	60	8.8	4.2	47.9%	601	288	14.2%
Thailand	5 741	75	5.4	4.2	78.5%	588	462	10.5%
Turkey	10 924	75	6.2	5.3	85.3%	355	302	21.7%
United Kingdom	39 455	81	9.3	7.8	83.3%	3 685	3 070	16.5%
Uruguay	16 879	77	8.7	6.1	70.0%	1 465	1 025	20.9%
Venezuela	12 265	76	4.9	1.5	31.3%	606	189	6.4%
Low income		62	5.1		38.8%	32	13	9.0%
Low middle income		66	4.1		64.4%	85	32	6.2%
Upper middle income		74	6.0		56.2%	446	249	11.6%
High income		79	11.6		60.6%	4632	2857	16.8%

Source: World Health Organization Health Statistics 2015 National Health Accounts data, World Bank World Development Indicators

Table 4 provides the sources of funding for health care in a range of countries (as of 2013). In a number of countries such as Mexico, new programmes have begun to increase the share of health care expenditure from public funds. What is notable is the high share of health expenditure in South Africa which comes from private health insurance. Despite this share being 43% of total health spending in 2013, it funds the needs of less than 20% of the population (Department of Health 2015). A significant fraction of the OOP is also spent on this small fraction of the population because of health care packages that are restricted in scope. Even in a country such as the UK, where the bulk of the National Health Service (NHS) is financed from general tax revenues, user fees are still used to fund some proportion of the health service. In many countries with well-developed health insurance systems there remain limits to the range of free services. In Canada and France, for example, many citizens take out top-up insurance for dental, optical and other benefits.

Table 4: Sources of revenue as a percentage of total health care expenditure, 2013

COUNTRY	Public funds	Private funds	Total
---------	--------------	---------------	-------

	General government exp (excl social security)	Social security funds	Total public funds	Private health insurance	Out of pocket expenditure	Non-profits	Other	Total private funds	
Argentina	11.3	43.5	54.8	10.9	30.2	3.4	0.7	45.2	100
Australia	67.0		67.0	8.4	18.8	1.1	4.7	33.0	100
Botswana	60.1		60.1	31.9	5.1	2.8	0.1	39.9	100
Brazil	45.1		45.1	27.7	25.8	1.4		54.9	100
Canada	69.6	1.4	71.0	12.5	13.6	1.2	1.6	29.0	100
Chile	44.0	4.2	48.2	19.4	32.3			51.8	100
China	17.2	38.6	55.8	3.5	33.9		6.8	44.2	100
Colombia	12.8	63.5	76.3	9.9	13.8			23.7	100
Costa Rica	10.0	63.0	73.0	1.4	24.5		1.1	27.0	100
Ghana	55.4	14.7	70.1	0.6	19.9	6.0	3.4	29.9	100
India	26.7	1.8	28.4	1.8	63.8	0.7	5.2	71.6	100
Malaysia	54.2	0.6	54.8	7.3	36.1		1.8	45.2	100
Mexico	22.5	29.2	51.7	4.2	44.0			48.2	100
Morocco	24.5	8.5	33.0	7.8	59.2			67.0	100
Namibia	57.5	1.5	59.0	25.1	7.4	8.3	0.2	41.0	100
Nigeria	23.8		23.8	2.4	72.9	0.9		76.2	100
Peru	36.9	21.3	58.2	4.8	31.9	1.6	3.6	41.8	100
South Korea	11.5	42.8	54.3	6.2	35.2	0.6	3.7	45.7	100
Russia	25.5	26.8	52.3	1.9	45.4		0.4	47.7	100
South Africa	46.6	1.3	47.9	43.0	6.6	1.9	0.6	52.1	100
Thailand	79.9	5.4	85.3	4.6	8.3	0.6	1.1	14.7	100
Turkey	22.8	55.7	78.5		16.8		4.7	21.5	100
United Kingdom	83.3		83.3	3.4	9.5	3.7	0.1	16.7	100
Uruguay	30.6	39.4	70.0	13.5	16.5			30.0	100
Venezuela	22.1	9.1	31.3	2.3	62.6	3.8		68.7	100

Source: National Health Accounts, World Health Organisation, 2015

Out of pocket expenditure in South Africa funded 6.6% of health spending in 2013. This is lower than Thailand (8.3%) and Colombia (13.8%) and much lower than in Uruguay (16.5%), Turkey (16.8%), Costa Rica (24.5%), Argentina (30.2%), Malaysia (36.1%) and Mexico (44%) in 2013,

From this table, it can be deduced that in many countries public funds stem primarily from general government revenues. Among OECD countries, thirteen provide automatic health coverage, funded primarily from general tax revenues: Australia, Canada, Denmark, Finland, Iceland, Ireland, Italy, New Zealand, Norway, Portugal, Spain, Sweden and the United Kingdom (Paris, Devaux and Wei 2010). In China, Colombia and South Korea, however, more than twice as much is paid from social security funds as from general government expenditure. In Mexico the balance is near equal. Of these countries, Colombia has by far the highest share of overall expenditure from social security funds. Many countries make use of general government revenues, although some degree of specific earmarking is/has been used in Australia (GST; mining taxes), Ghana (VAT), Malaysia (petroleum taxes), South Korea (tobacco tax) and Brazil (VAT and financial transaction taxes).

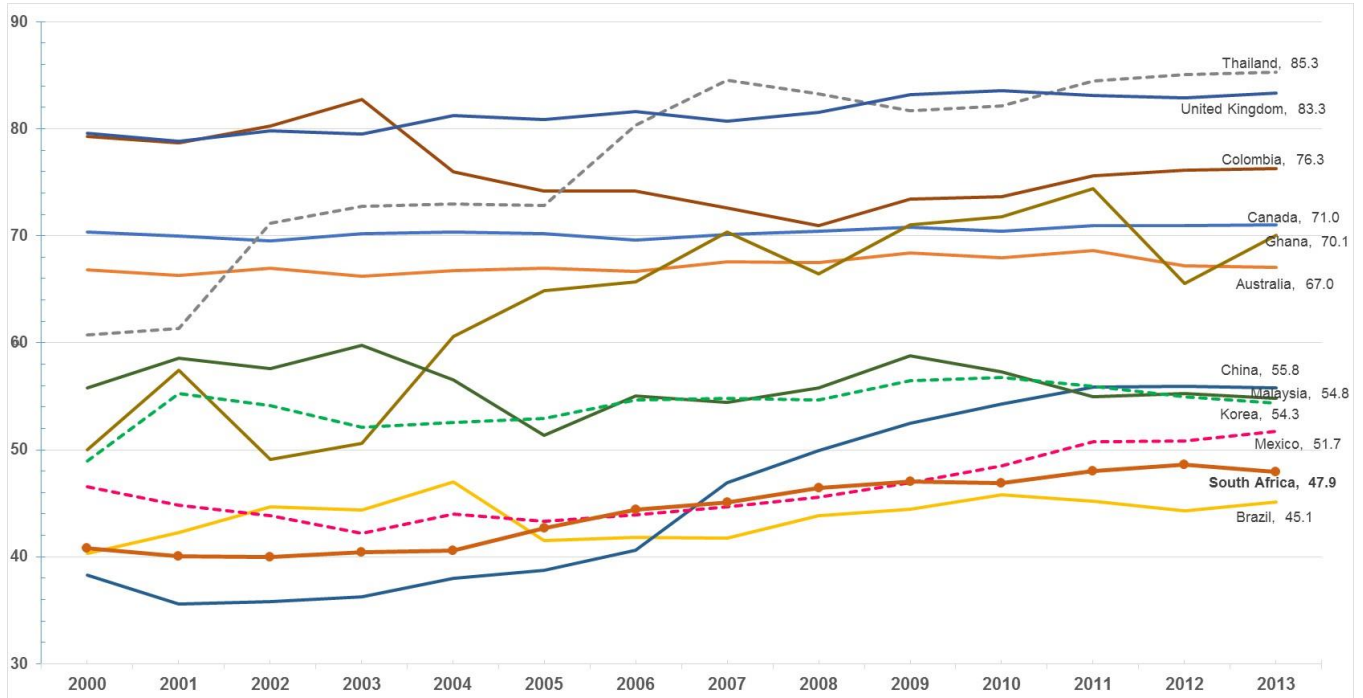
Although payroll taxes (social health insurance (SHI) taxes) are frowned upon by many fiscal economists, they are still widely used by countries following the social insurance model in Europe (Germany, Netherlands), in Latin America (e.g., Chile, Colombia, Mexico) and in Asia (Japan, Korea, Taiwan). Arguments are, however, advanced for the advantages of SHI systems over the

use of general taxation revenues. Most of these entail the enforcement of “an institutional separation of the ‘purchasing’ of health care, which would be done by insurers or a SHI agency, and the delivery of health care, which could remain the responsibility of the health ministry” (Wagstaff 2007).

A major issue with SHI, however, is that scale-up to UHC is usually much slower than when general government revenues are used. While in developed countries, SHI schemes have been successful, in developing nations the use of general tax revenues has proved more effective than SHI schemes in achieving UHC (Task Force on Global Action for Health System Strengthening 2009). Some countries such as Spain, Denmark, Greece, Iceland, Italy and Portugal abandoned SHI in the 1970s and 1980s and switched entirely from payroll taxes to general taxation to pay for health (Belli 2016). Others, like Malaysia, are debating the introduction of a payroll tax to augment existing resources for health. In Germany, increasing use is made of general tax revenues to maintain UHC (Oxfam 2013). Germany is notable in that high income earners are allowed to opt out of SHI to enrol in private health insurance. In 2010, 15% of the population did so (Paris, Devaux and Wei 2010).

Many countries which operate SHI schemes have implemented policies so that the poor can obtain health insurance at no cost or lower costs. These include 12 OECD countries (Austria, Belgium, Luxembourg, France, Germany, Korea, Mexico, Turkey, the Netherlands, Switzerland, Japan and Poland) (Paris, Devaux and Wei 2010).

Figure 1: Government expenditure on health as a percent of total health expenditure 2000-2013



Source: World Health Organization Health Statistics 2015 National Health Accounts data

In some countries a significant shift from private to public funding has occurred. This is most notable in Thailand where public funding increased from approximately 55% in 1998 to 85.3% in

2013. This has usually been associated with a significant increase in coverage, which in Thailand is now approaching full UHC. A significant change in funding can also be noted for China where public funding has increased from 32% in 1998 to 56% in 2013.

Table 5 presents data indicating that many of the countries, which have made strides towards or have achieved UHC, rely on general revenue, for instance Australia, Brazil, Malaysia, New Zealand and the UK. Other countries rely on a mix of payroll taxes and general revenue, although in South Korea, payroll taxes are more significant.

Table 5: Tax instruments used to fund health care in selected countries

Country	Tax instruments used				
	General taxes	Surcharge on taxable income	Payroll taxes	VAT	Other Taxes
Australia	X	X		x (GST ⁵)	X
New Zealand	X				
UK	X				
China	X		X		
Malaysia	X				
South Korea			X		X
Thailand	X		X		X
Taiwan			X		
Brazil	X				
Ghana			X	X	

Sources: Results for Development Institute (OECD, *Annals of Internal Medicine*)

Differences exist between countries as to how funding is pooled. The UK's NHS operates a single pool, albeit with some subdivision in practice regarding resource allocation at the level of district purchasing authorities. In Australia and Canada, however, separate state or provincial funding pools are maintained. In Germany, Japan and the Netherlands, separate purchasing authorities have developed from occupational and other membership funds. Nonetheless these all provide a statutorily regulated package of benefits.

In single pool systems, such as New Zealand and the UK, mechanisms exist to allow for risk-adjusted payments at regional level. The operation of multiple funding pools could lead to inequities in health outcomes. As a result, many countries that allow multiple pools, e.g., Colombia, Germany and the Netherlands, have introduced risk equalisation mechanisms to prevent insurers gaining advantage via risk-based selection or membership targeting (Paris, Devaux and Wei 2010). Competition is based on cost and quality, not on risk. Even in Thailand, which has achieved effective universal coverage, three main schemes operate: the universal coverage scheme, the civil servant scheme and the social security scheme. Mexico, too, operates multiple schemes such as the Mexican Social Security Institute (IMSS) scheme for private sector employees and the Institute for Social Security and Services (ISSTE) scheme for public sector workers and their dependants. In Kyrgyzstan and the Republic of Moldova payroll taxes from the formal sector are pooled with the general tax revenue to fund UHC (Kutzin, Jakab and Shishkin 2009).

6.1 Selected countries' experience

Attaining UHC has achieved considerable momentum in a number of developing countries over the last decade, some through social or national health insurance models. Certain developing countries have made considerable progress in extending coverage to their populations between 2006 and 2011 (albeit off small initial bases): China's New Rural Cooperative Medical Scheme increased coverage from 32% of the population (410 million) to 64% of the population (832 million); Ghana's National Health Insurance Scheme, which had been established in 2005, from 11.4% of the population (2.5 million) to 32.8% of the population (8.2 million); Mexico's Seguro Popular from 14.3 % of the population (15.7 million) to 43.8% (55.6 million). In developing countries which already had fairly high levels of coverage in 2006, by 2011 increases were generally more modest: Chile's Fondo Nacional de Salud increased coverage of the population from 68% (12 million) to 78% (13.2 million) and the Social Security of Costa Rica from 88.8% (3.6 million) to 91.5% (4.3 million). Thailand's Universal Coverage Scheme, established in 2002, dropped marginally in coverage from 72% (47.5 million) in 2006 to 71.2% (47.7 million) in 2011 (World Bank 2015).

Brazil's health system draws from a wide range of funding methods: a number of direct and indirect taxes, private voluntary insurance, and OOP payments. Specific taxes have been earmarked for health care. Brazil created the tax-based Sistema Unica de Saude (SUS) in 1988 to fund free and universal access to health (d'Ávila Viana, da Silva and Yi 2015). In 2013, 45% of health care in Brazil was funded by public money (from central, state and municipal government), with a large percentage of OOP expenses (26%). Since 2004, public funding had increased significantly as a share of overall funding. \$11.5 billion was raised from a tax, levied on bank transactions (Contribuição Provisória Sobre Movimentação Financeira (CPMF)), but this was abolished in 2007 because of criticism about its effects on the cost of borrowing, inflation and market distortions. Direct tax revenue is progressive but the ICMS (VAT) and OOP payments are regressive (Ugá and Santos 2007).

SUS authorities contend that underfunding is the prime cause of the system's challenges and shortcomings. There were attempts in the 1980s to earmark 30% of social security budget for SUS while more recently a proposal to institute a new tax to fund the SUS was not approved by congress: "Economic authorities are reluctant to support new taxes for health or to increase allocation to health, partly because SUS has an image of being inefficient and wasteful, and health authorities find it difficult to make a strong case for increased funding" (Couttolenc and Dmytraczenko 2016, 17)

Malaysia guarantees universal access to health care through public hospitals and health clinics. Approximately 45% of total health care expenditure in 2009 was funded by government. Half of revenue for public funding stems from direct taxes with approximately 30% from indirect taxes and the rest from non-tax/special tax revenues. These include a variety of petroleum taxes. By 2015, Malaysia had not introduced a national health insurance system. Nevertheless, it has been deemed to have achieved UHC in terms of access to health service and good financial risk protection in relation to health, despite out-of-pocket expenditures on private health care providers comprising roughly one third of total health spending (Ng 2015).

Another Asian country to rely significantly on general government revenues for UHC is Sri Lanka (Oxfam 2013). By 2013, the proportion of government funded health care had risen to 55%.

In Thailand, use is made of general tax revenues, with modest social health insurance, to create a national pool to fund the universal coverage scheme (UCS) (Wagstaff 2007). Users have a restricted choice of provider. A comprehensive package of benefits, free care at the point of

service, improvements in the functioning of PHC improvements in rural access have reduced OOP expenses to below 20% while increasing government funding from 55% of total health funding in 1988 to 80% in 2009 (World Health Organisation 2010) and 85% in 2013. Over time the share of indirect taxes and OOP payments has decreased, with direct taxes and SHI increasing. The revenue mix is seen as highly progressive. When UCS was rolled out, it was felt that the contributory scheme for the informal sector would be difficult to enforce and expensive to manage. General taxes allowed UCS to be rolled out quickly (Limwattanon, et al. 2011).

In Mexico, an increase in government expenditure on health was achieved through the Seguro Popular (Popular Health Insurance) programme, a tax-financed voluntary public health insurance system designed to gradually extend insurance coverage to the poor and informal sector workers (Frenk, Gómez-Dantés and Knaul 2009). Its introduction followed a pilot project in twenty states (Knaul and Frenk 2005). Those uninsured who do not enrol in the program pay user fees at the point of service. Those enrolled, who pay a yearly membership fee according to a sliding scale based on household income, are exempt from user fees. Funding for the Seguro Popular programme is shared between the federal government, the state governments and the household through annual enrolment fees (Frenk, González-Pier, et al. 2006). The increase in general government expenditure on this programme decreased the share of social security funding in Mexico from 35% to 25% over the period of 1995-2010. Nonetheless, in absolute terms, social security funding has continued to increase because of the increase in enrolment, reaching 29.2% of total health expenditure in 2013. It should be noted, however, that the OECD has described the Mexican system as “bad for patients and bad for taxpayers” (OECD 2016). Life expectancy relative to other countries in the OECD has been extended since the implementation of Seguro Popular. The system remains fragmented, though, with people belonging to different subsystems depending on their occupation. Millions of Mexicans belong to more than one insurance scheme and many millions more, when surveyed, appeared not to know that they have any health insurance at all (ibid).

In the 1980s and 1990s, the bulk of health care was financed privately in Ghana, primarily through OOP payments. As a result, Ghana instituted the National Health Insurance Scheme (NHIS) in 2004. Premiums are collected from members in the formal and informal sector. Although enrolment is mandatory, it has become voluntary in practice (in 2013 only 36% of the population was covered (Oxfam 2013)). In the formal sector a 2.5% payroll tax is levied. Workers in the informal sector pay registration fees and premiums, ranging from US\$5 to \$35. A significant fraction, however, is raised from VAT. 2.5% was added to the VAT rate in 2013. This raises over 65% of NHIS health care funding (Amporfu 2013). The incidence of VAT has been shown to be neutral in Ghana (Younger 2015) but in combination with progressive social security contributions the overall funding of the NHIS is progressively structured (Younger 2015). NHIS-covered services incur no OOP charge at the point of service. Ghana is considering introducing a one-off payment to replace annual contributions for the informal sector to increase coverage since less than 10% of NHIS funding is obtained from informal sector premiums (Amporfu 2013). Very few Ghanaians enrol privately since they are not eligible for subsidisation by the NHIS Fund. By 2013, government funding, social security and out of pocket expenditure comprised 55%, 15% and 20% of total health spending respectively, with private medical schemes contributing less than 1%.

In 1977, South Korea created a mandatory Social Health Insurance (SHI) for industrial workers (Kwon 2009). To achieve rapid expansion, a low benefit package was offered initially. The SHI was expanded incrementally over time as the NHI fund improved its financial stability. It was extended to the self-employed and by 1989 covered the whole population. In 2006, industrial, government

and school employees contributed 3.38% of their wage income to SHI. This was shared between employees and employers. Co-insurance rates of 20% for inpatient care and 35-50% (depending on the type of hospital) for outpatient care are charged. Pooling of both public and private resources ensures coverage of the population in its entirety. The elderly (over 65), Medicaid and chronic illness patients pay discounted co-payments for outpatient care. As a result, OOP expenditure declined from 63% in (1983) to 38% (in 2004) and 35.2% in 2013. This is higher than the OECD average and remains a barrier to access. In 2006, 17% of funding was provided from public funds (excluding SHI) and comprised approximately 12.8% from general taxes and 4.3% from a tobacco tax. While the rapid expansion of coverage has been laudable, the OECD points out that there has been insufficient focus on the quality of care. In addition, the system is geared towards acute care with insufficient focus on preventative health care (OECD 2012).

In China, health funding has been expanded through the expansion of social health insurance, notably for urban residents. China aims to achieve UHC by 2020 (Yip, et al. 2012). The Urban Employee–Basic Medical Insurance (UEBMI) is financed through contributions from employers (6%) and employees (2%) (Langenbrunner and Somanathan 2011). In the early 2000s, in excess of 90% of China's rural population was not covered. Rural Chinese were subject to large OOPes (Brant, et al. 2006). To address this, China rolled out the New Rural Cooperative Medical Scheme (NRCMS) from 2003 to 2008 (Chen 2013). This is heavily subsidised by local and national government from general taxation, with a small supplement from individual premiums (Yip and Mahal 2008). The plan requires an annual contribution of 10 Yuan (\$1.25) from rural residents, which is matched by a 20 Yuan (\$2.50) contribution from government (10 Yuan each from the national and local governments) which are deposited in a special, county-level account (Dong, Hoven and Rosenfield 2005). Nonetheless, large doubts exist over the effectiveness of this scheme (Brant, et al. 2006), particularly around the small size of individual risk pools. A third scheme, the Urban Resident Basic Medical Insurance (URBMI) scheme, targeting non-salaried urban residents, especially children, students and the elderly, was also launched in 2007 and expanded to all cities in 2010 (Chen 2013). These systems still suffer from payroll tax evasion and non-enrolment in social health insurance as well as problems with large co-payments.

Colombia achieved UHC in 2008. This was driven by significant growth in funding from social security funds. Through a merger of social insurance funds, Colombia created a contributory regime and subsidised regime with risk cross-subsidisation between the two. 51% of the population was covered by the latter in 2008. The subsidised regime targets lower income members of the population, informal sector workers and the elderly.

Australia introduced the Medicare programme in 1984 (Department of Health 2015). This is funded by a surcharge on taxable income and is known as the Medicare levy. General tax revenue, however, remains the primary source of health care funding. This is funded from general revenues at both the federal and state level (Healy, Sharman and Lokuge 2006). Furthermore, a portion of the goods and services tax (GST) is reserved to fund health care. The Medicare levy is a form of payroll tax and has a progressive structure. In order to exempt low income earners, it is levied on a percentage of income above a certain threshold. In 2014, this rate was increased from 1.5% to 2% in order to finance the DisabilityCare Australia Fund. In 2015-16, the Medicare levy yielded Australian \$14 790 million, which was about 22% of national health spending in that year (Australian Treasury 2016). It is used in addition to general tax revenue to meet the costs of a set of PMBs for the entire population. Prior to the introduction of Medicare, health care subsidies were limited to low income groups (the scheme was known as Medibank, started in 1975). In Australia, hospital inpatient services are free in public hospitals but patients may choose to be private

patients (in both public and private hospitals), in which case co-payments are required. Where a patient chooses to be a private patient, Medicare covers 75% of a specified 'schedule fee' for the physician's services. A further 1% surcharge (Medicare Levy Surcharge) is applied to high-income earners who elect not to purchase private health insurance for hospital treatment. In 2010, 45% of the population had some form of private insurance. Australia has also imposed a levy, specifically on mining companies, to help pay for health sector programmes and there are plans to introduce a sugar tax and increase excise duties on alcohol and tobacco to contribute to the cost of Medicare. Overall, health care financing is slightly progressive, despite 30% of funding deriving from regressive indirect taxes (GST and 'sin' taxes). Since 1998, a private health insurance rebate has been introduced through which 30% of premiums paid by people, eligible for Medicare, are covered. This was to spur the uptake of private insurance.

In the Netherlands, social insurance coverage based on a common basic benefit package (BBP) for all legal residents was mandated by the 2006 Health Insurance Act. Previously the population had been covered by sickness funds (covering 65%) and private voluntary insurance (37%). The BBP is comprehensive, including ambulatory and hospital care, outpatient pharmaceuticals, maternity care, dental care for youth, rehabilitation, and some other services, but excludes long-term care which is covered by separate legislation. Nonetheless 92% of the population subscribe to voluntary insurance to pay for uncovered services. A similar model operates in Switzerland (Paris, Devaux and Wei 2010).

The Slovak and the Czech Republics operate mixed models. Employees are subject to mandatory health insurance, financed through income-linked employer and employee contributions. Their families and the unemployed, however, are covered via direct payments, of premiums to health insurance companies, by national government on their behalf (Paris, Devaux and Wei 2010).

Even in the USA, which relies heavily on private health insurance, the tax-financed Medicaid and Medicare programmes (for low-income families and the elderly, respectively) account for a large share of overall health spending. Nonetheless (as of 2016), 11% of the US population remained uncovered (Marken 2016).

6.2 Cost pressures: international experience

Most countries, whether advanced or developing, are facing increasing cost pressures in relation to health expenditure. The average public health and long term care expenditure for OECD countries is expected to increase from 6% of GDP in 2006-2010 to 9.5% in 2060, assuming that cost containment policies are implemented. Without these policies, the increase could be even greater (as much as 14% of GDP). Within the BRIICS countries, health spending is also expected to accelerate to 10% of GDP by 2060 unless cost-containment policies are implemented (OECD 2013). Although there are significant differences across individual countries, the main drivers are new technologies, rising relative prices and health policies and institutions, and, to a lesser extent, demographic and income trends, such as ageing populations (OECD 2013).

In the aftermath of the 2008 global economic crisis, even established health insurance systems experienced extreme financial pressures. In November 2016, the Comptroller and Auditor General of the United Kingdom reported that, with an aggregate deficit in 2015-16, the financial position of the National Health Service Trusts (i.e., hospitals) had continued to deteriorate: "With more than two-thirds of trusts in deficit in 2015-16, we repeat our view that financial problems are endemic and this is not sustainable" (National Audit Office UK 2016, 12). There is evidence that fiscal austerity measures introduced by the NHS have also compromised access and the quality of care.

There is a joint plan by the Department of Health and the NHS to close the £22 billion gap between patients' needs and available resources by 2020-21. The plan assumes that £6.7 billion of efficiency savings can be realised through capping public sector pay, favourably renegotiating contracts, increasing revenue raising activities and decreasing running costs. A further £6.7 billion is to be achieved by moderating health care service demand and achieving 2% productivity improvements (National Audit Office UK 2016).

The Auditor General of the UK raises some serious concerns about how realistic these assumptions are and the likelihood of the planned savings actually materialising. The UK Department of Health maintains that the level of funding that the NHS has received over the past few years is adequate, which the NHS contests: "Confronted as NHS England is by the pressures of rising demand for services, these signs of difference do not help build a confident feel about the future of the NHS" (National Audit Office UK 2016, 12). This is indicative of some very disquieting fault lines in the implementation of their purchaser-provider split model.

6.3 Fiscal sustainability of benefit packages

In many developing countries, there is a gap between the free, comprehensive benefit package promised, without any restrictions in theory, and the de-facto actual benefits. Implicit rationing in practice balances the increased demands for health care services with available resources due to inadequate availability of health care providers such as specialists, complicated authorisations, waiting lists, geographic access and transport cost barriers, crowding, long waiting times in facilities offering more specialised health services, stock outs of critical drugs and quantitative restrictions at health care providers. The burden of implicit rationing tends to fall most heavily on the poor and vulnerable (World Bank 2015).

Many developing countries have moved from implicit benefit packages to explicit benefit packages, either through negative lists (which exclude health services from the package with the remainder being covered), positive lists (where services covered are listed and unlisted services are not covered) or through positive and negative lists (which contain inclusions and exclusions). As can be observed from Table 6 below, the content of benefit packages varies markedly.

Table 6: Benefit packages in selected countries, 2011

Benefit package structure	Argentina	Brazil	Chile	Columbia	Costa Rica	Ghana	Mexico	Thailand	Turkey
Maternity	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emergency services	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hospital services	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Physician service components	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pharmaceuticals	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Public health services e.g immunization	Yes	Yes	No	Yes	Yes	N/A	Yes	Yes	Yes
Outpatient primary care	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Outpatient specialist care	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pharmaceuticals for outpatients	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clinical lab tests for outpatient services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Imaging for outpatients -basic (X-rays and ultrasound)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Diagnostic imaging beyond basic (e.g. MRI CT Scan)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eyeglasses	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Mental health/behavioural	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Dialysis or transplants	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Explicit package positive (PL) and/or negative list (NL)	PL	PL	PL	N/A	-	NL	PL	PL&NL	PL
GDP per capita (US\$ 2011)	\$ 13 694	\$ 12 567	\$ 14 511	\$ 7 125	\$ 8 704	\$ 1 594	\$ 8 704	\$ 5 192	\$ 10 605

Source: Adapted from World Bank 2015: pp 74-75, pp 76-77

Explicit packages attempt to balance resource constraints with delivery of a basket of services, in practice available to everybody, through explicit rationing of what coverage does and does not allow.

In a recent study, surveying 24 developing countries' health systems, criteria for defining benefit packages included cost-effectiveness, the degree of financial protection and the opinion of the scientific community. Initial affordability was not, however, rigorously assessed, nor the fiscal impact of subsequent revisions to the benefit package:

The majority drew up their initial budget for the package with reference to what government was willing to spend, sometimes also using benchmarking or even best guesswork; only a minority conducted actual analysis, systematic estimation of costs, formal cost-effectiveness study, or HTA [Health technology assessment]. This vagueness led the SIS programme in Peru, for example, into a major mismatch between what it promised and what it could feasibly achieve (World Bank 2015, 81).

While more explicit benefit packages reduce implicit rationing and create greater certainty for the patient as regards the scope of services which can be expected in practice, these packages could also increase exposure to future fiscal risk as utilisation rates increase, cost pressures intensify and expensive new technology and medicines are adopted in the absence of effective accountability mechanisms. In negotiating this trade-off, countries often mitigate greater fiscal sustainability by explicitly limiting the scope of the benefits provided.

However, fiscal sustainability risks still loom large for countries that may have promised open-ended comprehensive entitlements that are not explicit, even if they are not, in effect, made universally available to all beneficiaries via implicit rationing that, typically, disproportionately affects the poor and vulnerable. In the short term, the fiscal risks in such countries may be low if this implicit rationing continues. However, in the longer term, benefits may need to be made more explicit. (World Bank 2015, 194)

In the 24 country sample being studied, cost sharing (OOP payments for user charges) was rare for PHC, such as maternal and public health services, but about one third required cost-sharing for outpatient treatment and half required co-payment for in-patient services, especially pharmaceuticals. In most cases, these co-payments were retained by health facilities rather than pooled at a higher level. Countries like Brazil, Mexico, Chile, Ghana and Thailand did not require co-payment, whereas China, Colombia and Turkey did (World Bank 2015).

According to the World Health Organization, "[w]hen the OOP share of total health expenditures is 20 percent or less, the incidence of catastrophic health expenditures and health spending related impoverishment usually becomes negligible" (World Bank 2015, 119). At 6.6% of total health expenditure, South Africa's aggregate OOP compares favourably with the WHO benchmark of 20% (see Table 4 on page 13). What is of greater concern in the South African context is whether the incidence of OOP is borne mainly by the relatively well-off who are willing and able to pay out of pocket for better responsiveness in health care provision, or whether OOP reflects low or incomplete coverage among the poor. Low income patients tend to be extremely price sensitive,

especially in relation to chronic medication (World Bank 2015). Exemptions from user charges at point of service for the poor are therefore crucial.

Countries surveyed in the World Bank study generally made use of three main types of cost sharing regimes:

1. Programme protective cost containment caps on benefits, either as budgetary limits or as quantitative restrictions to contain aggregate UHC spending. China's UHC programme capped reimbursements at six times the local county or municipality income. The Republic of Georgia caps reimbursements by service type at around US\$10,000 per operation and US\$7,500 for radiation/chemotherapy. Vietnam had a per episode cap of 40 months of the minimum monthly salary (about US\$35 per episode per member). Brazil's UHC programme imposes explicit caps on in-patient admission as a quantitative limit.
2. Demand management caps aimed at limiting costs by beneficiary utilisation. For instance, co-payments for outpatient drugs are required in Georgia's UHC programme. In Vietnam, patients were penalised for bypassing lower facilities without referral, by incurring higher co-payments: 70 percent at central, 50 percent at provincial, and 30 percent at district health facilities. In Colombia, only higher end services, such as surgeries, hospitalisation, and diagnostic imaging required co-payment.
3. Modalities designed to mitigate the adverse financial impact of direct payments. Eleven of the 24 UNICO countries had neither explicit co-payments nor budgetary nor quantitative restrictions. While co-payments were required under Colombia's UHC programme for surgery and hospitalisation, these were capped per visit and per year, while some disease categories and vulnerable population subgroups were completely exempt, as were indigent beneficiaries in Chile and Mexico (World Bank 2015).

In Jamaica, as with many other developing countries, progress towards UHC has been impacted upon by a weak macroeconomic outlook, spending cuts associated with IMF funding conditions, staffing reductions, termination of donor funded programmes and uncertainty about the specifics surrounding the policies required to achieve UHC (Coombs n.d.).

6.4 Earmarking of revenues

The proceeds of earmarked taxes (also known as hypothecated or ring-fenced taxes), rather than being lumped in the general revenue pool, are dedicated exclusively to financing specific public services such as health; for example, an earmarked surcharge on income tax. As illustrated in Table 7 below, mandatory social insurance contributions, a form of earmarking, were significant in Costa Rica (95% of total UHC programme financing) and, to a lesser extent, Chile (39%) and Ghana (15%). In these countries, UHC programmes are embedded Social Health Insurance comprehensive UHC programmes that pool contributions from formal sector populations with government-subsidised premium payments for the poor.

Table 7: Earmarked taxes as a source of government health revenue (selected developing countries)

TYPE OF EARMARKING	COUNTRY	DESCRIPTION
Specific taxes earmarked for UCH programmes	Colombia	Earmarked payroll tax from parallel formal sector insurance programme
	Costa Rica	Taxes on luxury goods, liquor, beer, soda and other imported goods to finance the non-contributory regime
Specific taxes earmarked for financing general government health spending (or for financing other non-UHC programmes)	Chile	Tobacco taxes, customs revenues, sales of shares in public health enterprises earmarked for financing SHI reform
	Colombia	Earmarked state-level taxes on tobacco and alcohol for financing general health spending
	Mexico	Earmarked alcohol and tobacco taxes for financing general government health spending
	Thailand	Earmarked alcohol and tobacco taxes used to support the Thailand Health Promotion Fund
General taxes earmarked for financing UHC programmes, other non-UHC programmes health programmes, or general government health spending	Chile	Earmarked 1% VAT for AUGÉ
	Ghana	Earmarked National Health Insurance levy, 2.5% VAT
	Brazil	Federal health spending equal to health spending in previous year adjusted for changes in nominal GDP; minimum 12% of state expenditure and 15% of municipal expenditure earmarked for health
	Vietnam	Increase in government spending on health has to be higher than increase in overall government spending by law (Resolution No. 18/2008/NQ-QH12 in 2008)

Source: Adapted from World Bank, 2015: p116

The above table also illustrates that other forms of earmarking are also utilised. In Ghana, for instance, a 2.5 percent value-added tax (VAT) levy was earmarked for UHC programme financing, accounting for almost half of the UHC programme financing in that country. In Chile, the additional VAT proceeds from raising the VAT rate from 18 to 19% were earmarked to finance the AUGÉ reform introduced in 2005 (World Bank 2015). “Sin taxes” on alcohol, tobacco and soft drinks are also earmarked for health care purposes in some countries.

Proponents of earmarking argue, from a political perspective, that earmarking may shield health expenditure from competing claims by other public services, under conditions of fiscal austerity or economic vulnerability, ensuring greater prioritisation of the health sector. Economic arguments for earmarking centre on the benefit principle – those paying tax receive the health service benefits. There is typically more willingness to pay increased taxes for well-defined services which are perceived by the taxpayer as adding value. Resistance and evasion may therefore be less for earmarked taxes than for general taxation (World Bank 2015). This nexus between mandatory tax contribution and receipt of health benefits is key to the social contract underpinning Social Health Insurance systems in many countries. In South Africa, the constitutional imperative to finance the progressive realisation of health care for poor and unemployed South Africans and those in the informal sector, would attenuate this link.

Earmarking revenue sources, on the other hand, may also lead to under-funding of health activities, especially if general non-earmarked revenues are reduced as earmarked revenue is increased. Conversely, earmarked surpluses in an earmarked fund may be diverted to other activities, especially where governance is poor. Critics point out that earmarking cannot substitute

for political will to prioritise health spending, to reduce macroeconomic flexibility and to undermine allocative efficiency by introducing additional constraints (World Bank 2015).

7 EXISTING FINANCING SOURCES OF HEALTH CARE IN SOUTH AFRICA

The international experience of extending UHC coverage outlined in the previous sections provides a useful backdrop against which to analyse the South African context and the fiscal implications of the White Paper NHI proposal.

As can be seen in Table 8 below, in 2014/15, South Africa spent 8.6% of its GDP (R334.6 billion) on health care. 48.3% of the total health spending is financed by the public sector (R161.7 billion or 4.1% of GDP), 49.8% by the private sector (R166.7 billion or 4.5% of GDP) and 1.8% by donors (R6.1 billion or 0.2% of GDP).

Health is a concurrent function for which all three spheres of government have responsibilities. National health policy is largely set by the national Department of Health, but the implementation of health policy and the delivery of health services in clinics, hospitals and other public health facilities, is largely the responsibility of the nine provincial health departments. They are therefore the largest spenders on public health, but other departments such as Defence, Correctional Services and Education also incur health expenditure. Municipalities likewise play an important role in environmental health while the Workmen's Compensation and Road Accident Funds similarly finance health expenditure.

Medical schemes financed R139.1 billion or 83.3% of total private sector health spending in 2014/15. This figure includes an estimate of R20 billion for the state's contribution to medical aid schemes on behalf of its employees, but excludes state owned entities and contributions to Polmed and Parmed. Other private health financing sources include OOP payments by households to GPs and other service providers, private sector employer contributions to medical aids on behalf of their employees and medical insurance.

Besides these direct expenditures, members of medical aids, whether employed in the public or private sector, received an additional R16 billion in tax credits which the uninsured cannot claim (p 48).

The South African Health Review 2016 estimates that in 2014, there were 8 814 458 medical aid beneficiaries, based on data from the Council for Medical Schemes 2014/15 annual report. Estimates of medical aid coverage in 2014 range from 16.3% (where Stats SA mid-year estimates for 2014 are used to estimate the total population) to 18.1% (where the Stats SA General Household Survey 2014 figures are used). The Stats SA General Household Survey figures suggest that there are huge disparities in medical aid access across population groups. While the average overall access is 18.1%, 76% of whites and 48.7% of Indians have access to medical aid, compared to only 20.3% of coloureds and 10.6% of Africans (Health Systems Trust 2016, 307).

Table 8: Public and private sector health expenditure 2011/12 – 2013/14

Rand million	11/12	12/13	13/14	14/15	15/16	16/17	17/18	Annual nominal change
Public sector								
National Department of health core	1,772	1,926	2,243	3,955	4,610	4,585	4,842	18.2%
Provincial Departments of Health	111,324	122,492	130,690	140,889	150,869	159,540	169,350	7.2%
Defence	3,400	3,460	3,734	3,849	3,933	4,225	4,536	4.9%
Correctional services	519	584	628	692	734	759	825	8.0%
Local government (own revenue)	1,977	2,096	2,221	2,355	2,496	2,628	2,768	5.8%
Workmens Compensation	3,369	3,000	2,713	2,821	2,934	3,090	3,253	-0.6%
Road Accident Fund	785	1,138	1,204	1,279	1,352	1,424	1,499	11.4%
Education	4,929	5,274	5,561	5,875	6,133	6,458	6,781	5.5%
Total public sector health	128,075	139,971	148,994	161,715	173,062	182,710	193,854	7.2%
Private sector								
Medical schemes	107,383	117,528	129,789	139,134	148,456	158,105	167,591	7.7%
Out of pocket	18,202	19,294	20,452	21,679	22,980	24,198	25,480	5.8%
Medical insurance	3,120	3,392	3,687	4,007	4,356	4,587	4,830	7.6%
Employer private	1,491	1,621	1,762	1,915	2,081	2,192	2,308	7.6%
Total private sector health	130,196	141,835	155,689	166,735	177,873	189,082	200,210	7.4%
Donors or NGOs	5,308	5,574	5,852	6,145	6,097	5,876	5,642	1.0%
Total	263,579	287,379	310,536	334,595	357,033	377,668	399,706	7.2%
Total as % of GDP	8.6%	8.6%	8.6%	8.6%	8.5%	8.3%	8.1%	
Public as % of GDP	4.2%	4.2%	4.1%	4.2%	4.1%	4.0%	3.9%	
Public as % of total government expenditure (non-interest, main budget)	15.0%	15.2%	15.1%	15.2%	15.2%	15.2%	15.2%	
Private financing as % of total	49.4%	49.4%	50.1%	49.8%	49.8%	50.1%	50.1%	

Source: White Paper on NHI, 2015: p47

Based on the Council for Medical Schemes 2014/15 data, the per capita spending by medical schemes (i.e. average benefits paid per beneficiary per annum) was R14 186. This was four and a half times greater than the per capita spend in the public health sector of R3 183 (calculated from National Treasury provincial expenditure 2014/14 per uninsured population in 2014) (Health Systems Trust 2016, 307).

The White Paper identifies “the existence of a two-tier health care system where the rich pool their health care funds and resources separately from the poor” (p.15) as the main contributor to inequity in health care. The White Paper links this inequity in financing to disparities in the distribution of health professions between the private and public sectors as well as geographical disparities among rural and urban areas and across health districts.

8 NHI EXPENDITURE PROJECTIONS AND COST ESTIMATES

The White Paper acknowledges the complexity of trying to project future NHI cost estimates, since these depend on an extensive array of assumptions concerning:

1. *NHI policy design* (such as the basket of services offered, the range of private service providers from whom services are purchased, reimbursement arrangements),
2. *NHI implementation* (e.g. the extent to which the cost reductions from active purchasing and price controls are realised), as well as
3. *factors influencing the demand and supply of health care*. The demand for health care services is influenced by epidemiological trends and rates of utilisation of hospital and outpatient services. Supply capacity factors, such as the availability of health facilities and professional personnel and the prices of supplies, equipment and services, are also pertinent.

Accordingly, instead of focusing on a single point estimate of NHI costs, the White Paper preferred the approach of considering several scenarios and presenting a preferred option. Just the preferred costing scenario, which is based on the costing in the Green Paper, is discussed in the White Paper.

In this scenario, modelled by the National Treasury (delineated in Table 9), expenditure rises from R110 billion during 2010/11 to R256 billion during 2015/16, in 2010 prices. After 2015/16, health expenditure increases at an average annual rate of 6.7% per annum in real terms. Assuming GDP grows at 3.5% annually, public health spending would increase from the current 4% to 6.2% of GDP in 2025/26. The *White Paper* indicates, however, that these projections are merely illustrative and “do not represent the actual expenditure commitments that will occur from the phased implementation of NHI” (p.46)

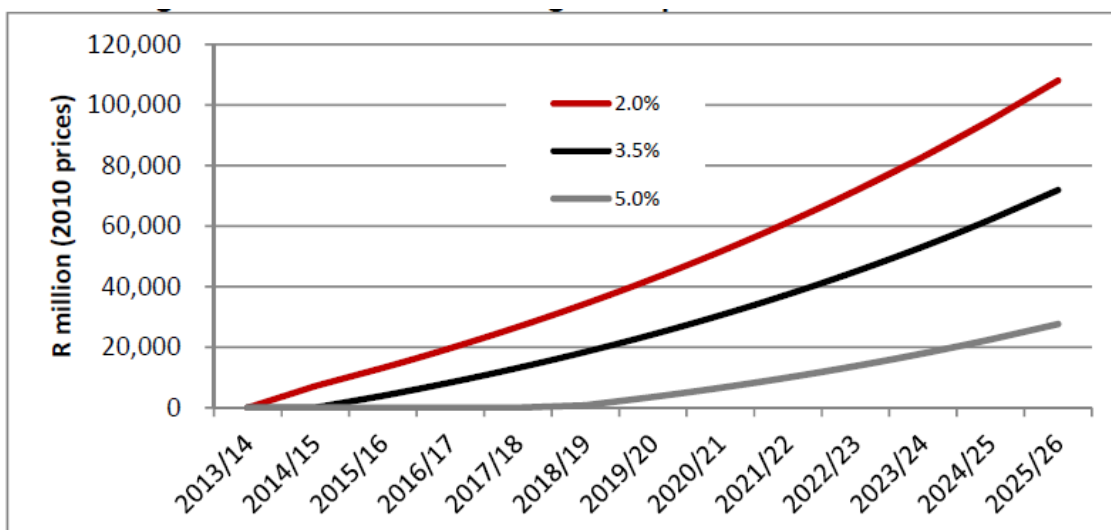
Table 9: Projection of NHI costs adapted from the Green Paper

		Average annual per cent increase	Cost Projection R m (2010 prices)
Baseline public health budget:	2010/11		109 769
Projected NHI expenditure:	2015/16	4.1%	134 324
	2020/21	6.7%	185 370
	2025/26	6.7%	255 815
Funding shortfall in 2025/26 if baseline increases by:		2.0%	108 080
		3.5%	71 914
		5.0%	27 613

Source: National Treasury projection (2012)

Table 9 also indicates that the funding shortfall is extremely sensitive to assumptions about the economic growth rate which influence baseline resource growth projections. If baseline resources grew at 5% per annum, the shortfall would only be R27 billion in 20125/26. By contrast, a more sluggish 2% growth rate would translate into a R108 billion shortfall. This is depicted in the graphic below (Figure 2).

Figure 2: Funding shortfall under different growth paths



Source: White Paper on NHI, 2015, p47

These projections appear to abstract from many of the implementation challenges and the behavioural responses to the proposed reforms, as they do not take into consideration “the health system’s absorptive capacity and personnel requirements or the accompanying public and private sector health service reforms. As people make greater use of health services under NHI, their expenditure on private health services would decrease” (p.47).

Cost scenarios for the NHI could vary markedly, depending on the assumptions which underpin them. These include:

1. Future changes in utilisation of hospital and PHC services with the introduction of the NHI, especially given the pent-up demand for quality hospital services not currently provided by the public sector.
2. Changes in the demographic structure (e.g., ageing populations) and epidemiological profiles of the trends in the burden of disease.
3. The scope of the benefit package, the quality of services provided and the impact of formal and informal systems of rationing (e.g., referral systems, queues with long waiting times).
4. Supply side constraints in the short to medium term, e.g., the availability of GPs and specialists, hospital beds, the geographic distribution of health infrastructure, the number of PHC institutions and hospitals accredited by the OHSC and so forth.
5. Health inflation which tends to exceed consumer price index inflation and is driven, *inter alia*, by remuneration of health professionals, the mix of health professionals utilised, the exchange rate, new technologies and improved drugs.
6. Impact of efficiency gains in the public and private sectors on unit costs, while maintaining service quality.
7. Provider reimbursement mechanisms: Payment mechanisms could influence both the volume and price of services. Prospective payment systems based on volumes and capitation may contain costs more effectively than retrospective fee-for-service contracts.
8. Costs of delivery at procedure level in the public and private sectors
9. Administrative costs to be incurred, e.g., setting up the NHI fund public entity, District Health Management Office for each health district, hospital boards, scaling up the Office of Health Standards compliance, National Health Commission (NHC), NHI Fund, NHI Benefits Committee, Clinical Peer Review Committee, National Health Information Repository and Data System, Health Patient Registration System (HPRS), Patient Registry and Master Patient Index (MPI) service, a system of “health technology assessment”, Health Provider Index (HPI), “a national health products list” which will set out what is allowed at different “provider levels”.

A number of other costing studies for NHI implementation have been done, based on a wide range of assumptions. These yield widely varying expenditure projections. A model by Sule Calikoglu and Patrick Bond generated estimates in 2006 prices ranging between R77 billion and R174 billion per annum, with a preferred estimate of R148 billion, which translates into R189 billion at 2009 prices (Econex 2010b). An estimate by McIntyre, Ataguba and Cleary suggests R131 billion per annum in 2009 Rands (Econex 2010b)

Econex’s model indicates that under the most optimistic efficiency savings assumptions and the severe rationing, the cost of NHI in 2009 prices was likely to be roughly R179 billion per annum. Given that about R62 billion was spent on public health care in 2009, this implied an additional R112 billion in 2009 prices to be funded from the fiscus. The most likely estimate, however, lay between R216 and R244 billion per annum in 2009 prices (Econex 2010b)

McLeod, Grobler and Van der Berg (2010), using cost-curve data from existing medical schemes, estimated the costs of a range of benefit packages, assuming different levels of delivery efficiency, reflected in Table 10. The largest efficiency gain was modelled as 50 percent of medical scheme costs based on staff model health maintenance organisations. 30%, 20% and no efficiency gains were also modelled. The five benefit packages modelled were:

1. Medical Scheme Prescribed Minimum Benefits (PMBs): consists of PMBs in-hospital excluding maternity; PMBs for maternity in hospital; PMBs for chronic medicine; and PMBs for related visits and tests
2. Basic Benefits: PMBs+ Primary Care: consists of the PMBs as above, with primary care including specialist costs
3. High Cost Benefits: PMBs+ all In-Hospital: consists of the PMBs as above; primary care including specialists; and all benefits provided in-hospital
4. Core Benefits: PMBs+ Primary Care + In-hospital: consists of the PMBs as above, PHC including specialists and all benefits provided in-hospital
5. Fully Comprehensive: all health care benefits: consists of the PMBs as above; Primary care including specialists; all benefits provided in-hospital; and a final “slice” of benefits that includes non-PMB out-of-Hospital non-primary care costs.

Table 10: Estimates of NHI costs in 2009 R billions by : McLeod, Van der Berg and Grobler

Cost in Rbn (2009 terms) of Benefit Package Offered by NHI					
Efficiency assumption	Medical Scheme Prescribed Minimum Benefits (PMBs)	Basic Benefits: PMBs+ Primary Care	High Cost Benefits: PMBs+ all In-Hospital	Core Benefits: PMBs+ Primary Care+ In-Hospital	Fully Comprehensive: all healthcare benefits
Medical schemes efficiency: 100% of cost	156	251	224	319	334
Moderate improvement: 80% of cost	125	201	179	255	267
Presumed public sector cost: 70% of cost	109	176	157	223	234
Staff model efficiency: 50% of cost	78	126	112	160	167

Note: Excludes administration and managed care costs

Source: McLeod, Van der Berg and Grobler (2010:p33)

As can be seen from the table, fully comprehensive care with no efficiency gains could cost as much as R334 billion per annum in 2009 prices, decreasing to R234 billion if a 30% efficiency gain were realised. With only basic benefits and an efficiency gain of 30%, the cost per annum would still be R176 billion when calculated at 2009 prices.

While there is considerable variation across costing models, all point to the fact that resources required for the NHI are substantial. The White Paper’s costing is not out of line with R256 billion at 2010 prices and is not out of line with other costings. The possible variation, however, is extremely large, which makes the task of revenue raising very difficult indeed. While it is understood that the

White Paper represents a strategic policy perspective, greater institutional design and implementation detail is required to understand its resource requirements.

A major area of concern is that the revenue shortfall in the White Paper of R71.9 billion (presented in Table 9) is contingent on a real growth of 3.5% of GDP. Should the growth rate be at 2%, then the shortfall anticipated by the White Paper would increase markedly to R108 billion. According to the South African Reserve Bank, the real GDP growth was 1.6% in 2014, 1.3% in 2015 and was forecast in November 2016 to be 0.4%, 1.2% and 1.6% in 2016, 2017 and 2018 respectively. Should the average real growth rate fall below 2%, it is likely that the R108 billion figure could substantially understate the actual shortfall. In a submission to the Davis Tax Committee, Econex – using the same NHI costs as the White Paper, but more recent real growth forecasts – arrived at an NHI annual shortfall of about R111 billion in 2010 prices by 2025/26 (Econex 2016).

Given the large amounts at stake, it would be critical to manage the fiscal risk by linking expenditure outlays to available fiscal resources. Here credible cost scenarios play a pivotal role and their absence could compromise the goals of the NHI. A case in point is that of Ireland, where the White Paper on Universal Health Insurance in 2011 promised implementation by 2016, without providing either costings or details of the service package. In November 2015, after an Economic and Social Research Institute study indicated it was unaffordable, given that total public health spending would have to increase by between €666 million and €2 billion (3.5 to 11%), the Irish government abandoned its plan (*Irish Times* 2015).

9 MACROECONOMIC IMPACTS OF NHI

In addition to promoting equity (e.g., by reducing risk of impoverishment through catastrophic health spending), the NHI could also yield economic benefits. The NHI White Paper suggests that a one year improvement in a nation's life expectancy could increase GDP per capita by 4% in the long run and that higher labour productivity, increased labour participation and reduced absenteeism could lead to an additional 0.5% increase in GDP growth. Because health care expenditure in an economy has been estimated to create a 5% Keynesian multiplier effect, the NHI White Paper posits that each R1 extra spent on health care would create R0.05 extra economic activity in the long run. The National Department of Health cited a 2012 KPMG report on the effect of productivity gains:

A KPMG economic analysis of NHI suggests that if the NHI improves the health of the labour force resulting in productivity gains of 10% between 2012 and 2020 (half of the improvement in productivity seen in other countries), the economic benefits would outweigh the economic costs of implementing NHI (KPMG 2016:4).

More research is, however, required to empirically establish the nature and magnitude of the link between health expenditure and economic growth. The average South African life expectancy increased by 9.1 years between 2004 and 2015 but this was not accompanied by concomitant GDP growth. Moreover, it is contested whether greater life expectancy causes greater GDP growth and higher incomes, or vice versa. The South African Private Practitioners Forum (SAPPF), in its submission to the DTC (SAPPF 2016:23), contends that causality runs from higher incomes to longer life expectancy:

This statement by the White paper is, in fact, disproved by the bulk of the academic literature, which strongly suggests that causation runs in the opposite direction. For

example, this relationship was confirmed by a seminal 1996 study by economists Lani Pritchett and Lawrence Summers, who showed the dramatic effect that increases in incomes can have on health. They found a strong causative effect of income on infant mortality and demonstrated that, if the developing world's growth rate had been 1.5 percentage points higher in the 1980s, half a million infant deaths would have been averted. The most probable cause for the lack of correlation between life expectancy and wealth in South Africa is probably the 38% extended unemployment figures, which remain unconsidered. Even providing the indigent with all-encompassing free health services will not make up for lacking nutrition, sanitation and clean water that could be obtained by increasing employment levels (SAPPF 2016).

The White Paper also implicitly assumes a high degree of substitution of expenditure from medical schemes to the public sector – in other words, that households will simply redirect their health spending from medical aid scheme membership tariffs towards NHI funding or increased tax payments. However, if higher income earners retain private medical cover despite mandatory contributions to NHI, this would substantially increase the proportion of GDP devoted to health – which would have macroeconomic consequences for household disposable income, consumption and economic growth. Few higher income households would stop using private sector services in favour of public services if the quality of services offered by the public sector were perceived to be lower than that of the private sector, or if the mix of services in the NHI benefit package did not correspond with consumer preferences. In the early stages of NHI implementation, the White Paper envisages mainly a PHC, preventative thrust. Higher income earners, however, typically require coverage for catastrophic expenditures, not PHC out of pocket expenditure which comprises a relatively small proportion of their incomes (Van den Heever 2011).

Other crucial variables in NHI financing are the low levels of formal employment and high levels of unemployment and informal sector employment in South Africa, all of which translate into a narrow tax base. The attainment of UHC worldwide has been predicated on compulsory rather than voluntary prepayment. This is likely to present a challenge, however, for fiscally constrained developing countries, such as South Africa, where large proportions of the population are not in regular paid employment. In order to cater for the informal sector and unemployed, sole reliance cannot be placed on payroll taxes.

Empirical studies in Colombia, Mexico and Thailand have raised concerns about perverse labour market incentives for jobseekers where the same benefit package is offered to both formal and informal sectors. If the benefits are similar in both sectors, workers may choose to remain in the informal sector to avoid the payroll deductions, reducing formal employment in some labour categories and retarding the formalisation of the economy (World Bank 2015).

To explore the impact of tax-financed UHC schemes on macroeconomic aspects of labour supply, asset holding, inequality, and welfare, Huang and Yoshino (2016) construct a dynamic stochastic general equilibrium model with heterogeneous agents who have different education levels, employment statuses and probabilistic health expenditure shocks depending on whether they are young or old. The model, calibrated to the Thai economy, displays characteristics common to developing economies, such as informal employment and tax avoidance. In the model, government implements a tax-financed UHC scheme through which the informal and old-age agents can access health care with a lower out-of-pocket ratio, financed by government revenue. To balance its budget, the government faces 3 options: (1) increasing the labour income tax rate for formal workers by 2.58% (the tax rate difference with and without the universal coverage scheme), (2) increasing the consumption tax by 1.20%, or (3) increasing the capital income tax by 4.35%. Under

such a UHC, equity improves, but there are efficiency trade-offs as distortions are introduced into the labour market. Financing UHC through labour income or consumption taxes reduces labour supply, whereas financing through capital income tax increases this supply:

At the disaggregate level, the results are consistent with the literature that labor income tax has the highest distortion for the labour supply. We find that in the formal sector, where the labour income tax is enforced, labour supply is discouraged more than with the less-distortive consumption tax. Agents with low education are especially less willing to work, at a reduction of 2.81%, compared with only 0.42% when the consumption tax is used to finance the scheme. (Huang and Yoshino 2016, 16)

In all three UHC tax financing scenarios, there are negative impacts on output, largely due to declining aggregate capital. Capital tax could be preferable to the other two taxes, given that it tends to increase labour supply and is associated with a smaller reduction of capital.

This suggests that further research needs to be performed on the type of behavioural responses likely in South Africa.

10 PRINCIPLES OF GOOD TAX DESIGN

The White Paper envisages a “moderate rise” in total health spending to GDP ratio over the medium term (p 48). This is expected to be financed partially through the “restructuring of medical scheme arrangements” and the introduction of the proposed NHI fund, which is envisaged to trigger “a shift from private spending to public health expenditure” (p48). In general, an increasing tax burden on households is anticipated to be offset by the reduced burden of medical aid membership fees. It is, however, acknowledged that the individual impacts on individual household would be conditional on the specific design of the NHI (e.g. its benefit package) and the behavioural responses of individual households.

A second source of sustainable funding for NHI would be economic growth, which would mobilise additional tax revenues without significantly altering the existing tax structure, and would permit tax increases “without unduly impacting on households’ disposable income” (p48).

Where changes to the tax system are required, the White Paper articulates the following design principles. These are listed verbatim below:

1. *Equity*: The tax system should impose obligations on all residents or qualifying taxpayers in proportion to their ability to contribute, with tax rates set after taking into account the economic burden or potential welfare losses associated with alternative tax bases and rate structures. A tax system should incorporate both elements of equity: horizontal (people with equivalent incomes pay comparable amounts of tax) and vertical (those with higher incomes pay more, according to their ability to do so). The high levels of income inequalities in South Africa require that a progressive tax system be maintained.
2. *Efficiency*: The tax system should minimise economic distortions, i.e. have a limited unintended burden on the productive economy and consumption patterns. It must produce sufficient income for the state to meet its spending needs, collected in a manner that interferes as little as possible with allocation choices. The costs of administration, collection and compliance should also be taken into account in assessing the efficiency of the tax system.
3. *Simplicity*: Tax administration should be designed to collect revenue in a manner that is timely and convenient to taxpayers, as well as simple to understand.

4. *Transparency and certainty*: The timing of tax collection and calculation of tax liability should be known and certain to allow for proper planning. Transparency implies that a well-reasoned rationale exists for the imposition of taxes and that tax legislation is accessible and comprehensible.
5. *Tax buoyancy*: Changes in national income and discretionary changes to the tax system affect tax revenue. Tax buoyancy measures the ratio of change in tax revenue relative to the change in the tax base. In practical terms this refers to the ability of the tax system to raise revenue during all phases of the business cycle. It is important to ensure that the tax system raises sufficient revenue, while contributing to a counter-cyclical fiscal framework.

While acknowledging that there may be trade-offs among these principles, the White Paper states that these principles of good tax design correspond closely to the NHI principles (outlined in Section 4 on page 4), and that a balance must be struck which avoids “economic disruption or a breakdown in solidarity” when making crucial policy decisions relating to the appropriate tax base and mix, the trade-off between efficiency and equity; and the degree of progressivity of the tax system.

11 SUMMARY OF NHI FINANCING OPTIONS PROPOSED BY THE WHITE PAPER ON NHI

The first part of this section summarises the various revenue options identified in the White Paper. The second part presents various tax scenarios to fund the estimated R71.9 billion NHI funding shortfall (in real 2010 prices) by 2025/26, identified in *Table 9: Projection of NHI costs adapted from the Green Paper* on page 27.

11.1 Potential sources of revenue identified by the White Paper

The advantages and disadvantages for various revenue instruments are summarised below:

Table 11: Sources of revenue for NHI identified in the White Paper

REVENUE SOURCE	DEFINITION	ADVANTAGES	DISADVANTAGES
Payroll tax	Taxes calculated on payroll, as either employer or employee contributions or both. This is similar to the present Skills Development Levy. Flat rates or sliding rates may be used. An earnings ceiling may be prescribed at which the tax is capped in nominal terms.	Payroll taxes could be a significant source of revenue. The current level at which payroll taxes are set is regarded as low. It would be a buoyant and stable source of revenue and administratively simple. Health is one amongst several social benefits that could be financed in this way	A flat rate would be regressive. A sliding scale would be progressive. An earnings cap on a sliding scale would introduce greater regressivity. By adding to the costs of employment, these tax instruments may retard job creation in the formal sector and increase informal and unprotected work. Very wealthy individuals are often not “employed” but derive their income from investments, and or inherited wealth. They would not be subject to this tax.

REVENUE SOURCE	DEFINITION	ADVANTAGES	DISADVANTAGES
Surcharge on income tax	Taxable income is calculated as gross income minus allowable deductions (including business expenses and contributions to retirement funds). Gross income includes income from employment and capital income (interest and profits in the case of unincorporated businesses). The current personal income tax structure is progressive, with marginal tax rates ranging between 18% and 41%. The proposed surcharge would be on the same base. Australia introduced a surcharge on taxable income in 1984 known as the Medicare Levy.	A surcharge is seen as administratively feasible "as it would be based on a well-established system" (p53).	A higher personal income tax burden would reduce disposable income and household consumption and savings (which may compromise investment and future economic growth).
Value Added Tax (VAT) increase	Taxes levied on transactions or goods and services, irrespective of the circumstances of buyer or seller.	The current VAT rate of 14% "is moderate by comparison with the international average (16.4 per cent)" (p 53). VAT is broad based, reaching both the formal and informal economies. VAT is also buoyant, generating a substantial and stable share of GDP in tax revenue.	Consumption taxes such as VAT are considered less distortionary in resource allocation, do not undermine formal sector employment or savings. Despite zero-rating of basic necessities, there is an equity concern that VAT is regressive.
Increases in duties on alcohol and tobacco products	Specific excises are a tax on each unit of output or sale of a good, unrelated to the value of a good. Ad valorem duties are levied on commodities as a certain percentage of their value.	By reducing consumption of these harmful products, the burden of disease is reduced.	High rates of tax may lead to smuggling. Revenue yields are likely to be small in relation to the quantum of funding required for NHI. About R11.7 billion in revenue was raised from cigarette sales and R14.8 billion from taxes on alcohol sales in 2012/13.
Securities transfer tax	It is currently set at a rate of 0.25 per cent and contributed R 3.3 billion to the fiscus in 2012/13		This is seen as a possible revenue source but there are no clear reasons why it should be dedicated to health expenditure rather than general revenue. Revenue potential is limited. It is seen as a volatile revenue source which is costly to collect.
Estate duty	The estate duty is a form of wealth tax. It yielded R1 billion in 2012/13.		This is seen as a possible revenue source but there are no clear reasons why it should be dedicated to health expenditure rather than general revenue. Revenue potential is limited. It is seen as a volatile revenue source which is costly to collect.
Carbon tax	The first phase of the proposed carbon tax regime, which will allow a minimum tax-free threshold of 60 per cent, is projected to generate over R8 billion per annum. It is not intended to increase the overall tax burden, and offsetting	The carbon tax can be linked to health concerns through adverse impacts on the environment and quality of life associated with climate change. Secondly, the revenue raising potential is higher	However, this should not be seen as a tax base that will continue to expand indefinitely. The primary objective of the carbon tax is to encourage behavioural change through the pricing of an externality. The ideal is to see an eventual decline in the carbon intensity of the

REVENUE SOURCE	DEFINITION	ADVANTAGES	DISADVANTAGES
	measures to address adverse impacts on low-income households and industry competitiveness will be introduced.	than the other taxes explored and could possibly increase in subsequent phases (from 2020) as the tax free thresholds are progressively decreased.	economy that should ultimately lead to a decrease in associated tax revenues over time.
Current employer contributions to medical schemes	Current employer contributions (subsidies)	Public medical scheme contributions (to the Government Employees Medical Scheme, the Police Medical Scheme, Parliamentary Medical Scheme, Municipal Workers Union Medical Scheme), State entity medical schemes (e.g. Transmed) and private medical schemes to which State employees belong) could be reallocated towards the funding requirements for NHI	
Remove the tax credit for membership to medical schemes and for some medical expenses		The scaling down of this tax expenditure could augment the funds available for the NHI and thereby limit the need for additional tax increases.	However, the phasing-out of the medical tax credits can only happen once the NHI is fully operational. In addition, the needs of people with disabilities and the aged and the financial implications for such taxpayers would require special attention.

Source: White Paper on NHI, 2015: pp 50-53

11.2 Tax rate scenarios

The tax scenarios set out in the White Paper aim to explore the impact of shifting from private medical funding to an NHI equivalent of about 2% of GDP through raising an additional R71.9 billion (in 2010 prices) to cover the NHI shortfall identified in Table 9 on page 27. The tax scenarios model various tax mix permutations of increases in payroll tax, personal income tax (PIT) and value-added tax (VAT). Offered merely as broad illustrations, these are “not proposed as overall tax increases” (p 54).

The five scenarios to raise an additional 2% of GDP are modelled:

1. Scenario A: an increase of 1% in payroll tax, 1% marginal PIT rates which is equivalent to a 1% increase in surcharge on, and 1% of VAT
2. Scenario B: an increase of 2% in payroll taxes and 2% increase in marginal PIT rates
3. Scenario C: a 2% increase in marginal PIT rates and 1.5% increase in VAT
4. Scenario D: a 2% increase in payroll tax and a 1.5% increase in VAT
5. Scenario E: a 4% increase in marginal PIT rates.

Actual revenue yielded would depend on a number of factors, including the tax base targeted, the structure of rates and exemptions, the particular tax mix selected and the rate of real GDP growth.

The following assumptions on the structure of the tax instruments underpin the modelling:

1. In respect of the payroll tax, the employer would pay a percentage of the total amount paid in salaries to employees, similar to the current Skills Development Levy. No upper or lower threshold is assumed. Such thresholds would decrease revenue yields and would require a higher percentage of salaries to be taxable.
2. There is no change in the number of VAT items zero-rated.
3. The surcharge on taxable income is identical to an increase in PIT rates. The scenarios assume that a percentage point increase would apply across all the PIT brackets. If the marginal tax rate on the bottom bracket is left unchanged (to avoid changing the tax free threshold), the simulations suggest that the percentage increase for the remaining brackets would need to be doubled in general.

Table 12: Alternative tax scenarios to fund a R71.9 billion (at 2010 prices) NHI funding shortfall by 2025

		Payroll tax	Surcharge on taxable income	Increase in value-added tax
Scenario A: Surcharge on taxable income, VAT increase and payroll tax	2016/17	0.5%	0.5%	0.0%
	2018/19	0.5%	0.5%	0.5%
	2022/23	1.0%	1.0%	0.5%
	2023/24	1.0%	1.0%	1.0%
	2024/25	1.0%	1.0%	1.0%
Scenario B: Payroll tax and surcharge on taxable income	2016/17	0.5%	0.5%	
	2019/20	1.0%	1.0%	
	2022/23	1.5%	1.5%	
	2025/26	2.0%	2.0%	
Scenario C: Surcharge on taxable income and VAT increase	2016/17		0.5%	
	2018/19		0.5%	0.5%
	2019/20		1.0%	0.5%
	2020/21		1.0%	1.0%
	2022/23		1.5%	1.0%
	2024/25		1.5%	1.5%
	2025/26		2.0%	1.5%
Scenario D: Payroll tax and VAT increase	2016/17	0.5%		
	2017/18	0.5%		0.5%
	2019/20	1.0%		0.5%
	2022/23	1.5%		1.0%
	2024/25	1.5%		1.5%
	2025/26	2.0%		1.5%
Scenario E: Surcharge on taxable income	2016/17		0.5%	
	2017/18		1.0%	
	2019/20		1.5%	
	2021/22		2.0%	
	2022/23		2.5%	
	2023/24		3.0%	
	2024/25		3.5%	
	2025/26		4.0%	

Source: White Paper on NHI, p55

Table 13 compares the 2014/15 average PIT rates by income category with those after a 1%, 2% and 4% increase in average PIT rates, and the associated increases in tax liability per income category.

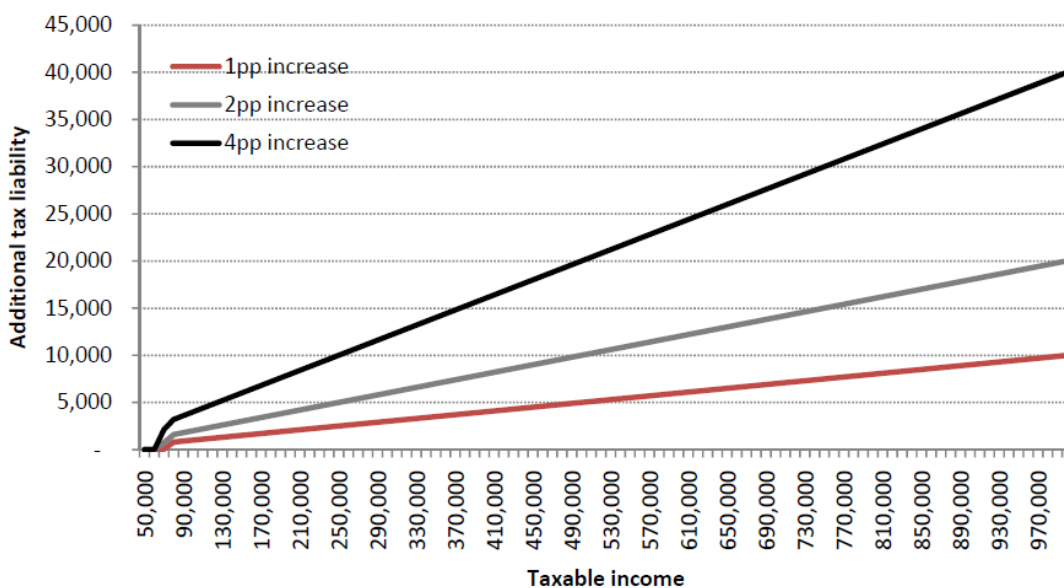
Table 13: Average PIT rate changes, and changes in tax liability (in rands)

Taxable income	Average tax rate				Change in tax liability		
	Current	1pp increase	2pp increase	4pp increase	1pp increase	2pp increase	4pp increase
70,000	0.0%	0.1%	1.1%	3.1%	43	743	2,143
100,000	4.7%	5.7%	6.7%	8.7%	1,000	2,000	4,000
150,000	9.2%	10.2%	11.2%	13.2%	1,500	3,000	6,000
250,000	14.9%	15.9%	16.9%	18.9%	2,500	5,000	10,000
500,000	23.7%	24.7%	25.7%	27.7%	5,000	10,000	20,000
750,000	28.7%	29.7%	30.7%	32.7%	7,500	15,000	30,000
1,000,000	31.8%	32.8%	33.8%	35.8%	10,000	20,000	40,000

Source: White Paper on NHI, 2015: p56

Figure 3 below graphically illustrates the increase in personal income tax burden by income category associated with a 1%, 2% and 4% increase in marginal tax rates.

Figure 3: Additional tax liability (in Rands) by income category, associated with increases in marginal tax rates



Source: White Paper on NHI, 2015: p56

Table 14 illustrates the possible changes in tax structure associated with marginal PIT rate increases per income bracket, as well as tax rebates and tax free thresholds.

Table 14: Personal income tax structure in 2014/15 and under different scenarios for a surcharge on PIT in 2025/26 (in 2014 prices)

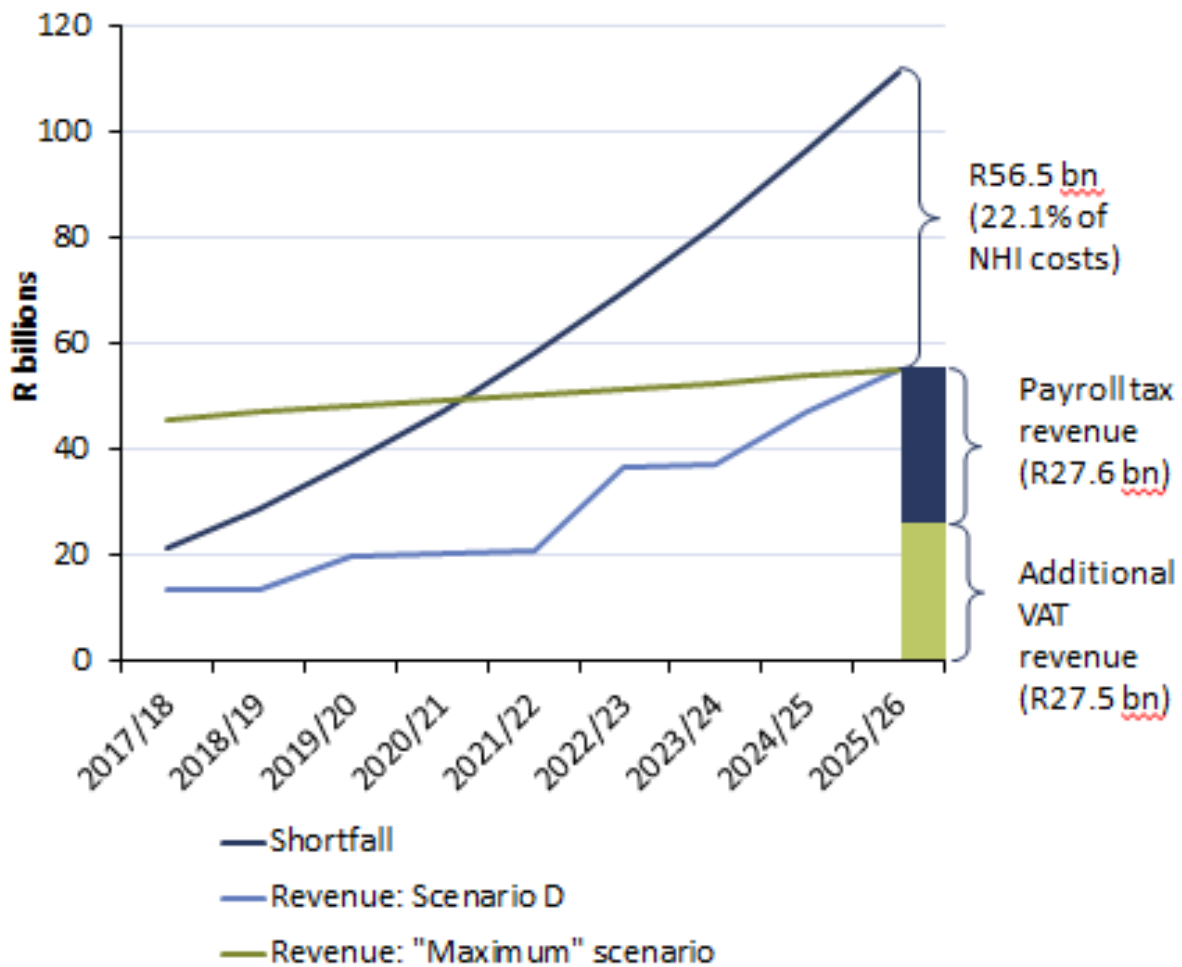
Taxable Income	Current tax rates	Scenario B tax rates	Scenario C and D tax rates	Scenario E tax rates
R0 - R181 900	18.0%	19.0%	20.0%	22.0%
R181 901 - R284 100	26.0%	27.0%	28.0%	30.0%
R284 101 - R393 200	31.0%	32.0%	33.0%	35.0%
R393 201 - R550 100	36.0%	37.0%	38.0%	40.0%
R550 101 - R701 300	39.0%	40.0%	41.0%	43.0%
R701 301	41.0%	42.0%	43.0%	45.0%
Rebates				
Primary	R13 257	R13 257	R13 257	R13 257
Secondary	R7 407	R7 407	R7 407	R7 407
Tertiary	R2 466	R2 466	R2 466	R2 466
Tax free thresholds				
Below age 65	R73 650	R69 774	R66 285	R60 259
Age 65 and over	R114 800	R108 758	R103 320	R93 927
Age 75 and over	R128 500	R121 737	R115 650	R105 136

Source: White Paper on NHI, 2015: p57

12 DISCUSSION OF FINANCING OPTIONS

It has been estimated by Econex that there would be a shortfall in covering NHI costs using the scenarios presented in the White Paper. They conclude that this would not be covered by the payroll tax and higher VAT. While other taxes may help cover some of the shortfall (e.g., higher taxes on alcohol and tobacco), these would not be sufficient. Econex also predict a shortfall using a scenario requiring a payroll tax of 2% and a VAT increase of 1.5% (Erasmus, M 2016).

Figure 4: Estimated shortfall in funding NHI costs



Source: Econex (Erasmus, M 2016)

The shortfall in 2025/26 of R71.9 billion in 2010 prices may seem optimistic because of the assumption of 3.5% GDP growth. Assuming 2% growth, this shortfall would grow to R108 billion in 2010 prices. Nonetheless, PwC estimate that even the R71.9 billion shortfall cannot be funded by most of the tax scenarios in the White Paper (PwC 2016). They suggest that tax increases would need to be greater. This calculation may be found in Table 15 below.

Table 15: Tax rate scenarios for funding an NHI shortfall in 2025/26 of R72 billion (2010 prices)

Table 5: Alternative tax scenarios to fund a R71.9 billion (2010 prices) NHI funding shortfall by 2025/26								
	White paper				PwC Estimate			
	Payroll tax	Surcharge on taxable income	Increase in value-added tax	Total additional tax raised 2014/15	Total additional tax required	Payroll tax	Surcharge on taxable income	Increase in value-added tax
Scenario A: Surcharge on taxable income, VAT increase and payroll tax	1%	1%	1%			1%	1%	2%
Additional tax 2014/15	14,032	17,540	18,664	50,236	68,900	14,032	17,540	37,328
Scenario B: Payroll tax and surcharge on taxable	2%	2%				2%	2.5%	
Additional tax 2014/15	28,064	35,079		63,143	71,913	28,064	43,849	
Scenario C: Surcharge on taxable income and VAT increase		2%	1.5%				2%	2%
Additional tax 2014/15		35,079	27,996	63,075	72,407		35,079	37,328
Scenario D: Payroll tax and VAT increase	2%		1.5%			3%		1.5%
Additional tax 2014/15	28,064		27,996	56,060	70,092	42,096		27,996
Scenario E: Surcharge on taxable income		4%					4%	
Additional tax 2014/15		70,159		70,159	70,159		70,159	

Source: PwC, 2016

It is suggested that to fund the shortfall a surcharge on taxable income, payroll tax or increase in VAT would have to be between 0.5 and 1% higher than that presented in the White Paper. A greater shortfall, due to reduced rates of growth, would require even larger increases in tax rates.

To fund a R108 billion (2010 prices) shortfall in 2025/26 would require even greater tax increases (see Table 16). This would require, for instance, a surcharge on personal income to be in excess of 6%.

Table 16: Tax rate scenarios for funding an NHI shortfall in 2025/26 of R108 billion (2010 prices)

Alternative tax scenarios to fund R108 billion (2010 prices) NHI funding shortfall by 2025/26				
	Payroll tax	Surcharge on taxable income	Increase in value-added tax	Total additional tax raised 2014/15
Scenario A: Surcharge on taxable income, VAT increase and payroll tax	2%	2%	2.5%	
Additional tax 2014/15	28,064	35,079	46,660	109,803
Scenario B: Payroll tax and surcharge on taxable income	3%	4%		
Additional tax 2014/15	42,096	70,159		112,255
Scenario C: Surcharge on taxable income and VAT increase		3%	3%	
Additional tax 2014/15		52,619	55,992	108,611
Scenario D: Payroll tax and VAT increase	4%		3%	
Additional tax 2014/15	56,128		55,992	112,120
Scenario E: Surcharge on taxable income		6%		
Additional tax 2014/15		105,238		105,238

Source: PwC, 2016

13 TAX CREDITS

South Africa has recently reformed the tax treatment of medical expenses within the personal income tax system. Moving towards NHI implementation will entail further reform.

Prior to 2012/13, taxpayers could deduct their contributions to registered medical schemes or funds with similar provisions, subject to monthly caps that were adjusted annually. Such contributions could be for the benefit of the taxpayer, her or his spouse and any other dependant as defined in the Medical Schemes Act of 1998. Employer contributions to employee medical schemes were added to the taxable income of the employee as a fringe benefit. Taxpayers could claim a deduction of medical scheme contributions up to the capped amounts, regardless of whether these contributions were made by the employee or by the employer on her or his behalf. Taxpayers who did not belong to a medical scheme could deduct qualifying OOP medical expenses to the extent that such expenditure exceeded 7.5 per cent of taxable income. This relief was also available to medical scheme members, to the extent that the aggregate of the disallowed medical scheme contributions and out-of-pocket qualifying medical expenses exceeded 7.5 per cent of taxable income.⁴

In effect, this system of medical expense deductions resulted in better off individuals receiving larger tax breaks (in absolute (Rand) terms) because of the progressive nature of the PIT system. This inequity was a driving force in the decision to replace this system with a system of medical tax credits.

The Medical Tax Credit is a fixed monthly amount which increases according to the number of dependants. As such, the same tax relief is provided to all taxpayers (with the same number of dependants) regardless of their tax bracket. In addition to being more equitable than the previous arrangement, this has the advantage of being administratively simple and highly transparent.

The Medical Tax Credit is a form of tax expenditure. In the current tax year (2016/17), the cost to the fiscus amounts to R17.4 bn. In effect, this is the contribution of the State towards the health care costs of taxpayers in the private health care system. In his submission to the DTC sub-committee, Prof. Alex van den Heever from Wits University presented an interesting comparison between the value of the medical tax credit and per capita government spending on health, summarised in Table 17 below. It is interesting to note that the medical tax credit is not entirely dissimilar in magnitude to per capita state health spending.

Alignment with NHI will need to be carefully considered and can be achieved in a variety of ways, ranging from abolishing the tax credit (as proposed by the DA) to viewing it as one of the mechanisms for providing health care. At the time of introducing the new tax arrangements, the Treasury noted that 'The shift to tax credits will also facilitate the transition of medical schemes into a National Health Insurance framework, in that the fiscal contribution is transparent, equitable and limited, and likely to be in line with or less than overall insurance costs per person' (Treasury, National 2011).

⁴ The tax treatment for persons aged 65 and over was different and more generous, but for simplicity we discuss just those taxpayers under 65, in this section.

Table 17 Per capita value of the universal subsidy framework divided between state provision and the tax credit for medical scheme members in 2014 prices

Subsidy	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14
Tax credit	2 321	2 000	1 872	2 117	2 239	2 342	2 385	2 694	2 517
Public health	2 013	1 904	2 217	2 426	2 719	2 832	2 981	3 057	3 052

Source: Van den Heever, 2016, personal communication

14 CONCLUDING REMARKS

The large degree of uncertainty and lack of common understanding of how the NHI will be implemented and operate is of concern, given the magnitude of the proposed reform. International experience in implementing UHC demonstrates that not only greater technical skills, but also higher order political skills are essential, since any fundamental re-organisation of the health system will invariably create winners and losers:

These skills will be put to the test in, say, adopting explicit targeting, choosing the benefit package expansion path from among those already supported by strong provider interest-groups, balancing short-term political gains secured through populist promises against long-term risks of sustainability, or bringing powerful new players (such as the pharmaceutical industry or associations of specialists in tertiary care) into day-to-day decision making on budget allocations (World Bank 2015, 193).

Inadequate engagement at the early stages of NHI may well create resistance to change in the latter stages of implementation – much like the e-tolls. The voice of the person in the street, the patient, seems conspicuous by its absence in a policy domain dominated by experts.

As illustrated in the preceding sections, there are a number of factors in the design of NHI, as well as its implementation, all of which have an impact on its financing trajectory. These include parameters on risk pooling, on health care purchasing and on provision. Risk pooling decisions include whether there would be a single or multiple purchaser, the level of consolidation of risk pools and their coverage and composition as well as the nature of the resources allocation formula (evidence and needs based, risk equalisation *etc.*). The structure of purchasing encompasses, *inter alia*, the scope and pricing of the benefit package (which had not yet been defined in the White Paper), contractual arrangements with health care providers such as GPs and hospitals, quality management systems, payment and information systems. Provision refers to the modalities of personal health service delivery by accredited public and private health care providers.

Although these parameters impact critically on the quantum and timing of the NHI financing requirement, they lie outside the DTC's mandate which is focused exclusively on the tax revenue

dimensions. Nonetheless, a few pertinent observations can be made based on the draft NHI White Paper. It is premature to be prescriptive on funding mechanisms at this stage, but the DTC believes that a discussion of funding principles underpinned by an independent assessment would add value to the debate at this formative stage.

1. There is currently substantial uncertainty about both the costs and funding shortfall of the NHI given the level of detail on institutional reforms and the lack of specifics on health financing system reforms. Detailed implementation plans and financing plans still need to be developed. The White Paper focuses on a R256 billion per annum funding increase need, at 2010 prices, in 2025, with a funding shortfall of about R72 billion assuming real average growth rate over the period of 3.5%. The additional cost per annum could, however, be substantially more than this.
2. The projected shortfall is highly sensitive to the economic growth rate assumed. The credibility of this assumption must be viewed relative to South Africa's sluggish growth performance over the last decade. Should the real annual growth rate reach just 2%, then the shortfall could be as large as R108 billion. Should the average growth rate dip below 2% (as is currently the case), then it is likely that even the R108 billion figure could substantially understate the actual shortfall.
3. It is difficult to estimate the potential economic benefits and costs without more implementation detail. While the draft White Paper is at a strategic policy level, costing requires a more detailed implementation framework. Realistic costing based on a well defined benefit basket is critical for assessing fiscal consequences, sustainability and revenue raising requirements.
4. The pace of implementation must be consistent with the fiscal resource envelope – detailed implementation plans should be sensitive to human, infrastructure and financial resource constraints. Design, sequencing and timing of implementation must be refined in the light of constraints, both financial and supply side, in order to ensure that risks are appropriately managed and the policy objectives of the NHI are not compromised. This is compatible with the phased implementation approach outlined in the White Paper.
5. There should ideally be a fiscal rule to link NHI spending with the availability of fiscal resources.
6. A great deal of the economic and fiscal impact depends on the shift from private to public financing, the role of private medical funds, fund administrators and health insurers, and the regulation of health care. Equally important are the behavioural responses of members of private sector medical aids and their perceptions of the quality of services they receive under the NHI. The highest earners are also the most internationally mobile.
7. The equity and efficiency impacts of alternative tax instruments (e.g., income tax, corporate tax, VAT) are highly country specific and arise from the cumulative impact of all tax measures and the expenditure side. The entire package should be considered when determining overall progressivity, rather than considering one instrument in isolation.
8. A combination of tax instruments with as broad a base as possible is likely to introduce fewer distortions of economic activity since lower rates would be required.
9. As NHI entitlement will result in a structural increase in spending, additional public expenditure should be financed by tax instruments which are sufficiently buoyant to yield a structural increase in revenues of the appropriate magnitude.

10. Given that the NHI introduces a universal benefit, it is appropriate that its financing base be as broad as possible, in the interests of social solidarity. The cumulative effect of the combination of tax instruments should be progressive.
11. The two points above mean that increases in VAT should not be ruled out as a funding source. Although this may be regressive, it will be offset through progressivity on the expenditure side.
12. Most OECD countries rely on PIT and social security taxes to fund UHC. Social security taxes would have to be introduced at high levels to fund the proposed NHI. Social security taxes cannot be the sole funding instrument in South Africa since, generally, benefits are linked to contributions. This would not be feasible in South Africa since a high proportion of the population is not in regular formal employment (i.e. unemployed or employed in the informal sector).
13. A surcharge on PIT may be preferable to an increase in payroll tax from an equity perspective because it is based on income sources beyond labour income, captures the self-employed and is less likely to adversely affect employment.
14. Excise taxes on alcohol, tobacco or sugar-based beverages are levied primarily to change behaviours, but high increases tend to lead to illicit trade, resulting in reduced collections, and are, in any event, unlikely to fund a significant proportion of the NHI funding requirement.
15. Given the considerable size of projected funding shortfalls, ***substantial increases in VAT or PIT and/or the introduction of a new social security tax would be required to fund the NHI.***
16. Any revenues raised to fund the NHI should not be earmarked (hypothecated) since this runs the risk of NHI being under-funded, but should be funded through general tax revenues (although there may be political “soft” earmarking).
17. Although the poor should be exempted from OOP payments, a role remains for user charges since cost-sharing with patients ~~can~~ [may](#) help [in](#) managing health care demand for non-essential, elective services, or where primary care referral gatekeepers are bypassed and patients go directly to a higher level of care. User charges may also cover services not catered for in the NHI benefit package.
18. The magnitudes of the proposed NHI fiscal requirement are so large that they might require trade-offs with other laudable NDP programmes such as expansion of access to post school education or social security reform.
19. Given the current costing parameters outlined in the White Paper, ***the proposed NHI, in its current format, is unlikely to be sustainable unless there is sustained economic growth.***

Bibliography

- 58th World Health Assembly. 2005. "Resolution 33: Sustainable health financing, universal coverage and social health insurance." World Health Organisation, Geneva, Switzerland.
- Akazili, J, B Garshong, M Aikins, J Gyapong, and D McIntyre. 2012. "Progressivity of health care financing and incidence of service benefits in Ghana." *Health Policy Plan.* 27 (Suppl. 1): 13-22.
- Amporf, E. 2013. "Equity of the premium of the Ghanaian national health insurance scheme and the implications for achieving universal coverage." *Int. J. Equity Health* 12: DOI: 10.1186/1475-9276-12-4.
- Australian Treasury. 2016. *2015-16 Final Budget Outcomes*. <http://www.budget.gov.au/2015-16/content/fbo/html/index.htm>.
- Belli, P. 2016. *Reflections on the White Paper, based on International Experiences, presentation to the DTC subcommittee on NHI*. World Bank.
- Brant, S, M Garris, E Okeke, and J Rosenfeld. 2006. *Access to care in rural China: A policy discussion*. Ann Arbor, MI, USA: Gerald R. Ford School of Public Policy, University of Michigan.
- Business Day. 2016. "NHI pilots fail to achieve targets." *Business Day*, 24 November.
- Chen, Y. 2013. *Thesis: Health care financing in China: what lessons China can learn from other countries on healthcare reform?* Hong Kong: Hong Kong University.
- Coombs, M. n.d. "Universal Coverage in Jamaica." Accessed January 02, 2017. http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=19100&Itemid=270.
- Couttolenc, B., and T. Dmytraczenko. 2016. *Brazil's Primary Care Strategy*. World Bank, Washington DC: Universal Health Coverage Studies Series (UNICO) Studies Series No. 2.
- d'Ávila Viana, A L, H P da Silva, and I Yi. 2015. *Universalizing health care in Brazil: Opportunities and challenges (Working Paper No. 2015-8)*. Geneva, Switzerland: UNRISD.
- Department of Health. 2015. *National Health Insurance for South Africa: towards universal coverage*. http://www.gov.za/sites/www.gov.za/files/39506_gon1230.pdf.
- Department of Health. 2016. "National Health Insurance, presentation to the DTC subcommittee on NHI (09 November 2016)."
- Department of Health. 2015. *Status of the NHI pilot projects*. <https://ndoh.dhmis.org/owncloud/index.php/s/R5cmdp0gY4Fa43Z/download?path=%2FNHI&files=NHI%20Pilot%20District%20Assessment%202015-%20FINAL.pdf>.
- Dong, Z, C W Hoven, and A Rosenfield. 2005. "Lessons from the past." *Nature* 433: 573-574.
- Econex. 2010b. *Estimating the Financial Cost of the NHI Plan*. http://econex.co.za/wp-content/uploads/2015/07/ECONEX_NHInote_7.pdf.
- Econex. 2016. *NHI funding options: making informed decisions*. 13 October 2016: Submission to the Davis Tax Committee on behalf of the Hospital Association of South Africa (HASA).

- Econex. 2010a. *Updated GP and specialist numbers for SA*. <http://econex.co.za/publication/health-reform-note-7/>: Health Reform Note 7.
- Erasmus, M. 2016. *NHI Funding Options: Making Informed Choices, presentation to the DTC subcommittee on NHI*. Econex.
- Frenk, J, E González-Pier, O Gómez-Dantés, M A Lezana, and F M Knaul. 2006. "Comprehensive reform to improve health system performance in Mexico." *Lancet* 368: 1524-1534.
- Frenk, J, O Gómez-Dantés, and F M Knaul. 2009. "The democratization of health in Mexico: financial innovations for universal coverage." *Bulletin of the World Health Organization* 87: 542-548.
- Giedion, U, E A Alfonso, and Y Diaz. 2013. *UNICO Study Series No. 25. The impact of universal coverage schemes in the developing world: a review of the existing evidence*. Washington DC, USA: World Bank.
- Health Systems Trust. 2016. *South African Health Review Review 2016*. <http://www.hst.org.za/publications/south-african-health-review-2016>.
- Healy, J, E Sharman, and B Lokuge. 2006. "Australia - health systems review." *Health Systems in Transition* (World Health Organisation) 8: 1-158.
- Huang, X., and N. Yoshino. 2016. *Impacts of universal health coverage: financing, income inequality and social welfare*. ADBI Working Paper Series 617, November 2016: Asian Development Bank Institute.
- Irish Times. 2015. *An outstanding policy failure on universal health insurance*. 23 November 2015.
- Knaul, F M, and J Frenk. 2005. "Health insurance in Mexico: achieving universal coverage through structural reform." *Health Aff. (Millwood)* 24: 1467-76.
- Kutzin, J, M Jakab, and S Shishkin. 2009. "From scheme to system: social health insurance funds and the transformation of health financing in Kyrgyzstan and Moldova." *Adv. Health Econ. Health Serv. Res.* 21: 291-312.
- Kwon, S. 2009. "Thirty years of national health insurance in South Korea: lessons for achieving universal health care coverage." *Health Policy Plan.* 24: 63-71.
- Langenbrunner, J C, and A Somanathan. 2011. *Financing Health Care in East Asia and the Pacific: Best Practices and Remaining Challenges*. Washington DC, USA: World Bank.
- Limwattanon, S, V Vongmongkol, P Prakongsai, W Patcharanarumol, K Hanson, V Tangcharoensathien, and A Mills. 2011. "The equity impact of Universal Coverage: health care finance, catastrophic health expenditure, utilization and government subsidies in Thailand." Consortium for Research on Equitable Health Systems , London School of Hygiene and Tropical Medicine, London, UK.
- Marken, Stephanie. 2016. *U.S. Uninsured Rate at 11.0%, Lowest in Eight-Year Trend*. Accessed October 11, 2016. <http://www.gallup.com/poll/190484/uninsured-rate-lowest-eight-year-trend.aspx>.
- McLeod, H., P. Grobler, and S. Van der Berg. 2010. *Preliminary estimate of NHI costing: McLeod-Grobler-Van der Berg model methodology and assumptions*. 18 February 2010: A briefing paper prepared for the National Treasury.
- National Audit Office UK. 2016. *The financial stability of the NHS*. 22 November 2016.

- Ng, C. 2015. *Universal Health Coverage Assessment: Malaysia*. http://gnhe.org/blog/wp-content/uploads/2015/05/GNHE-UHC-assessment_Malaysia.pdf, Global Network for Health Equity (GNHE).
- OECD. 2012. *OECD health care quality review: Korea*. Paris: OECD Publishing .
- OECD. 2016. *OECD Reviews of Health Systems: Mexico 2016*. Paris: OECD Publishing.
- OECD. 2013. *What future for health spending?* June 2013: OECD Economics Department Policy Note No 19.
- Oxfam. 2013. *Universal health coverage: Why health insurance schemes are leaving the poor behind*. Accessed October 03, 2016.
https://www.oxfam.org/sites/www.oxfam.org/files/bp176-universal-health-coverage-091013-en_.pdf.
- Paris, V, M Devaux, and L Wei. 2010. *OECD Health Working Paper No. 50. Healths systems institutional characteristics: A survey of 29 OECD countries*. Paris, France: OECD Publishing.
- PwC. 2016. "National Health Insurance, presentation to the DTC subcommittee on NHI."
- Sanger-Katz, M. 2017. "What Does Trump's Executive Order Against Obamacare Actually Do?" *New York Times* 21 January 2017.
- SAPPF. 2016. *Submission on NHI financing to the Davis Tax Committee*. 12 October 2016: South African Private Practitioners Forum.
- SARRAH. 2014. *Status of the NHI pilot districts*. Department of Health.
- Surender, R., R. Van Niekerk, and L. Alfes. 2016. "Is South Africa advancing towards National Health Insurance? The perspectives of general practitioners in one pilot site." *South African Medical Journal* 6 (11): 1092-1095.
- Task Force on Global Action for Health System Strengthening. 2009. *Global Action for Health System Strengthening 9*<http://www.jcie.org/researchpdfs/takemi/full.pdf>). Tokyo: Japan Center for International Exchange.
- Treasury, National. 2011. *Conversion of Medical Deductions to Medical Tax Credits* . Pretoria: National Treasury.
- Ugá, M A, and I S Santos. 2007. "An analysis of equity in Brazilian health system financing." *Health Aff. (Millwood)* 26: 1017-1028.
- Van den Heever, A. 2011. *Evaluation of the Green Paper on National Health Insurance*.
<http://hsf.org.za/projects/health-reform/national-health-insurance-project-developments/alex-van-den-heever-nhi-green-paper-submission>.
- Wagstaff, A. 2007. "Social health insurance reexamined, World Bank Policy Research Working Paper 4111." World Bank, Washington DC, USA.
- World Bank. 2015. *Going universal: how 24 developing countries are implementing universal health coverage reforms from the bottom up*. Washington DC: World Bank.
- World Health Organisation. 2010 . "Health systems financing: the path to universal coverage. World health report 2010." Geneva.

- Yip, W C, W C Hsiao, Chen W, S Hu, J Ma, and A Maynard. 2012. "Early appraisal of China's huge and complex health-care reforms." *Lancet* 379: 833-842.
- Yip, W, and A Mahal. 2008. "The health care systems Of China and India: performance and future challenges." *Health Affairs* 27: 921–932.
- Younger, S, Osei-Assibey, E & Oppong, F. 2015. *Fiscal incidence in Ghana*. Working paper, Tulane: Commitment to Equity Institute.