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Highest Attainable and Maximum Available: Measuring Compliance with the Obligation to Fulfil the Right to Health

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for the degree of Doctor of Philosophy (PhD) in Law

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For Allen Ginsberg

by Dorothea Grossman

Among other things,
thanks for explaining
how the generous death
of old trees
forms
the red powdered floor
of the forest.

Declaration

This thesis is submitted to the University of Warwick in support of my application for the degree of Doctor of Philosophy. It has been composed by myself and has not been submitted in any previous application for any degree

Abby Kendrick

Abstract

The right to health is often seen as being in enduring ‘crisis.’ On the one hand, social rights supporters see the pervasiveness of unsatisfied health needs as evidence of widespread violations of the right. On the other hand, social rights sceptics see the resource-conditional nature of the right as reason for its unenforceability. As a result, there is no tangible sense of where along the line between promising everything and delivering nothing the obligation to fulfil the right to health sits. This thesis suggests, however, that the right to health can be rescued. But the rescuer will require multi-disciplinary tools.

The contribution made by this thesis is the development of a methodological framework for measuring right to health compliance. The contribution is two-fold. Firstly, through a public health-devised measurement of avoidable mortality, the thesis provides a methodology for describing what type of health the right to health guarantees. And secondly, through an econometric estimation of efficiency, it provides a methodology for determining what level of this type of health the right guarantees for individuals under resource scarcity as well as for offering a signal with respect to the degree to which this standard is in fact being met. It is argued that compliance with the obligation to fulfil the right to health is a function of the duty-bearer’s ability and willingness to provide for health. The results suggest that not all unmet health needs signal a violation of the right to health. Some duty-bearers are doing as well as they can with the maximum resources available, notwithstanding the relatively low levels of health sometimes being achieved. At the same time, the results also reveal many instances where the actual level of health achieved falls well short of the level expected. But, on the basis of the willingness indicators used in this thesis, whether these shortfalls systematically characterise unwillingness is unclear. Instead, this question requires a more nuanced, qualitative, investigation. In the case of Brazil, the hypothesis of unwillingness appears to hold. The methodology can be used efficiently for signalling compliance.

Introducing the problem

Introduction

Consider two new lives. The first enters the world in Swaziland, the other in Switzerland. The Swazi newborn is 20 times more likely to die before reaching her fifth birthday than her Swiss counterpart. If she lives to childbearing age, she is 52 times more likely to die during pregnancy or childbirth. Overall, being born in Swaziland means she can expect to live 30 fewer years than if she was born in Switzerland, and the disease she will eventually die from could most likely otherwise have been avoided.¹ On witnessing the real life tragedy of those around the world afflicted with early mortality and preventable, recurrent disease, it would intuitively seem that a violation of human rights, the human right to health, has occurred. But, whilst framing life and death tragedies within the notion of rights leads one to hope that some improvement to the ill-fated situation could be made, the mere labelling of an unsatisfied health need as a human rights violation is unsatisfactory.

¹ WHO Global Health Observatory Data Repository. (Data on child and maternal mortality refers to 2013 and data on life expectancy at birth refers to 2012.)

Determining precisely when and under what conditions the identification of an unsatisfied health need indeed signals a violation requires further investigation.²

Economic and social rights in general, and the right to health in particular, are dependent on the availability of resources. And, given that the capacities of different countries vary in significant ways, the expectation that some countries have a duty to deliver the same standard of health as others may be unrealistic, just as the Swaziland/Switzerland example illustrates. An answer to the question of whether a human right has been violated needs therefore to take into account the ‘resources problem,’ which essentially requires answers to the following three questions: i) whose resources count as being available, that is, who are the duty-bearers?; ii) what level of resources are available?; and iii) are these resources sufficient for fulfilling the right to health? This is not to say that when these three questions are answered, the content of the right to health will automatically be known. Indeed, further questions, such as what is the substantial and recurrent threat from which the right to health protects?; which aspects of health does the right to health guarantee; and what standard of feasibility should be adopted when considering resource-sufficiency against other practicalities? are discussed in detail in Chapter 2. However, what it is to say is that without answers to these three resource questions, any conclusion as to whether the right to health has been violated could be naively presumptive.

² The concept of ‘violation’ is used here, and throughout the thesis, as a way of describing an unjustified breach of the right. It is not used to describe an infringement, i.e. a justified breach of the right. As will become clear in Chapter 2, implicit in my argument is the distinction between the human *right to health* and the human *interest in health*. The level of health to which the right guarantees is determined by the duty to fulfil it, which is determined with reference to the duty-bearer’s ability. The fact that some health interests are not met does not necessarily signal a violation of the right in the unjustified sense because meeting those needs may be outside of what is required of the duty-bearer. If, however, meeting those needs has been deemed to be within a duty-bearer’s ability, the right can be said to have been unjustifiably breached.

This thesis attempts to make progress in the pursuit of finding those answers. It starts from the premise that an assessment of compliance requires not only an assessment of the degree to which health, as a human interest, is enjoyed but an assessment of the duty-bearers' capacity to provide for health also.³ It is structured around the central hypothesis that compliance with the obligation to fulfil the right to health is a function of the duty-bearer's *ability* and *willingness* to provide for health.⁴ The challenge set out in this thesis is therefore to distinguish between those deprivations that come about as a result of factors beyond a duty-bearer's control (an inability to provide for health) and those in which a duty-bearer's action or inaction is a major contributing, if not causal, factor (an unwillingness to provide for health).

Before heading straight for the trees, however, this chapter takes a look at the wood. Since the notion of compliance expresses the connotation of something that is capable of being monitored and assessed, international law, as the ostensible monitor and assessor of the right to health across countries, is a reasonable place to

³ Whilst it could be argued that what is needed for measuring a duty-bearer's performance with respect to its human rights commitments is a measure of 'conformity', (i.e. the degree to which the duty-bearer acts in accordance with the duty) rather than a measure of 'compliance', (i.e. the degree to which the duty-bearer acts in accordance with the duty by reason that there is a duty to do so) in accordance with the existing literature, the language of 'compliance' is used throughout the thesis to investigate the relationship between duty-bearers and the fulfilment of the right to health. See, in particular, Chapman, A.R. "A "Violations Approach" for Monitoring the International Covenant on Economic, Social and Cultural Rights" (1996); UN OHCHR. *Human Rights Indicators: A Guide to Measurement and Implementation*, 2012; and Fukuda-Parr, S., T. Lawson-Remer, and S. Randolph. *Fulfilling Social and Economic Rights*, 2015

⁴ This is essentially how Cingranelli and Richards define the 'efforts' made by states in realising economic and social rights. Cingranelli, D.L., and D.L. Richards "Measuring Government Effort to Respect Economic and Social Human Rights: A Peer Benchmark." In *Economic Rights: Conceptual, Measurement and Policy Issues*, Hertel, S., and L. Minkler (eds.) pp. 214-232

start.⁵ Section I outlines the way in which the right to health is articulated by international law and discusses the constituent parts of the obligation to respect, protect and fulfil the right to health. Because the ground, which traces the history of the right to health, is already well-trodden, going through its provisions with the finest of fine-toothed combs is unnecessary.⁶ Instead this Section will offer an introduction to the right to health as it appears in international law with a focus on the way in which it gives rise to the central resources problem. Section II outlines the thesis' overarching method for approaching the resources problem, and Section III then returns to the central hypothesis, setting it out in more detail before finally outlining how it will be developed throughout the thesis.

I. The right to health in international law

A. Aspects of the right

Internationally, the right to health was first articulated in 1946 in the Constitution of the World Health Organisation (WHO), whose preamble states, “the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.”⁷ Subsequent international instruments have recognised health as a

⁵ See, e.g., the 1966 International Covenant on Economic, Social and Cultural Rights, Article 12 (UN ICESCR from here on); the 1979 Convention on the Elimination of All Forms of Discrimination against Women, Articles 11(1)f), 12, and 14(2b); the 1989 Convention on the Rights of the Child, Article 24; the 1990 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, Articles 28, 43(e), and 45(e); and the 2006 Convention on the Rights of Persons with Disabilities, Article 25.

⁶ See, e.g., Toebes, B., R. Ferguson, M.M. Markovic, and O. Nnamuchi. “The Right to Health: A Multi-Country Study of Law, Policy and Practice” (2014); Langford, M., A. Sumner, and A.E. Yamin. *Millennium Development Goals and Human Rights: Past, Present and Future*, 2013; Tobin, J. *The Right to Health in International Law*, 2012; Wolff, J. *The Human Right to Health*, 2012; Farmer, P.E. “Challenging Orthodoxies: The Road Ahead for Health and Human Rights.” (2008); and Farmer, P.E. *Pathologies of Power: Health, Human Rights, and the New War on the Poor*, 2004

⁷ WHO Constitution of the World Health Organisation, Preamble (1946)

human right in various ways,⁸ the most important being the International Covenant on Economic, Social and Cultural Rights (ICESCR),⁹ which opened for signature in 1996 and sets out, in Article 12, an elaborate statement of the human right to health:

1. The States Parties to the present Covenant recognise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.
2. The steps to be taken by the States Parties to the present Covenant to achieve the full realisation of this right shall include those necessary for:
 - (a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;
 - (b) The improvement of all aspects of environmental and industrial hygiene;
 - (c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;
 - (d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.¹⁰

Since then, the human right to health has come far out from the shadows and is now eminent in all kinds of contexts — whether academic, legal, economic, social or political. According to John Harrington and Maria Stuttaford, it “has moved to the centre of political debate and social policy across the globe ... It features prominently in the output of the United Nations and regional human rights bodies, as well as national courts and legislatures; national constitutions increasingly include explicit recognition of the right to health.”¹¹

⁸ See n. 5

⁹ There are currently 164 Parties to the ICESCR. However, it is also worth noting here that some of the states that have not ratified the Covenant are rather important in terms of size and economic and political power, such as the USA and Cuba. UN International Covenant on Economic, Social and Cultural Rights, Status of Treaties as at 17/05/2015

¹⁰ *Ibid*, Article 12

¹¹ Harrington, J., and M. Stuttaford. *Global Health and Human Rights*, 2010 p. 1

In 2000, the Committee on Economic, Social and Cultural Rights adopted its General Comment on the right to health.¹² In it, the right to health is detailed as an inclusive right, extending not only to timely and appropriate health care, but also to the underlying determinants of health, such as access to safe and potable water and adequate sanitation, healthy occupational and environmental conditions, and access to health-related information, including on sexual and reproductive health. It contains both freedoms and entitlements. Freedoms include “the right to control one’s health and body, including sexual and reproductive freedom and the right to be free from interference such as the right to be free from torture, non-consensual medical treatment and experimentation.”¹³ Entitlements include the right to a system of health protection (i.e. health care and the underlying determinants of health) that provides equality of opportunity for individuals to enjoy the highest attainable standard of health.

It is worth noting here that there is some unease as to whether the protection of freedoms, such as those concerning physical security, religion, and privacy, amongst others, really belong as constituent parts of the right to health. After all, there is no textual basis in the ICESCR for them.¹⁴ Although it is obvious that these freedoms do serve health in important ways — for example, to be free to choose if and how often to have children, or the freedom to withhold consent for undergoing medical procedures — it does not follow that they automatically become components of the right to health by means of this fact since that would practically equate the right to health to a right to wellbeing. This is what Tasioulas and Vayena refer to as “radical inclusivity.” As they put it: “health is just one of several elements of wellbeing, not

¹² UN Committee on Economic, Social and Cultural Rights “General Comment No. 14. The Right to the Highest Attainable Standard of Health.” 2000 (UN CESCR from here on)

¹³ *Ibid*, para. 8

¹⁴ Tobin, J. *Supra* n. 6, p. 133

the whole of it.”¹⁵ As such, insofar as there are rights to these freedoms, they seem to more plausibly belong as part of other, more specific, rights.

The nature of the entitlements included under the right to health has been distilled by the Committee into four essential principles: availability, accessibility, acceptability, and quality; otherwise referred to as the AAAQ framework.¹⁶ The principle of *availability* requires duty-bearers to make available, in sufficient quantities, “functioning public health and health care facilities, goods, and services, as well as programmes, ... [which] will include the underlying determinants of health, such as safe and potable drinking water and adequate sanitation facilities, hospitals, clinics and other health-related buildings, trained medical and professional personnel receiving domestically competitive salaries, and essential drugs, as defined by the WHO Action Programme on Essential Drugs.” The principle of *accessibility* requires that these health facilities, goods and services be accessible for all without discrimination, both in terms of physical accessibility (i.e. be “within safe physical reach”) and economic accessibility (i.e. be affordable). Accessibility also implies the “right to seek, receive and impart health-related information in an accessible format.” The principle of *acceptability* requires that all health facilities, goods and services be “respectful of medical ethics” and be “culturally appropriate.” And finally, the principle of *quality* means that not only must health facilities, goods and services be provided (in a way that meets the AAA part of the framework) they must also be of good quality, i.e. hospitals must be safe and clean, medicines must be scientifically proven, and health professionals must be skilled and well-trained.¹⁷

¹⁵ Tasioulas, J., and E. Vayena. “Getting Human Rights Right in Global Health Policy.” (2014) p. 2

¹⁶ UN CESCR. *Supra* n. 12, para. 12

¹⁷ *Ibid*, para. 12(a-d)

Together, alongside Article 12, these four principles make for rather demanding entitlements. Indeed, looking at them in the abstract terms in which they are stated, one would be forgiven for being filled with a sense of hopelessness. What would it mean to guarantee all of the people in the world the highest attainable level of AAAQ health? How could that be achieved? However, in setting out these guiding principles, the Committee has also recognised that their precise application “will depend on the conditions prevailing in a particular State party,”¹⁸ the most limiting of these conditions being the availability of resources.

B. Aspects of the obligation

Certain rights must be realised immediately: that there must not be discrimination in implementation of the rights; and that steps must be taken immediately with a view to the progressive realisation of these rights. However, in recognition of the difficulties resource constraints pose, the obligation specified by international law with respect to economic and social rights, to which the right to health belongs, provides that:

Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of available resources, with a view to achieving progressively the full realisation of the rights recognised in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.¹⁹

The shorthand statements in Article 2(1) of “progressive realisation” and “maximum available resources” introduce flexibility to the obligations pertaining to economic and social rights and have been described as the “linchpin of the whole

¹⁸ *Ibid*, para. 12

¹⁹ UN ICESCR. *Supra* n. 5, Article 2(1)

Covenant”²⁰ since ‘oughts’ without ‘cans’ have the potential to render obligations null and void. According to former Special Rapporteur on the Right to Health, Paul Hunt:

Both phrases — progressive realisation and resource availability — have two crucial implications. Firstly, they imply that some (but not necessarily all) States Parties’ obligations under the Covenant may vary from one State to another. Second, they imply that, in relation to the same State Party, some (but not necessarily all) obligations under the Covenant may vary over time.²¹

With respect to the right to health, the language in Article 2(1) recognises that immediate achievement of the highest standard of health is not what is required of the right but that instead the duty-bearer has an obligation to make planned and targeted steps towards this goal. It also recognises that the pools from which resources can be drawn for realising the highest attainable standard of health will vary. But herein lies the difficulty. The formulation of this obligation is vague and imprecise. On the resource issue particularly, Robert Robertson observed more than 20 years ago that “it is a difficult phrase — two warring adjectives describing an undefined noun. ‘Maximum’ stands for idealism; ‘available’ stands for reality. ‘Maximum’ is the sword of human rights rhetoric; ‘available’ is the wiggle room for the state.”²² And, despite the considerable amount of literature that has been dedicated to the progressive and resource-dependent nature of economic and social

²⁰ Alston, P., and G. Quinn. “The Nature and Scope of States Parties’ Obligations under the International Covenant on Economic, Social and Cultural Rights.” p. 172

²¹ Hunt, P. “State Obligations, Indicators, Benchmarks and the Right to Education.” (1998) para. 4

²² Robertson, R.E. “Measuring State Compliance with the Obligation to Devote the ‘Maximum Available Resources’ to Realising Economic, Social and Cultural Rights.”(1994) p. 694

rights since,²³ very little progress in the clarification of these concepts has been achieved.

Adding further complexity to the resolving-the-resources-problem task is the inclusion in Article 2 of the obligation, which refers to “international assistance and cooperation.” Do the resources counting as ‘maximum available’ compose of those not solely belonging to a country but also of those that a country might receive from overseas? In an attempt to shed light on this question, the nature of an international-type obligation is dealt with in detail in Chapter 3. At this point, it is sufficient to note that, with respect to the ways in which progressive realisation and maximum available resources give rise to the resources problem, further gravity to the problem is all that the international dimension adds.

C. The obligations to respect, protect and fulfil

In addition to the specific obligations under Article 2(1), there are three general obligations within the economic and social rights framework: the obligations to respect, to protect, and to fulfil these rights. Henry Shue first explicitly defined the notion underpinning these obligations.²⁴ Shue proposed that, “every basic right, and most other moral rights as well, could be analysed using a very simple tripartite typology of interdependent duties of avoidance, protection and aid.”²⁵ The *respect, protect, fulfil* framework that has been adopted by the Committee is a variation on Shue’s typological scheme. In a similar way to Shue’s treatment of duties, the

²³ See, e.g., Eide, A., C. Krause, and A. Rosas. *Economic, Social and Cultural Rights: A Textbook*, 2012; Sepúlveda, M. *The Nature of the Obligations under the International Covenant on Economic, Social and Cultural Rights*, 2003; Chapman, C., and S. Russell (eds.) *Core Obligations: Building a Framework for Economic, Social and Cultural Rights*, 2002; and Craven, M. *The International Covenant on Economic, Social and Cultural Rights: A Perspective on its Development*, 1995

²⁴ Shue, H. *Basic Rights: Subsistence, Affluence and US Foreign Policy*, 1980

²⁵ Shue, H. “The Interdependence of Duties,” In *The Right to Food*, Alston, P., and K. Tomasevski (eds.) 1984

obligation to respect the right to health is essentially a negative obligation that requires the duty-bearer to refrain from acting in ways that deprive individuals of their health, for example, through ensuring that access to health services and/or information is not restricted arbitrarily both in general or for particular communities. The obligation to protect the right to health requires the duty-bearer to ensure that third parties do not deprive individuals of their health, for example, through passing and enforcing laws and regulations governing environmental and public health. The obligation to fulfil the right to health is a positive obligation that requires duty-bearers to establish systems for the effective delivery of health services, for example, through providing primary health care.

Importantly, the vagueness and imprecision of the specific obligations incumbent on the duty-bearer — to *achieve progressively* the full realisation of economic and social rights to the *maximum of its available resources* — are likely to affect these general obligations in rather different ways. Although it is almost certain that resources will be required to comply with each of the general obligations individually, clearly many more resources will be required for the fulfilment of the right to health than for its respect or protection.²⁶

To take the UK as an example, in 2014-2015, the Treasury resource budget for justice and law officers' departments (combined) was £8,151 million. This represents 2.4% of the total budget. Meanwhile, the Treasury resource budget for health in the same period was £110,555 million, around one third of the overall resource budget.²⁷ Whilst protecting human rights (through security, effective law

²⁶ It is worth acknowledging that protecting the right to health may require more resources than respecting it, though not as many as fulfilling it.

²⁷ HM Treasury *Public Expenditure Statistical Analyses 2015*, Cm 9122, 2015 p. 20 (Table 1.3)

enforcement, effective regulatory mechanisms, and non-discrimination law, for example) evidently requires some resources, the stakes are not quite the same when compared to fulfilling the right to health. The obligation to fulfil the right is essentially the part of the obligation that requires the duty-bearer to take appropriate measures to secure the effective enjoyment of the right, which as the UK example shows, is particularly resource-heavy. By association, the intractability of progressive realisation and maximum available resources is likely to prove far more problematic in deciding when and why a duty-bearer has failed to comply with the fulfil dimension of its obligation. What this means in context is that on the one hand there is a right to health, which supporters of social rights would believe includes access to all kinds of health facilities, goods and services. But on the other hand, without specific allocation benchmarks, a duty-bearer can somewhat legitimately avoid providing these health facilities, goods and services by reason of resource unavailability. This leaves a substantial proportion of the content of the right as an unknown and, as a consequence, any effort to measure compliance would be extremely difficult, if not impossible.

So if the right, and its content, is to have any kind of meaning in practice there must still be some flexibility in the obligation to fulfil it, which respects differences in resource availability, but at the same time, discretion to which the duty-bearer is entitled must be limited. Any plea of resource unavailability must remain open to some sort of objective scrutiny. But this, as Tobin rightly notes, is “a deeply political project.”²⁸ It will at least require an examination of the existing political structures governing resource allocation and may require a reordering of those structures if the allocation of resources is found inappropriate, a result that will likely be at odds with powerful incumbents with vested interests in maintaining the status quo.

²⁸ Tobin, J. *Supra* n. 6, p. 196

Dealing with the resources problem to determine the right to health's content, and assessing where along the line between a right to everything and a right to nothing the obligation lies, presents the biggest challenge to measuring compliance with its fulfilment. But this does not mean that the task is impossible or that it should be abandoned. On the contrary. The fact that undertaking such an assessment is difficult means that there is an imperative to do so. Given the resources problem is the central problem under investigation in the thesis and the problem is most problematic for measuring compliance with the fulfilment of the right, focus on the obligation to fulfil the right to health holds the most promise for overcoming the central resources problem. It is for this reason that the focus of this thesis will be directed towards producing a better understanding of the obligation to *fulfil* the right to health, whilst bracketing the obligations to respect and protect the right to health, in a bid to better resolve the central resources problem.

II. An overarching method for approaching the resources problem

By now it is clear that approaching the resources problem is a complex job. Still, it has been argued that it is at least approachable. But in making that approach, what is required is a set of multidisciplinary tools. Whilst a growing literature on measuring compliance has started to emerge, the application of quantitative analysis to the question of human rights fulfilment remains relatively underdeveloped. This is partly due to an established reluctance in the human rights field to use numbers, to quantify and to correlate when thinking about rights, but it is primarily due to the major conceptual and empirical challenges creating rights-based measures

presents.²⁹ This has left much human rights research relatively discourse rich and data poor.

But statistics, as both numerical data and as the mathematical methods that deal with the analysis and interpretation of numerical data, can be a useful addition to the more traditional qualitative approaches to human rights research. Just as the economist J.K Galbraith's famous maxim goes: "if it isn't counted, it tends not to be noticed."³⁰ So, in terms of an overarching method for measuring compliance with the obligation to fulfil the right to health, what is desired is something like an information pyramid.³¹ The pyramid combines qualitative and quantitative elements and in this case consists of three levels of information.

At its base, the first level of information includes a qualitative description of what is to be quantified. In order to provide any valid meaningful measure of the right to health, it is obviously first necessary to unravel what in fact the measure should be measuring. As Landman insists, quoting Sartori, "the qualitative distinction made between and among categories in any attempt to classify social phenomena *necessarily*

²⁹ Despite the momentum being gathered in the wake of the "data revolution," there remain huge gaps in the collection and dissemination of detailed, objective quantitative socioeconomic information and often disaggregated details of who is benefiting and who is being left behind simply do not exist. UN Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development. *A World that Counts: Mobilising the Data Revolution for Sustainable Development*.

³⁰ J.K Galbraith cited in UN OHCHR. *Human Rights Indicators: A Guide to Measurement and Implementation*, 2012 p. 1

³¹ In the same sense as Isabell Kempf's version of an information pyramid, the pyramid can serve as "a way of identifying the obstacles to the realisation of rights and creates a better understanding of the measures ... which should be taken to overcome them." But the version of an information pyramid here differs from Kempf's in a number of fundamental ways. Kempf's version leaves no space for the conceptual reasoning required for identifying rights indicators in the first place, nor does it identify a process or method of analysis for dealing with the maximum available resources issue. Kempf, I. "How to Measure the Right to Education: Indicators and their Potential Use by the Committee on Economic, Social, and Cultural Rights." (1998)

precedes the process of quantification.”³² Here, this description will be generated through theoretical reasoning of the right to health as it is seen in moral philosophy, and through an interpretive analysis of the right to health as it appears in various human rights instruments.

In the middle, the second level of information includes the quantitative indicators that have been carefully selected based on the information provided by the level below, and the resultant quantitative measure of compliance. Understanding the extent to which the right to health is being fulfilled entails not only an understanding of the right-holder’s perspective but an understanding of the duty-bearer’s perspective also. A measure of compliance with the obligation to fulfil the right to health must therefore reflect both the state of human health and also the effort being made by the duty-bearer to improve it.³³ These measures will be generated through quantitative analyses; specifically, through avoidable mortality analysis, cost-effectiveness analysis and econometric frontier analysis.

Finally, at its peak, the third level of information includes a qualitative description of the compliance environment, i.e. the health, wider-social, geographic, cultural, economic, and political environment. Because health can be sensitive to environmental changes that may necessarily be outside of the duty-bearer’s control, (e.g. epidemics, famine, war, etc.) a qualitative examination of the government’s policy and budgetary responses to those changes could help either affirm or exonerate the measure of non-compliance. Essentially, qualitative data helps to

³² Landman, T. “Social Science, Methods and Human Rights.” In *The SAGE Handbook of Human Rights: Volume 1*, Mihr, A., and M. Gibney (eds.) 2014, p. 195; Sartori, G. “Concept Misinformation in Comparative Politics.” (1970)

³³ Fukuda-Parr, S., S., T. Lawson-Remer, and S. Randolph. “An Index of Economic and Social Rights Fulfilment: Concept and Methodology.” (2009); Cingranelli, D.L., and D.L. Richards. *Supra* n. 4

explain the quantitative data and can be used to test whether it makes sense in context. This will be generated through an in-context case study.

The method for approaching the resources problem undoubtedly matters. Choosing the right method maximises the value of the conclusions and inferences drawn. The choosing will be driven firstly by an understanding of the theoretical foundations underpinning the research question, and secondly by the realities of what can practically be achieved. Quantitative analysis can help deal with the complexities and intractabilities accounting for the resources problem involves. But the qualitative elements of human rights are too important to ignore.³⁴ If, as Landman argues, methods “adhere to the goal of making inferences from available evidence,”³⁵ then the preferred information pyramid approach to measuring compliance, which complements the quantitative with the qualitative, means that the conclusions drawn will be based on the best evidence available.

III. The thesis in a nutshell

From the way that the right to health appears in international law to the ways in which assertions of compliance and non-compliance are made in practice, what emerges is a picture of the right to health that is far more demanding than it may initially seem. But its demandingness does not mean that it collapses to zero. Now, the overriding challenge is to continue unravelling the conceptual complexities that

³⁴ As, in the words of former Council of Europe Commissioner for Human Rights Thomas Hammarberg, “[h]uman rights can never be fully measured in statistics; the qualitative aspects are too essential.” Hammarberg, T. “Searching the Truth: The Need to Monitor Human Rights with Relevant and Reliable Means.” Conference on Statistics, Development and Human Rights, Montreux, 04-08 September 2000

³⁵ Landman, T. *Supra* n. 32, p. 195

are at the root of the right to health and be brave enough to stick a stake in the ground for thinking about how one might go about measuring compliance with the obligation to fulfil it. This thesis aims to be a contribution in meeting that challenge.

In sticking that stake in the ground, this thesis founds itself upon the hypothesis that compliance with the obligation to fulfil the right to health is a function of the duty-bearer's ability and willingness to provide for health. The hypothesis is operationalised on the basis that the various dimensions of ability can be measured. Then, given each duty-bearer's ability, the level of health delivery that is expected can be predicted. Since the ability element of the hypothesis is taken care of, any shortfall between the level of health predicted and the actual level of health observed may reveal something about unwillingness, which by association is a good starting point for thinking about and measuring non-compliance. In the process of determining compliance, what is left to find out therefore is: what kind of health does the right to health guarantee; what level of this kind of health do duty-bearers owe to individuals; and how well are duty-bearers doing with respect to what they owe? It is around these three questions that the thesis is structured.

A. Unravelling foundations

An unravelling of the conceptual foundations of the right to health is called for both for practical and substantive reasons. Despite the human right to health being on the international law scene for some time, scepticism over its theoretical existence, as well as the possibility of determining its precise content and of the duties it entails, persists in some philosophical corners. For example, it has been

described by Griffin as a “vacuous concept”³⁶ that is almost “criterionless,”³⁷ and by Onora O’Neill as “muddled or vague, or both.”³⁸

Leading from the reality that the resources problem is yet unresolved, any project that presupposes the existence of the right to health needs to demonstrate that it is possible for the right to be acceptably determinate. Indeed, if this cannot be demonstrated measuring compliance with it would be impossible to begin with, and therefore the exercise worthless. If a persuasive argument can be made for the right to health’s existence, unravelling its foundations also sheds light on both what shape the right to health might take, as well as who bears the associated duties, since the definition of its content inescapably rests on the nature of the right, which can be best explained by its connection to fundamental values.

The conclusion in Chapter 2 is that the right to health can be justified as a bona fide human right. This justification is made based within a general interest theory of human rights in that human rights protect against significant threats to universal fundamental interests and it is the special nature of health in protecting against threats to these fundamental interests that provides sufficient basis for generating obligations on others to fulfil it. Importantly, these fundamental interests need not be grounded by one comprehensive theory. They are plural and essentially converge upon the things that are required for having and leading a minimally decent life. The idea of minimalism is key to the way in which the right to health takes its shape and to allocating the associated obligations. Minimalism imposes limits to the right to health. And, it is argued that in order that the duties be minimal it must be possible

³⁶ Griffin, J. *On Human Rights*. 2008, p. 208

³⁷ *Ibid*, p. 14

³⁸ O’Neill, O. “The Dark Side of Human Rights.” (2005) p. 428

to identify who the duty-bearers are, and these bearers must not be overburdened by the duties: they must be conditional on the duty-bearer's ability to comply with them.

B. Dealing with conditionality

The idea of conditionality deals with the prospect of ever-inflating duties in the alternate case that the right to health goes unchecked. In theory, it links the performance expected of a duty-bearer to its level of ability, given the particular socio-economic circumstances it finds itself having to deal with. However, the theoretical notion of conditionality on its own does little for the task of measuring compliance in practice; it is the resources problem, just in a slightly different guise. In order for the notion to be practically applied, a principled criteria for determining what sort of health the right guarantees and to what level, what share of resources is adequate for satisfying that level, as well as how resources are to be allocated amongst different needs when resources are not sufficient to meet them all, remains to be specified. This is the task taken up in Chapter 3.

The chapter discusses existing approaches to dealing with conditionality in practice, drawing on the experiences of the South African and Costa Rican courts. It is argued that neither the South African strictly-reasonableness approach nor the Costa Rican strictly-substantive approach is satisfactory with respect to the idea of the right to health presented in Chapter 2. Rather, it promotes a 'third way,' a form of the minimum core concept, as the most meaningful and practical way of dealing with conditionality and the resources problem. A set of criteria for determining how the minimum is to be constructed is presented, which results in what is referred to as the 'minimum health basket.' It is argued that absolute provision of the basket is not what is required for the fulfilment of the right to health. Instead, the right imposes an unconditional duty to provide as much of the basket of goods,

services and facilities that the duty-bearer is able to. An argument as to what constitutes ability is also presented.

C. Assessing compliance

After offering a way of unravelling the nature and shape of the right to health, the first step in assessing compliance with its fulfilment is to define what the basket of health goods, services and facilities, to which individuals have a right, precisely consists of. Chapter 4 is concerned with defining this health basket through operationalising the criteria set out in Chapter 3. The analysis uses techniques borrowed from public health to provide a framework for prioritising those health issues that are most important with respect to the burden they pose and for identifying where the greatest potential for improvement in population health lies. The model then uses cost-effectiveness analysis to determine whether interventions that have been deemed effective can feasibly be scaled-up to population-level coverage in the typical low-income country. Those interventions that are deemed scale-upable, constitute the health goods, services and facilities duty-bearers have a conditional obligation to provide.

Remembering that the right to the health basket is conditional on the ability of the duty-bearer to provide it, what remains in assessing compliance is an assessment of the degree to which the health basket is ‘affordable;’ Chapter 5 outlines and operationalises a methodology for doing just that. The central focus of the chapter is an econometric frontier analysis, which empirically predicts the level of health basket attainment that is to be expected at different levels of ability and assesses the degree to which duty-bearers are meeting, or falling short of, this expected level. Returning to the hypothesis that the falling-short (or non-compliance) may amount to unwillingness, the chapter investigates the relationship between the estimates of

non-compliance and several indicators of willingness. The results show that the general relationship between willingness and compliance is as expected, (the more willing the state is, the lower its non-compliance) however, the coefficients suggest that the relationship is weaker than might have been anticipated. So, to test the hypothesis with greater precision, Chapter 6 presents a qualitative investigation with respect to the indicators of willingness and the indicator of non-compliance in a case study of Brazil.

The Chapter assesses the degree to which the right to health is being fulfilled in Brazil and, specifically, investigates whether the quantitative measure of non-compliance generated by this thesis' methodology makes qualitative sense. It also analyses the implications of the measure with respect to how right to health claims have been dealt with in Brazil, and what light, if any, the measure can shed on the way in which the right has hitherto been interpreted by the Brazilian judiciary. The results suggest that the quantitative signal of non-compliance is reasonably accurate in the Brazilian case, if not underestimated. The hypothesis of unwillingness seems to hold and the methodology can be used efficiently for signalling compliance.

D. Setting expectations

The challenge set out in this thesis is an ambitious one. Still, in responding to this challenge, the thesis does not claim to have found absolute answers. It makes a persuasive case that compliance with the right to health is a function of the duty-bearer's ability and willingness to provide for health and lays a theoretical foundation and empirical methodology for testing that hypothesis. However, in so doing, it also acknowledges its own limitations. These are discussed in more detail in Chapter 7.

Specifically, no attempt is made to deal with particular issues that affect health: the role of third parties in access to medicines, public versus private delivery of health care, or the ways in which history may have shaped the current health and/or available resources situation, for example. Whilst there is a potential normative argument that these factors could alter the degree of health attainment and/or right to health compliance in important ways, any accommodation made for these effects, plus or minus the status quo, would be pure simulation. This is not what this thesis has set out to achieve. Instead, it provides a base upon which alternative scenarios *could* be developed. Moreover, no attempt is made to situate the analysis of compliance with right to health fulfilment within an analysis of wider economic, social and cultural rights fulfilment. Whilst any assessment of compliance with the obligation to fulfil the right to health must be interpreted with respect to the many other competing demands with which duty-bearers are faced, obviously, scaling up the analysis to encompass all of these demands would be far too sizeable a task to undertake within one project.

As such, the thesis in no way advocates that the results it has produced pinpoint, specifically, where the right to health has been violated. What is offered is a methodology for providing a signal as to where some duty-bearers could potentially be doing better. The results should be interpreted more as red flags than an outright identification of violations of human rights. Human rights are by nature complex and any analysis of them deserves, even calls for, a methodology that is sensitive to those complexities. Hopefully the information pyramid-type approach presented throughout this thesis speaks to that call.

Unravelling foundations

Introduction

Over recent decades the discourse of human rights has, according to John Tasioulas, been elevated to “the status of an ethical lingua franca”¹ and claims of human rights are indeed increasingly, and more widely, being made in the conduct of global affairs through the proliferation of the international human rights regime,² in issues concerning international relations,³ and through the practices of development more generally.⁴ Whilst the booming industry of human rights may intuitively be perceived as a ‘good’ thing, Tasioulas offers a cautionary word of warning. “If human rights are not to fall victim to their own popularity, some principled way of distinguishing the genuine articles from the presumed spate of counterfeits is required.”⁵ These sentiments are laid out with an air of implicit

¹ Tasioulas, J. “The Moral Reality of Human Rights,” In *Freedom from Poverty as a Human Right: Who Owes What to the Very Poor?* Pogge, T. (ed.) 2007, p. 75

² See Landman, T. *Protecting Human Rights: A Comparative Study*. 2005, p. 62 which plots ratification of the main human rights instruments to show the growth of the human rights system periodised by the proliferation of human rights norms.

³ For example, human rights have been invoked to justify international humanitarian intervention in Haiti (1994), Rwanda (1994), Kosovo (1999), East Timor (1999) and Libya (2011), all of which were initially or ultimately approved by the U.N. Security Council.

⁴ This is particularly the case with respect to the more recent approach to development adopted by the U.N. “In an increasingly interconnected world... [t]here will be no development without security and no security without development. And both development and security also depend on respect for human rights.” UN General Assembly. “In Larger Freedom: Towards Development, Security and Human Rights for All.” (2005) p. 55

⁵ Tasioulas, J. *Supra* n. 1, p. 75

scepticism that is not uncommon to the human rights enterprise. The scepticism surrounding human rights wholesale often stems from the notion that the central idea of human rights, as being something that people can have unconditionally, simply by virtue of their humanity, is “intellectually frail — lacking in foundation and perhaps even in coherence and cogency.”⁶ More specifically, the scepticism that surrounds the right to health, tends to be expressed through the discriminatory exclusion of a particular classification of rights — usually, the so-called economic and social rights — albeit within an accepted general idea of human rights, where rights exist only contingently on the basis of meeting specific qualification criteria.

Whether scepticism and/or dismissal of human rights is expressed in terms of human rights comprehensively, or particular rights specifically, the same perennial question remains: where do these rights come from? But with respect to measuring compliance with the obligation to fulfil the right to health, to what extent is it necessary to engage with the conceptual complexities brought about by the requirement to derive and maintain such a “principled way” of distinguishing genuine human rights from other things, particularly given that the right to health already exists in international law and is increasingly being called upon to address the health needs of groups and individuals around the world?

Firstly and practically, in order to derive a measure of compliance with the obligation to fulfil the right to health the scope of the right and limits to obligations need to be defined. This definition inescapably rests on the nature of the right, which can be best explained by its connection to fundamental values; indeed it is precisely differences in these values which underlie justifications for rather different rights claims. Secondly and substantively, limiting the justification for the right to

⁶ Sen, A.K. “Human Rights and Capabilities.” (2005) p. 151

health to the simple assumption that the right is justified on the basis that it is an empirical fact does not provide a sufficiently persuasive theoretical grounding for the right.⁷ Although legal human rights are generally acknowledged to give effect to pre-existing moral principles, they are not in and of themselves “morally self-validating.”⁸ An argument which supposes the existence of the right to health thus needs to demonstrate, through moral reasoning, that it is meaningful independent of any legal specification incumbent upon it so as to evaluate the legal right that exists and flesh out its content. Indeed, if this cannot be demonstrated measuring compliance with it would be impossible.

To that end, the aim of this chapter is to determine whether a persuasive account of the conceptual foundations and content of the right to health can be offered within a general theory of human rights. Section I explores the basis of that general theory and argues that human rights are justified on the basis that they protect against significant threats to universal fundamental interests and in so doing allow, or in fact provide, for having and leading a life that is minimally decent. It is also argued here that in determining which rights we have certain minimalism-type tests have to be passed. Firstly, does the object of the right protect against threats to fundamental interests to a significant enough extent? Secondly, can the object of the right be served by an obligation to fulfil it? And finally, are the burdens necessary for the realisation of the right justifiable? Sections II, III and IV go on to address these questions with respect to health, respectively. Specifically, it is argued that health is so important to the protection of fundamental interests that it justifies the

⁷ This is the position advocated by all non-positivist approaches to human rights theory but is found particularly in, for example, Tasioulas, J. “Towards a Philosophy of Human Rights” (2012); Griffin, J. *On Human Rights*. 2008; Buchanan, A. *Justice, Legitimacy and Self-Determination: Moral Foundations for International Law*. 2007; Nickel, J.W. *Making Sense of Human Rights*. 2007; and Nagel, T. *Concealment and Exposure: And Other Essays*. 2002

⁸ Tasioulas, J. *Supra* n. 1, p. 75

imposition of obligations on others to fulfil it. Health can be served by an obligation to fulfil it and the duty-bearers can be identified. And, by formulating the right to health as a minimal rather than maximal standard that is constituted by the duty-bearers' ability to fulfil it, obligations need not be excessively burdensome.

I. The idea of human rights

The idea of rights, human rights and their conceptual foundations have preoccupied philosophical argument for centuries. Whilst the doctrine of natural law or natural rights is one such foundation, indeed one credited with influencing the ideas underpinning the Universal Declaration of Human Rights (UDHR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR),⁹ since Bentham's famous criticism that "natural rights is simple nonsense ... natural and imprescriptible [inalienable] rights ... nonsense on stilts,"¹⁰ reaching out to such metaphysical foundations as a theoretical justification for human rights has widely been considered less than adequate. Instead, foundational theorists have tended to turn to theories which ground human rights in certain 'fundamental interests.' This is to say that the principal function of human rights is to respect and safeguard fundamental interests, which are considered to be sufficiently important and significant for what it means to be a human living today, and indeed sufficiently important to justify the imposition of obligations on others for their respect,

⁹ The Preambles to the three foundational texts of the 'International Bill of Human Rights' — the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, and the International Covenant on Civil and Political Rights — all specify human rights by reference to "the inherent dignity and ... inalienable rights of all members of the human family."

¹⁰ Bentham, J. "Anarchical Fallacies; Being an Examination of the Declaration of Rights Issued during the French Revolution." In *Works of Jeremy Bentham, Volume 2*, Bowring, J. (ed.) 1792

protection, and fulfilment.¹¹ Human rights, in this view, owe their very existence to the way in which they serve these interests.

According to Tasioulas, fundamental interests are objective: they are interests of all human beings living today independent of the standards that happen to be incumbent upon them, whether or not each individual human being believes them to be interests of theirs, and whether or not each individual human being consciously desires their fulfilment.¹² But the identification of a universal human interest does not automatically identify a human right. Human rights are *not* universal human interests. The difference between interests and human rights can be distinguished by the domains in which these concepts operate; interests occupy the domain of things which make life better, and human rights the domain of morality. It is possible that interests may be thwarted in all kinds of ways without there necessarily being any instance of moral wrongdoing. Several illuminating examples already exist in the literature. Nickel's example of the universal interest in being comfortable during hot weather is a recurring favourite.¹³

The interest-based account maintains that it is the extent to which an individual's interests have an obligation-generative capacity that elevates human interests to human rights. That is, a human right exists when, in the case of all people, their individual interests — without the additional, cumulative support of other peoples interests — suffice to generate obligations on others to serve their interests by

¹¹ Joseph Raz gives a comprehensive description of this idea. Raz holds that rights are held to be grounded in interests. "The interests are part of the justification of the rights which are part of the justification of the duties," Raz, J. *The Morality of Freedom*. 1986, Chapter 7, p. 181

¹² Tasioulas, J. "Discussion of John Tasioulas' 'Or 'Emet Lecture: Is Dignity the Foundation of Human Rights?" 2011

¹³ Nickel, J.W. *Supra* n. 7, p. 36. Other examples include the interest in being romantically in love, Tasioulas, J. *Supra* n. 7, p. 16 and the interest in not being called up regularly at odd hours by despised neighbours, Sen, A.K. *The Idea of Justice*. 2009, p. 367.

securing the object of their right; an idea based on an extension of the description of rights given by Joseph Raz, amongst others, to provide a description of human rights.¹⁴

So what are the fundamental interests that ground human rights? The divergence between theories, which attempt to identify *the* interest which best gives justification for recognising human rights as such is vast and remains hotly contested. For example, in James Griffin's theory of human rights a right to X can be considered worthy of human right status only if it fits within his account of personhood, that is the fundamental interest an individual has in autonomy and liberty, and can be determined as a constitutive element of normative agency.¹⁵ Joseph Raz argues that rights can be held by those for whom wellbeing is of intrinsic value and that rights are based on the interests of such people, which may be of both intrinsic and/or instrumental value and are sufficiently important to warrant international concern, insofar as universal human interests in the case of each human being generate a duty to serve those interests in some way.¹⁶ Charles Beitz distinguishes human rights as those which institutionally protect "urgent individual interests" against predictable "standard threats" within the specific societal context that are a matter

¹⁴ "X has a right if and only if X can have rights, and, other things being equal, an aspect of X's wellbeing (his interest) is a sufficient reason for holding some other person(s) to be under a duty." Raz, J. *Supra* n. 11, p. 166

¹⁵ Griffin, J. *Supra* n. 7, p. 35 ("I single out functioning human agents via notions such as their autonomy and liberty, and I choose those features precisely because they are especially important human interests. It is only because they are especially important interests that rights can be derived from them.")

¹⁶ Raz, J. *Supra* n. 11. It is important to note here the distinction in qualification Raz makes between what is required to have rights (be a right holder), the fact that right holders have individual interests, and what is required for the basis of a right, which can often be mistakenly confused. Since, for Raz, what counts in order to hold rights is the intrinsic value of wellbeing and not the value of an individual's interests, it may seem to follow that "...only interests which are considered of ultimate value can be the basis of rights." p. 178. However, Raz acknowledges that there are many empirical examples where some instinctive rights protect interests, which are of merely instrumental value. He thus concludes, "(apart from artificial persons) those whose wellbeing is intrinsically valuable can have rights; but that rights can be based on the instrumental value of the interest of such people," p. 180.

of both national and international responsibility.¹⁷ And for Amartya Sen, the interests which form the subject matter of human rights are those freedoms, both in terms of substantive opportunities and freedom of processes, which enable individuals to achieve the combinations of functionings (beings and doings) to lead the kind of life which he or she has reason to value, the status of which “must be dependent ultimately on their survivability in unobstructed public discussion.”¹⁸

Whilst it is not within the scope of this chapter to engage in a critical evaluation of the successfulness of each of these theories, what can be traced from the space they occupy is that the interests that are allowed to ground human rights are plural and essentially converge upon respect for two overarching fundamental values: wellbeing and freedom.¹⁹ These two values are the things that are required for having and leading a minimally decent life.

¹⁷ Beitz, C.R. *The Idea of Human Rights*. 2009 (Beitz suggests an urgent interest is “one that would be recognizable as important in a wide range of typical lives that occur in contemporary societies” and is not necessarily one that is possessed or desired by everyone in the society. p. 110. Beitz also constructs a normative division between the responsibilities of the State and the international community as the bearers of primary responsibilities to respect and safeguard these urgent interests, and as the guarantors of these responsibilities, respectively, p. 137

¹⁸ Sen, A.K. “Elements of a Theory of Human Rights.” (2004) p. 349; Sen, A.K. *Development as Freedom*. 1999, p. 87 It is crucial to note here that Sen does not see interests and freedoms as coterminous and sees a real distinction between the two. It is argued here, however, that interests can and do extend to freedom, indeed freedom can be conceived as an especially important human interest insofar as freedom is *the* interest upon which a vindication of human rights is made, exemplified by Griffin’s interest-based theory of freedom, characterised by normative agency, as the basis of human rights. The connection between interests and freedom is elaborated in the following section.

¹⁹ My own view is in agreement with Tasioulas’ arguments, in “Towards a Philosophy of Human Rights,” that human rights are moral standards that perform a plurality of political functions, but that none of those functions is definitive of their nature as human rights as is the case with what Tasioulas calls the ‘functionalist’ view of human rights, which sees the essence of human rights as them playing a certain political role, for example, operating as benchmarks for the legitimacy of states or triggers for intervention against states that violate them. The aim in the present chapter is, however, to indicate that there is some convergence between and across theories in identifying the interests that ground human rights rather than defend one theory against others.

Having a minimally decent life is to have freedom from violence and harm.²⁰ The claim to have a minimally decent life is constituted both by negative duties not to murder, not to use violence, and not to maliciously harm, and positive duties of assistance to protect individuals against threats of murder, violence and harm. But being free from these threats is not all that having a minimally decent life is. Rather, to have a life that is minimally decent is to be capable of functioning as a human being, which requires the satisfaction of certain physical needs. Health, for instance.

Again, the claim to have such capabilities correlate to both negative and positive duties: not to actively prevent individuals from realising these capabilities, and to assist if and when individuals find themselves in a position of incapability. Then there is leading a life. Leading a life is to have freedom from being controlled by another individual or group of individuals without consent. The claim to lead a life is constituted by negative duties not to interfere with an individual's choice to lead the type of life they desire, and positive duties to provide assistance, in the words of Nickel, "for the creation and maintenance of social conditions in which the capacity for agency can be developed and exercised."²¹ As the justificatory basis for human rights, the values of wellbeing and freedom and the principles they produce (having a life of value to the extent that the material conditions of survival are met, and leading a life that has been shaped through each individual's own plans, efforts and decisions) set a modest standard. Specifically, a standard that provides for a life that is minimally decent.

²⁰ Freedom here is used in the sense of freedom of action, that each individual has control over his or her own choices. It is interchangeable with the ideas of autonomy and agency.

²¹ Nickel, J.W. *Supra* n. 7, p. 64

This modesty fits neatly alongside the idea of human rights advocated by James Nickel.²² Nickel offers a persuasive account of why human rights are minimal standards and, as a point of departure, will be adopted for this project of measuring compliance. Firstly, human rights should be minimal standards because they should serve to address the severest of problems, the solutions to which should take the highest priority. If human rights become more than minimal standards, standards for say promoting the highest possible standards of living, almost any unmet human need would become a violation of human rights. This, echoing Tasioulas' earlier warning, could undermine and devalue the whole human rights enterprise. Secondly, human rights should be minimal standards because they should be feasible across space.²³ In the case that human rights are more than minimal standards, feasibility becomes much less likely. Feasibility in this sense takes various forms. Human rights as more-than-minimal standards may be politically infeasible; they should leave reasonable space for national, democratic decision-making and allow for cultural reflexivity with respect to the way in which political, legal, economic and social institutions are shaped. They may also be economically infeasible; human rights as maximal standards would for many individuals likely remain distant dreams, which normatively speaking could, in the words of Maurice Cranston, "push all talk of human rights out of the clear realm of the morally compelling into the twilight world of utopian aspirations."²⁴ But asserting that human rights are minimal

²² "Human rights set minimum standards; they do not attempt to describe an ideal social and political world." *Ibid*, p. 10

²³ Although there are various notions of 'feasibility' used in the literature to test if and when an interest counts as a human right, here, a Nickel-type notion of feasibility is used as a point of departure. Feasibility as a *reasonable burdens* test and as an *implementability* test is discussed further in Section IV.

²⁴ Cranston, M. "Human Rights, Real and Supposed." In *Political Theory and the Rights of Man*, Raphael, D.D. (ed.) 1967 Quoted in Nickel, J. *Ibid*, p. 96

standards leaves open the question: what is meant by minimal? As Beitz pointedly remarks, minimalism too can take various forms; the idea is “hardly univocal.”²⁵

The idea of minimalism can apply to very different aspects of human rights. For instance, human rights can be minimal with respect to way in which they are justified; in the Cohen sense of “avoiding imposing unnecessary hurdles on accepting an account of human rights by intolerably tying its formulation to a particular ethical tradition.”²⁶ They can be minimal in terms of the urgency and number of threats they protect against. And they may also be minimal inasmuch as the bearers of the duties are few and the burdens given rise to are limited.²⁷ Whether minimalism is applied to one or a combination of these aspects will potentially produce differences in both what human rights are and which human rights we have. The idea of minimalism presented so far is essentially minimalism applied to all aspects of human rights: their justificatory basis does not have to be tied to one ethical tradition; the values that ground them are plural, they are minimal in terms of the urgency and number of threats they protect against and minimal with respect to the burdens that they generate. This distinction is crucial for determining whether certain rights exist and provides a basis for justifying which ones do. In order to justify that a particular human right exists, the right to health in this case, a number of minimalism-type tests must therefore be passed.

The first test is to demonstrate how the fundamental interests, wellbeing and freedom to have and lead a minimally decent life, are *significantly* threatened when the area the right would provide for, i.e. health, is not fulfilled. This test not only

²⁵ Beitz, C.R. *Supra* n. 17, p. 142

²⁶ Cohen, J. “Minimalism About Human Rights: The Most We Can Hope For?” (2004) p. 213

²⁷ *Ibid*

reveals whether health itself is an interest viable for fulfilment by human rights but also helps guide what kind of health the right would guarantee. Since human rights are minimal standards, the standard to which ‘significant threat’ is set has to be high. For example, take basic sanitation and bariatric surgery to treat obesity as potential elements of the entitlement to which the right to health guarantees. Assuming health can be justified as something that poses a significant threat to wellbeing and freedom, it is obvious that failure to provide each of the two health goods threatens these fundamental interests to a much varying degree. Whilst it may be reasonably argued that the lack of provision of basic sanitation poses a serious and significant threat to an individual’s ability to live and lead a minimally decent life (access to basic sanitation immediately improves the chances of survival and of achieving physical and mental competence), a failure to fund bariatric surgery does not. Although the latter may pose *a* threat to fundamental interests, it seems to go beyond the conditions of minimalism; it may make life more uncomfortable but it doesn’t necessarily pose an immediate threat to life itself or the ability to lead a minimally decent life. Its significance does not fit within the idea of human rights considered presently.

Passing the first test sets the prospective human right on the right path to justification. But justification of a human right requires not only justification of the entitlement, in accordance with the idea of minimalism set out above, it also requires justification of the burdens the right will impose. This involves the passing of two further tests: that duty-bearers can be identified and be appropriately burdened with the responsibility of protecting individuals against the significant

threat posed, and that the burdens imposed are not overly burdensome.²⁸ With respect to the final two tests, this then begs the question as to whether duties can justifiably be imposed on others. Is it possible for each and every right holder to serve their fundamental interests through a health duty, and if it is possible, will the duties not pose an unreasonably excessive burden on the duty-bearer, particularly given the multiple competing demands bearers are likely to already have placed upon them? If a proposed human right is to make it through to a fully fledged, justified human right, a case has to be mounted to clearly demonstrate how the interest fulfilled by the proposed right is amenable to passing these minimalist “claim-against”²⁹ tests.

In Nickel’s words, the emergence of a human right can then be thought of as “the coming together of the recognition of a problem, the belief that the problem is very severe, and optimism about the possibility of addressing it through social and political action at national and international levels.”³⁰ Justification of a specific human right, therefore, requires satisfaction of the foregoing three tests: i) the right protects against significant threats to fundamental interests; ii) duty-bearers can be identified and the object of the right can be served by an obligation to fulfil it; and iii) the obligations imposed are not overly burdensome. The remainder of this chapter will be occupied with running these three tests with respect to the right to health.

²⁸ The set up of these three tests is a variation on Nickel’s “entitlements plus” and Feinberg’s “claims-to” and “claims-against” theme, which holds that a right cannot be constituted by an entitlement alone. Norms that guide the behaviour of the duty bearer must be added to the entitlement to constitute a fully-fledged human right. Nickel, J.W. *Supra* n. 7, pp. 30-32; Feinberg, J. *Social Philosophy*. 1973, p. 64

²⁹ Feinberg, J. *Ibid*, p. 64

³⁰ Nickel, J. *Supra* n. 7, p. 36

II. Health and threats to fundamental interests

Though the conceptual foundations of human rights generally have been the subject of much philosophical debate historically, it is only until relatively recently that theoretical accounts of the right to health have been the explicit subject of rigorous discussion.³¹ This newfound focus, however, hasn't always been kind. To say that the right to health is one of the slipperiest of all the human rights (as embodied in the main legal instruments) would not be absurd, and differences in perspectives on its recognition and justification most certainly remain. With this in mind, it is ever more important to mount a strong case for health as a human right.

One approach to justifying the right to health could offer an account along the indivisibility thesis lines,³² which starts from having another already justified and accepted right, (that is, without it fundamental interests are significantly threatened) and justifies a right to health on the basis that it is either instrumentally or constitutively necessary for the enjoyment of that preceding right. For example, the right to participate in society is of little value and importance for an individual who is suffering from severe ill health and is not able to play a full and active part in society either economically or politically. This is the kind of argument provided by Henry Shue in his justification of the right to subsistence.³³ Indeed Shue goes so far

³¹ For example, Tobin, J. *The Right to Health in International Law*. 2012, Chapter 2; Venkatapuram, S. *Health Justice: An Argument from the Capabilities Approach*. 2011; Ruger, J. *Health and Social Justice*. 2010, Chapter 5; Sen, A.K. "Why and How is Health a Human Right?" (2008); Griffin, J. *Supra* n. 7; Daniels, N. *Just Health: Meeting Health Needs Fairly*. 2007; Ruger, J. "Toward a Theory of a Right to Health: Capability and Incompletely Theorized Agreements." (2006); Sen, A.K. *Supra* n. 7; Sen, A.K. "Why Health Equity?" (2002a); Sen, A.K. "Health: Perception Versus Observation" (2002b); Sen, A.K. *Supra* n. 7; Daniels, N. *Just Health Care*. 1985; Buchanan, A.E. "The Right to a Decent Minimum of Health Care." (1984); and Beauchamp, T.L. and R. Faden "The Right to Health and the Right to Health Care." (1979)

³² Indivisibility is used here in the sense that the absence of one certain right makes another right essence-less.

³³ Shue, H. *Basic Rights: Subsistence, Affluence and US Foreign Policy*. 1980, pp. 11-88

as to say that a right to subsistence is required if an individual is to have any rights at all.³⁴ But showing that the right to health exists as a precondition of another right may be too simplistic a justification. For instance, to take the example above, although ill health may reduce the value of a right to participate in society, it can hardly be said that such a right could never be upheld without a general right to health. The supportive relationship seems too weak to form the basis for justification of particular human rights. The job here, however, is not to defend or discredit Shue's indivisibility thesis; instead it is to find the justification that is most persuasive. Fortunately, the right to health need not be justified solely as a derivative of another right. It may also be justified independently.

It would not be extraordinary to reason that a lack of health poses a significant threat to wellbeing and freedom, or to have and lead a minimally decent life. Indeed, health is one of the most life-enhancing elements of human wellbeing and has been of value to humans for as long as there have been humans. The type of value health derives can be said to be both intrinsic and instrumental. The intrinsic value of health is "that of the sense of physical wellbeing enjoyed by the healthy."³⁵ In this sense, the value of health is non-derivative; Jack's being healthy is non-derivatively good for Jack, Jill's being healthy is non-derivatively good for Jill, and so on. The instrumental value of health, on the other hand, is derived from the value of its consequences.³⁶ Specifically, health is essential for having and leading a life that is minimally decent and that certainly most, if not all, forms of ill-health — that of pain, suffering and disability — make fulfilling such a life much more difficult to achieve.

³⁴ *Ibid*, p. 19

³⁵ Raz, J. "Human Rights in the Emerging World Order." (2010) p. 45

³⁶ Raz, J. *Supra* n. 11, p. 177

Without minimal health, wellbeing as well as life itself may be threatened. There is a risk of death. Without minimal health, physical and mental functioning will be impaired, which in turn poses a significant threat to developing and exercising agency and freedom. The link between health and fundamental interests is direct and obvious. With respect to passing the first of the three justificatory tests then, the lack of health surely poses enough of a significant threat to fundamental interests that it justifies the imposition of obligations on others to fulfil it.

III. Health as an object of obligation

So the threat posed by a lack of health corresponds to the central idea of the human right to health insofar as it threatens fundamental interests to a significant extent. Health passes the first minimalism test. But human rights are not only distinguished by the threats they pose to the values that ground them. They also need to be minimal in the sense that it is ‘possible’ to serve those underlying values through an obligation, the content of which is generated by the proposed right. Is it possible for each and every individual to serve his or her fundamental interests through a health obligation? The answer to this question may initially appear to be no, given the nature of ‘health’ as necessarily being something that is subject to random luck, determined and influenced by internal biological endowments as well as individual lifestyle preferences, choices and behaviours, rather than something that is capable of being under anyone’s control.

The notion that health cannot be the object of a right claim, and therefore of an obligation, is the reason why so often the right to health is understood either in

terms of a negative right, i.e. the obligations generated from the right are obligations of noninterference, to not impede the right holder from enjoying their right, and to prevent threats to an individual's health,³⁷ or as simply shorthand for a right to health care.³⁸

But in providing a rationale for engaging in conceptual inquiry it has been argued that the nature of human rights is best explained by their connection to fundamental values and it is differences in these values, which give rise to quite different rights claims. The fundamental values that underlie the theory presented so far rely, essentially, on the special nature of health for their defence; specifically, that a lack of health threatens fundamental interests to a significant extent. Because the importance of health in having and leading a life that is minimally decent is the essence of the reasoning for the generation of obligations to fulfil it, the right to health cannot be merely a negative right since claims to such a right would need to be defended by more general considerations of, say, equity, and not the special nature of health itself. Rather, a theory which asserts that health is of special moral importance justifies a right to health that not only requires equality in the ways in which individuals are able to fulfil the right but also that some level of health be fulfilled.

Likewise, health needs are broader than health care needs. There are many aspects of health, which are structurally, and procedurally controlled, so explaining health as largely determined by access to healthcare, individual behaviours or random luck is a fundamental moral error. Rather, social conditions are extremely far reaching; they

³⁷ See, e.g., Kuenzi, D.E. "Health Care, A Right?" (1973) p. 111

³⁸ See, e.g., Buchanan, A., and K. Hessler (2009) "Specifying the Content of the Human Right to Health Care." In *Justice and Health Care: Selected Essays*, Buchanan, A. (ed.) 2009; Daniels, N. *Supra* n. 31; Beauchamp, T.L. and R. Faden. *Supra* n. 31

act as ‘causes of causes,’ determining in large part “who is actually born and their genetic endowments, how they behave, as well as the surrounding physical and social conditions.”³⁹ Indeed, this can be shown to be the case through an extension to Drèze and Sen’s entitlement analysis of famines.

Drèze and Sen’s entitlement analysis presents a comprehensive analytical model of the causation and distribution of acute malnutrition by investigating the interactions between an individual’s endowments, i.e. assets, arable land and labour capacity, and the mechanisms through which they are able to exchange these endowments in the market for food; that is, earning sufficient wages from these endowments to buy sufficient bundles of food, and the price of food determined by its supply. Drèze and Sen’s findings challenged, and ultimately undermined, the long-held Malthusian assertion that famine is determined by food scarcity and is the result of a positive natural check on populations over-stretching the limits of their resources⁴⁰ by demonstrating that rather, it is the background social or institutional factors and the dependent and independent dynamics of endowment-exchange mechanisms that determine whether individuals are realistically able to acquire sufficient bundles of food for adequate nourishment.⁴¹

The power of Drèze and Sen’s analysis lies, however, not only in its explanation of the causes and distribution of malnutrition, but in its potential application to wider health issues also. The entitlement analysis of famines is amenable to transposition onto a theory of the causation and distribution of health since health can similarly be summarised as individual endowments plus social conditions. It is this

³⁹ Venkatapuram, S. *Supra* n. 31, p. 11

⁴⁰ Malthus T.R. *An Essay on the Principle of Population*. 1798, Chapter VII

⁴¹ Drèze, J. and A.K. Sen. *Hunger and Public Action*. 1989

construction of health, and the controllability of social conditions, that underwrites obligations to refrain from impoverishing an individual's health, obligations to protect individuals from health impoverishment and obligations to assist those individuals already suffering with severe health deprivation. Such a 'gloss' also makes clear that the right to health is not a right to be healthy. If the socially controllable factors affecting health have been managed and provided in line with the standards set by human rights yet health still fails, there is no instance, necessarily, of a violation of the right.⁴²

So the obligations correlative to a right to health must relate to a set of actions, which include provision of goods, services and facilities related to health care and those related to the broader determinants of health.⁴³ These are obligations of the negative and positive kind. The question that quickly follows is then, who has to do what so that these obligations are fulfilled and who will be held responsible if and when they are not? One criticism posed against the justification of economic and social rights, including the right to health, is that they are not claimable with respect to precisely formulated correlative obligations. If human rights are inherently claimable there must be specifiable agents against whom the right may be claimed. And, whilst it is possible to identify the duties and the duty-bearers in the case of so-called negative rights the criticism goes, everyone has a duty not to torture for example, this is not the case for positive rights. A right to health, for instance, cannot be matched by a universal obligation incumbent upon every individual to

⁴² Daniels, N. *Supra* n. 31, p. 145

⁴³ The broader determinants of health are bracketed to those in the social sphere and do not encompass those of a more political kind. Whilst it is not feasible to do justice to a discussion on the relevance of politics determinants of health to the right to health, briefly, it is assumed here that political determinants of health (such as legal equality and protection from mistreatment) do not form part of the right to health because emphasis on these dimensions seems to be misplaced. For example, to protect women from rape certainly has value in a health sense but the primary reason for protecting women against rape would not be for health purposes, it would be to protect them as human beings; the duties go beyond those that would be health-related.

provide a minimum level of health. Rather, as Onora O'Neill has most celebratedly suggested, 'welfare rights' such as the right to health cannot exist without some institutional mechanism defining their correlative obligations and allocating them to specifiable duty-bearers. When institutions for allocating and distributing obligations have not yet been established and it is unclear against whom claims to welfare-type goods and services should be made, according to O'Neill's critique, such claims amount to rhetoric, not entitlement:

“Unfortunately much writing and rhetoric on rights heedlessly proclaims universal rights to goods and services, and in particular ‘welfare rights,’ as well as to other social, economic and cultural rights that are prominent in international Charters and Declarations, without showing what connects each presumed right-holder to some specified obligation-bearer(s), which leaves the content of these rights wholly obscure ... Some advocates of universal economic, social and cultural rights go no further than to emphasise that they *can* be institutionalised, which is true. But the point of difference is that they *must* be institutionalised: if they are not there is no right.”⁴⁴

In responding to O'Neill's criticism, one immediately obvious problem with her argument is its reliance on the normative and empirical notion that negative and positive rights are distinct, a notion that has now been convincingly dispensed with by a number of human rights philosophers, but particularly by Henry Shue and Alan Gewirth.⁴⁵ All rights, whether negative liberty rights or positive welfare rights, will have corresponding obligations of both the negative and positive kind. The right not to be tortured, to which O'Neill refers, not only gives rise to the obligation incumbent on everyone not to torture. For its effective realisation, it imposes an obligation to establish prevention, enforcement and punishment mechanisms that would, for instance, require the setting up and maintenance of a police force,

⁴⁴ O'Neill, O. *Towards Justice and Virtue A Constructive Account of Practical Reasoning*. 1996 pp. 131-132

⁴⁵ Shue, H. *Supra* n. 33; Gewirth, A. “Are all Rights Positive?”(2001); The collection of essays in *Freedom from Poverty as a Human Right: Who Owes What to the Very Poor?* Pogge, T. (ed.) 2007 also speaks to this refutation generally, and John Tasioulas' contribution in Chapter 3, Tasioulas, J. *Supra* n. 1, speaks to O'Neill's critique specifically, pp. 75-101.

judiciary and penal system. Likewise, although the right to health has the counterpart obligations to aid and assist when there is an acute need, a crucial implication of this right is the obligation not to obstruct others in securing the means of their own health; the obligation not to prevent women who wish to seek family planning from doing so, for example. That the right to health and the right not to be tortured give rise to negative and positive obligations to a different degree may be a persuasive argument. But the claim that the two rights can be distinguished from each other by a difference in kind is plainly mistaken. There is no distinction.

So to return to O'Neill's argument, in the case of negative obligations, the bearer of the obligation not to interfere is known: everyone. In the case of positive obligations, without an appropriate institutional scheme, the duty-bearer is not known. But if knowing the bearer of the obligations is a requirement for the existence of a given right, then neither the so-called negative liberty, civil and political rights nor the positive welfare, economic and social rights can be human rights. They both entail both negative and positive obligations. One response might be that the distinction does in fact lie in the degree to which the different kind of obligations are correlative of the different set of rights rather than the kind in and of itself. The primary obligations associated with liberty rights are negative whilst the primary obligations associated with welfare rights are positive, at least as they are most commonly understood. But even taken in terms of degree, is the claim that economic and social rights can exist only in the presence of an appropriate institutional scheme really persuasive? Perhaps not. Tasioulas' view seems the most convincing in this regard: O'Neill "exaggerates the significance of our preinstitutional knowledge of the duties associated with liberty rights and downplays what we can know about the deontic implications of welfare rights. In other words, when it comes to discussing liberty rights, the glass looks to her half

full, but when welfare rights are in question, it looks half empty.”⁴⁶ As Tasioulas eloquently puts it, surely more is known about the obligations generated by welfare rights generally, and the right to health specifically, than O’Neill would have us believe. So much so perhaps that positive obligations can be allocated through “institutionally unaided”⁴⁷ philosophical reasoning.

So far, human rights have been discussed in the sense that they are rights of all human beings living today. Implicit in this notion is some sort of equality principle. To take Nagel’s “impersonal standpoint,”⁴⁸ Sidgwick’s “point of view of the universe”⁴⁹ or Bilchitz’s “equality premise,”⁵⁰ the principle embodied in fundamental human rights is that the fundamental values that underpin them are values of all human beings with personal perspectives, but from the impersonal perspective there is no basis upon which to judge the importance of one human being’s values over those of any other. It is from the impersonal perspective that fundamental rights are recognised and as such the rules, which govern the distribution of benefits within a society, are formulated and implemented most appropriately according to this perspective. But it is not only the rules, which govern the distribution of benefits to which the perspective applies. It must also apply to the burdens. The importance of a fundamental right to health then imposes a responsibility on all human beings, or

⁴⁶ Tasioulas, J. *Supra* n. 1, p. 90

⁴⁷ *Ibid*, p. 93

⁴⁸ Nagel, T. *Equality and Partiality*. 1991, p. 11. Quoted in Bilchitz, D. *Poverty and Fundamental Rights: The Justification and Enforcement of Socio-Economic Rights*. 2007, p. 59

⁴⁹ Sidgwick, H. *The Method of Ethics*. 1981, p. 421. Quoted in Bilchitz, D. *Ibid*, p. 58

⁵⁰ Bilchitz, D. *Ibid*, pp. 57-62

more sensibly on societies,⁵¹ to ensure that the fundamental interests that the right guarantees are in fact guaranteed. To return to O'Neill's claim that a right to health cannot be matched by a universal obligation incumbent upon every individual to provide a minimum level of health, perhaps the right to health cannot be matched by such an obligation. But instead what it could be matched by is an obligation incumbent on every human being in a given society to, in Sen's words, "consider seriously what one can reasonably do to help the realisation of another person's [right], taking note of its importance and influenceability, and of one's own circumstances and likely effectiveness."⁵²

Effectiveness is crucial for informing upon whom obligations fall. As O'Neill correctly points out, there are numerous candidates that could do the job: individuals themselves, the state, family groups, or aid agencies, for example. That the obligations cannot be allocated to one or a combination of these agents without an institutional scheme for doing so, however, seems implausible when the requirement of effectiveness is added to the mix. This idea is one advocated by David Bilchitz. Bilchitz argues that it is possible to deduce from the abstract right the obligation to "adopt effective methods of realising the right."⁵³ He recognises that there are limits to individual capacities to realise rights and argues that to be "maximally effective"⁵⁴ individual capacities will have to be combined. The only

⁵¹ For example, Bilchitz argues that there is an implicit assumption of 'society' in his justification of fundamental rights, particularly with regards to upon whom the benefits and burdens generated from rights fall. As he puts it: "human beings are social beings born into associations of different kinds whose rules are designed to govern the interaction of a range of individuals. For virtually all human beings in the world today, the question is not whether we form rule-based societies from a state of nature. Rather, we find ourselves within such societies, and there is virtually no individual today that is unaffected by the rules of a society." Bilchitz, D. *Ibid*, pp. 59-60

⁵² Sen, A.K. *Supra* n. 13, pp. 372-373

⁵³ Bilchitz, D. *Supra* n. 48, p. 89

⁵⁴ *Ibid*

really feasible way of realising the right to health for all is if all individuals cooperate and coordinate with each other and, most likely in the long term, establish an institutional structure through which health is provided for. In this sense, a structure that looks to allocate correlative obligations from the right itself does not directly identify where the obligations lie. But a more flexible structure based on effectiveness does. As Bilchitz concludes, “it will be a matter of empirical determination as to what the most effective allocation of responsibility is.”⁵⁵ Currently, in accordance with both the contemporary philosophical idea of human rights and the right to health in international human rights law, it is primarily with states.⁵⁶

IV. Justifying the burden

If the right to health is a positive right to those aspects of health that are socially controllable, it could still be reasonably argued that the costs to secure the right for each and every individual would bear excessively on duty-bearers, particularly within their capacity to meet other human rights obligations and other important human interests. This view is one expressed, notably, by James Griffin. Griffin argues that the right to health cannot be a right, literally, to health, and that neither can it be a right to health care. He agrees that the right to health must be “a right to the sorts of welfare provision that supports health.”⁵⁷ However, it is precisely this formulation of the right, which he finds problematic. For Griffin, such a

⁵⁵ *Ibid*, p. 92

⁵⁶ Nickel, J.W. *Supra* n. 7, pp. 10, 38-41; Beitz, C.R. *Supra* n. 17, p. 128; Griffin, J. *Supra* n. 7, pp. 101-104; and Raz, J. “Human Rights without Foundations.” In *The Philosophy of International Law*, Besson, S. and J. Tasioulas (eds.) 2010, p. 336. Also, UN International Covenant on Economic, Social and Cultural Rights (UN ICESCR from here on), Article 2

⁵⁷ Griffin, J. *Supra* n. 7, p. 99

formulation gives rise to obligations that are “ridiculously lavish”⁵⁸ since they do not appear to set limits to what is required by the duty-bearer, particularly given necessary expenditure on other important, worthy social goods. If justification of the burdens is to be an existence criterion of human rights, then the right to health, according to Griffin, would fail as such.

The critique that the right to health cannot be a true human right because it is overly burdensome is by now very familiar. But whilst it is accepted in the idea of human rights so far presented that a burdensomeness constraint must be satisfied as a condition to endorsing a human right, is Griffin’s assertion that the burdens generated by the right to health are ridiculously lavish still convincing when applied to the right to health in a minimal sense? There are several bases upon which this kind of critique can be challenged.

Firstly, the notion that the prevailing human, social and economic constraints faced in the world today render the grim fact that there are simply not sufficient resources to satisfy even minimal health for all⁵⁹ is, in the words of Sen, “an empirical observation of some interest on its own.”⁶⁰ Thomas Pogge, for instance, is just one critic of such a notion and claims that this kind of pessimism about the resources available to satisfy economic and social needs is unjustified. In justifying a right to be free from poverty, Pogge has suggested that “[i]t would not cost us much to eradicate the deprivations [such as malnutrition, lack of access to health services,

⁵⁸ *Ibid*, p. 100

⁵⁹ “Richard Rorty in his UNESCO lecture entertained the prospect that the rich parts of the world may be in the position of somebody proposing to share her one loaf of bread with a hundred starving people. Even if she does share, everybody, including herself, will starve anyway. So she may easily be guilty ... either of self-deception or hypocrisy.” Rorty, R. “Who Are We? Moral Universalism and Economic Triage.”(1996) quoted in Tasioulas, J. *Supra* n. 1, p. 81

⁶⁰ Sen, A.K. *Supra* n. 13, p. 383

adequate shelter, safe drinking water and basic sanitation] — perhaps around 1 percent of the disposable incomes of the most affluent tenth of humankind.”⁶¹ Central to Pogge’s argument then is that the needs-deficit is an issue of global justice.⁶² But the kind of global redistribution Pogge has in mind may still violate the principle of burdensomeness as it has been presented so far. Inasmuch as all individuals are both right holders and duty-bearers, as holders it may be in our interests that the right be as extensive as possible, but as duty-bearers (or as contributors to whichever system fulfils the right) it may be more desirable to limit the burdens, at least to the extent that they do not become, as Nickel puts it, “economically destructive.”⁶³ Whether the question of burdensomeness is framed with respect to the economic and social status quo or with respect to a situation where resources are [more] equally distributed therefore leaves open the answer. Nevertheless, even if we assume, at least at this point in time, that the kind of redistribution required would generate burdens that the majority of individuals would find unacceptable, the test of burdensomeness does not auto-fail at this point.

Because what is being tested is whether the right to health can exist without generating onerous burdens on the duty-bearer, it is useful to compare the right to health to other human rights that are standardly accepted to ‘exist.’ How persuasive is the argument that the burdens generated by the right to health are so much more

⁶¹ Pogge, T. “Human Rights and Human Responsibilities.” In *Global Justice and Transnational Politics: Essays on the Moral and Political Challenges of Globalisation*, de Greiff, P. and C. Cronin (eds.) 2002, pp. 151-152

⁶² Pogge, T. “Recognized and Violated by International Law: The Human Rights of the Global Poor.” (2005a) Peter Singer makes a similar argument when commenting on his book: “We need to commit ourselves to justice and to righting inequities, whether you’re talking about hunger, climate, or global health.” Daar, A. and P. Singer. *The Grandest Challenge: Taking Life-Saving Science from Lab to Village*. 2011

⁶³ Nickel, J.W. *Supra* n. 7, p. 78

lavish and excessively burdensome on the duty-bearer than those generated from, say the right to liberty (or other civil and political rights), so that the former cannot be cogently conceived as a human right whilst the latter absolutely can? Again, this argument rests on an assumption about the positivity and negativity of the primary obligations underlying each set of rights; an assumption made famous by Maurice Cranston. Cranston proceeds from the argument that for human rights to be coherent they must be accomplishable for all, and even with the best of efforts, it would not be feasible to realise many economic and social rights for all, particularly for developing societies, which violates the ‘ought’ implies ‘can’ maxim. This, according to Cranston, is not the case with respect to civil and political rights, which are “not difficult to institute” since “[f]or the most part, they require governments, and other people generally, to leave a man alone.”⁶⁴ For Cranston therefore, it does not make sense to regard economic and social provisions as a matter of universal human entitlement.

Whilst it is not necessary to relay the accounts which convincingly reject Cranston’s claims, of which there are many,⁶⁵ the important point to draw out of these accounts is that full realisability need not be what a recognised human right must demand. Indeed if full realisability were a necessary condition for any rights, “then not just social and economic rights, but all rights — even the right to liberty — would be nonsensical, given the infeasibility of ensuring the life and liberty of all against transgression.”⁶⁶ Leaving ‘a man alone’ has never been particularly easy or inexpensive. But the retort on behalf of Cranston may be that, on its own, an assertion that “non-realisation does not, in itself, make a claimed right a non-

⁶⁴ Cranston, M. “Are There Any Human Rights?”(1983) p. 13

⁶⁵ See, e.g., Shue, H. *Supra* n. 33; and Gewirth, A. *Supra* n. 45

⁶⁶ Sen, A.K. *Supra* n. 13, p. 384

right”⁶⁷ reveals very little about where along the scale between zero realisation and full realisation an obligation to fulfil the right to health should lie. It has been argued that the right is a positive right and should provide access to *some* standard of health; the “highest attainable”⁶⁸ standard of health in its international legal sense. If the right to health is interpreted as guaranteeing a standard of health that although is not full realisation but something close to it, (which is the connotation the ‘highest attainable’ term often acquires) the assertion that full realisation need not be what a bona fide human right demands is not a very successful rebuttal to the lavishness critique. Admittedly, on this interpretation, Cranston’s argument does seem rather credible. However, the right to health does set limits, as all rights do. And it is in its interpretation alongside limit-setting that provides the final and most persuasive argument as to why the right to health can pass the burdensome test.

Whilst the right to health entails a responsibility upon the duty-bearer to act in some way so that threats to fundamental interests are protected against — health services be provided for those who need and lack them — in order for those obligations to be justified, the acts of the duty-bearer must be conditioned on “additional practical and normative considerations:”⁶⁹ considerations, which may serve to alter the obligations of the duty-bearer. Fundamental interests therefore shape the content

⁶⁷ *Ibid*, p. 385

⁶⁸ The International Covenant on Economic, Social and Cultural Rights, widely considered as the central instrument of protection for the right to health, recognises “the right of everyone to the enjoyment of the *highest attainable standard* of physical and mental health.” UN ICESCR, *Supra* n. 56, Article 12; The Convention on the Rights of the Child recognises “the right of the child to the enjoyment of the *highest attainable standard* of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.” Article 24; The Convention on the Rights of Persons with Disabilities: recognises “that persons with disabilities have the right to the enjoyment of the *highest attainable standard* of health without discrimination on the basis of disability.” Article 25; and the Constitution of the WHO affirms that “the enjoyment of the *highest attainable standard* of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.”

⁶⁹ Bilchitz, D. *Supra* n. 48, p. 78

of the right to health, which is subject to further relevant considerations. These further relevant considerations then shape the content of the obligations, which are now unconditional. They are unconditional because other relevant conditions have been accounted for in their determination.

This scheme obviously has consequences. It could be argued that making an account of these relevant considerations part of the determining-obligations task leaves open the possibility that for some duty-bearers the unconditional obligation would be to realise the right to an extent of zero. Whilst this is theoretically true (these further considerations could render any level of realisation of the right overly burdensome) it is extremely unlikely within the idea of human rights thus presented, specifically, with respect to the importance and minimalist nature of the interests they protect. Nevertheless, these relevant considerations could, and would most probably, require that health be realised to a qualified extent. Precisely, they set limits.

So what are the relevant considerations that may set limits to the right to health? One of the main considerations, if not the main consideration, is the scarcity of resources. Whilst resource scarcity would limit the right most acutely in less developed societies, health needs will most likely outstrip the resources required for meeting them in every society, developed societies included. In determining unconditional obligations, it is therefore necessary to have some understanding of the resources that are available to duty-bearers for fulfilling the right to health. Where along the scale of zero to full realisability the right to health sits will, therefore, be “system relative”⁷⁰ and will be subject to the reasonable resource constraints faced by each duty-bearer. The right to health on this interpretation now

⁷⁰ Daniels, N. *Supra* n. 31, p. 145

begins to look something similar to its legal form. The International Covenant on Economic, Social and Cultural Rights (ICESCR) commits its state parties in Article 2(1) to “take steps ... to the maximum of its available resources, with a view to achieving progressively the full realisation of the rights recognised in the present Covenant.”⁷¹ The level of health to which the right guarantees is then limited by the maximum resources the duty-bearer has at its disposal. The ‘highest attainable’ standard isn’t then an absolute standard of health to which the right guarantees, it is instead the highest attainable standard of health, given available resources. The highest attainable standard can and will vary. In response to Griffin’s concerns of lavishness, a defender of the minimalist account of the right to health can therefore demonstrate that the obligations generated by it need not bear excessively on the duty-bearer when formulated and constrained appropriately and when framed in terms of the actual, or maximum, resources available. Indeed, this is similar to the minimalist conception Griffin proposes himself.⁷²

V. Conclusions

There remain many “conceptual doubts”⁷³ over whether the right to health can be a true human right, and full consensus on its importance, recognition and justification remains to be seen. But within the general aim of this thesis, which is to determine precisely when and under what conditions an unmet health need signals a violation of the right to health, the fundamental question over its existence has to be addressed. Amartya Sen makes this point emphatically. “It is critically important to

⁷¹ UN ICESCR *Supra* n. 56, Article 2(I)

⁷² Griffin, J. *Supra* n. 7, p. 101

⁷³ *Ibid.*

see the relationship between the force and appeal of human rights, on the one hand, and their reasoned justification and scrutinised use, on the other.”⁷⁴ If the right to health is to be invoked at all, it is first necessary to address such conceptual doubts by finding and defending its best conceptual grounding.

In an attempt to do precisely that, this chapter has argued that neither reliance on the empirical fact that the right to health is recognised as a legitimate standard within international law nor reliance on the metaphysical foundations of rights is sufficiently persuasive to provide justification for the right to health. Instead, it has been argued that it is the universal human interests in wellbeing and freedom that provide the conceptual foundations for rights, and it is the special nature of health in protecting against significant threats to these fundamental interests that provides sufficient basis for generating obligations on others to fulfil it. Critically, this justification is made based on the notion that human rights are minimal standards. It has been shown that doubts over whether the threats the right to health protects against are too far reaching may be misplaced because, in the minimalist sense, the right to health sets a modest standard; a standard that provides for living and leading a life that is minimally decent. Doubts over whether health is amendable to being an object of duty may be misplaced because the relevant, socially controllable factors that affect population health and its distribution can be provided for and those with the obligation to provide them can be identified: for now, states. Finally, and perhaps most critically, doubts over whether the obligations given rise to by the right to health bear excessively on the bearer may be misplaced because the notion of minimalism sets limits. The level of health the right guarantees is conditional on the duty-bearer’s ability to fulfil it so that obligations are determined both by

⁷⁴ Sen, A.K. *Supra* n. 18, p. 317

reference to the fundamental values that underpin the right and by consideration of the economic and social circumstances in which the duty-bearer finds itself.

The idea of conditionality deals with the problem of burdensomeness and scarcity insomuch as it identifies the principles and the rules regarding what duty-bearers have to do to fulfil the right to health. But as David Bilchitz rightly asserts, “ultimately, judgement will be required in translating these into particular actions and obligations.”⁷⁵ The idea of conditionality gives little detail on what kind of health the right guarantees, what share of resources is adequate for satisfying it, or how resources are to be allocated amongst different needs when resources are not sufficient to meet them all. It does not resolve the ‘resources problem.’ If the notion of conditionality is invoked as a defence against the lavishness-type critique, it seems there is a duty to provide a principled process through which this notion may be practically applied. This is precisely where the discussion now turns.

⁷⁵ Bilchitz, D. *Supra* n. 48, p. 101

Dealing with conditionality

Introduction

In the previous chapter it was argued that the right to health should be understood as entailing a conditional obligation on duty-bearers since the achievement of good health outcomes unavoidably requires the allocation of resources, and resources are limited. Indeed, this is one reality that was not lost on those responsible for drafting the International Covenant on Economic, Social and Cultural Rights (ICESCR). In an attempt to specify claims and obligations pertaining to economic and social rights that are sensitive to the needs and interests of both their beneficiaries and their duty-bearers, the resultant Covenant states that each state bears the obligation to take steps, with a view to progressively realising the rights recognised under the Covenant, which includes the right to health, subject to the maximum resources that are available.¹ Though this basic provision has incited many critics to declare that it provides states with a loophole through which to evade their obligation to fulfil economic and social rights and as such the motivation of the ICESCR can be seen only as “programmatic and promotional”² rather than “descriptive of individual rights,”³ the consensus amongst the Covenant drafters accepted that “the enjoyment

¹ UN International Covenant on Economic, Social and Cultural Rights, (UN ICESCR from here on) Article 2(I)

² Brownlie, I. *Principles of Public International Law*. 1998, p. 57-3

³ Vierdag, E.W. “The Legal Nature of the Rights Granted by the International Covenant on Economic, Social and Cultural Rights.” (1978) p. 103

of economic, social and cultural rights depended in part upon available resources and upon domestic and international economic and social conditions over which a state exercised only incomplete control and which not only varied from country to country but were also liable to sudden change.”⁴ The level of health to which these rights guarantee is conditional on the state’s ability to provide for it.

But it is precisely this conditionality, which is the core of these rights’ complexity. With specific reference to the right to health, how is the meaning of the right to health to be determined if it is allowed to differ across resource contexts, and how then is it possible to ascertain violations of the right to health if the meaning is not determinate? In setting out to answer these questions, the essential challenge rests, therefore, on developing an understanding of how the notions of progressive realisation and maximum available resources are to be operationalised in relation to a sufficiently grounded formulation of the right to health so that it is then possible to arrive at a standard by which a judgement can be made as to when and why the identification of a particular unsatisfied health need indeed signals a violation of the right to health. It is argued here that such a challenge could possibly be surmounted.

Section I sketches out the well-known problem concerning the allocation of scarce resources, and introduces the central dilemma: given that resources will always be insufficient to satisfy all health needs, whatever the relative wealth of society,⁵ what is the role of the right to health in allocating resources to meet health needs when it

⁴ Annotations on the Text of the Draft International Covenants on Human Rights, Chapter II, para. 24

⁵ The central observation of economics is that resources are known to be scarce, but there are no known bounds on the quantity of outputs that is desired. Because health and health care are ‘goods’ that are produced, or manufactured, choices must be made about what goods are produced, how they are to be produced and who will consume them. Another way to view this is that we cannot have all of the goods that we want and in choosing the basket of goods that we will have, we have to trade off one good for another.

is not possible to meet them all? In an attempt to shed light on this question, the experiences of the South African and Costa Rican courts are analysed. It is argued that neither approach is satisfactory with respect to the idea of human rights presented in the preceding chapter. Rather, I defend a form of the minimum core concept as the most meaningful and practical way of giving content to the right to health and of helping to deal with the central resources dilemma. This is the focus of Section II. It is argued that a minimum basket of health goods, services and facilities can be determined but its absolute provision is not what is required for the fulfilment of the right to health. Instead, access to the basket remains conditional and imposes an unconditional duty to provide as much of the basket of goods, services and facilities that the state is able to. An assessment of compliance with the obligation therefore must account for how able a state is to provide the basket and by association implies the degree to which it is willing to meet the level of provision that is expected. Section III offers an explanation of how ability could be formulated in such an assessment.

I. How to allocate resources to meet health needs when it is not possible to meet them all

Understanding that the threat to having and leading a minimally decent life posed by poor health is of sufficient moral importance that it generates obligations on others to protect it provides some general guidance as to the type of actions the right to health requires of the duty-bearer: namely, those actions that promote health to meet health needs. However, this understanding is of little help beyond such general guidance since, at the same time, if health needs are defined as the types of needs an individual must satisfy to lead the kind of life they have reason to value,

resources will always be insufficiently abundant in any given society to satisfy all of those needs. Obligations based solely on need would, as a consequence, violate the condition of burdensomeness, as discussed in Chapter 2. There is, therefore, an outstanding requirement to specify obligations with respect to a principled prioritisation strategy.

The need for resource prioritisation is necessary, and indeed inevitable,⁶ and is embedded at each and every level of allocative decision making. At the macro level, decisions must be made with regards to the proportion of resources which are to be directed towards satisfying health needs as opposed to satisfying other legitimate human needs such as education, housing, security, science and culture, all of which are important for the realisation of other human rights and other important human interests. At the meso level, decisions must be made with regards to the proportion of resources within a health budget that are to be directed towards one disease, one treatment, one locale as opposed to the innumerable other diseases, treatments and locales that equally call on those same resources. At the micro level, decisions must be made with regards to which patients receive the care, whether the young or old, or whether those with early or advanced stages of illness should be prioritised, for example.⁷

Determining where budgetary lines should be drawn between competing macro, meso and micro claims has been a political exercise for as long as there has been politics. But unanimity on how various legitimate concerns and values should be

⁶ Norman Daniels argues that justice requires the setting of limits since even though health is of special moral importance; it is not the only good that is important in this way. “However important health care is, we must weigh it against other goods and other ways of promoting opportunity.” Daniels, N. *Just Health: Meeting Health Needs Fairly*. 2007, p. 104

⁷ Coulter, A., and C. Ham. “International Experience of Rationing (or Priority Setting).” In *The Global Challenge of Health Care Rationing*, Coulter, A., and C. Ham (eds.) 2000 p. 5

balanced remains, nevertheless, elusive.⁸ The law as it is currently interpreted, whether international or domestic, fares no better in providing an explicit solution; yet it is precisely the question of where these lines start and finish and whether the existing lines are fair and proper that has to be deliberated for the setting of limits to health obligations if and when claims to health rights are to be judged and/or monitored. It is this incompleteness, yet dependence, which gives rise to the central dilemma: what is the role of the right to health with respect to the allocation of resources to meet health needs given that it is not possible to meet them all?⁹

A. Courts and resource allocation: experiences from South Africa

The challenge of engaging the right to health to mobilise resources for health is illustrated in two notable cases from South Africa. Section 27(1) of the South African Constitution states that everyone has the right to have access to health care services, including reproductive health care, (2) that the State must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of these rights, and (3) that no one may be refused emergency medical treatment.¹⁰ In 1997, for the first time, the Constitutional Court of South Africa (SACC) decided upon a case regarding the scope of obligations to fulfil the right to health care in light of limited resources.¹¹ The claimant, Soobramoney, suffered from a terminal illness and alleged a violation of the right to

⁸ For example, a libertarian might argue that there is zero duty on the State to provide social goods, such as health; inequalities in health may be unfortunate but not unjust. (Engelhardt, H.T. *The Foundations of Bioethics*. 1986) A Utilitarian might argue that there is good reason to guarantee some level of health, but only so far as it maximises welfare more generally. (Gauri, V. “Social Rights and Economics: Claims to Health Care and Education in Developing Countries.” 2003) Then, the egalitarian view is one that understands justice as equality of opportunity and that good health is necessary for the realisation of most species-typical life plans. (Daniels, N. *Supra* n. 6)

⁹ This is what Tobin calls “the resource allocation dilemma.” Tobin, J. *The Right to Health in International Law*. 2012, p. 69

¹⁰ Chapter Two of the Constitution of the Republic of South Africa, Bill of Rights, Section 27: Health Care, Food, Water and Social Security

¹¹ Soobramoney v Minister of Health (KwaZulu-Natal), 1998, SA 765

health care against the South African health authorities after their refusal to provide renal dialysis treatment on the grounds that Soobramoney's general condition did not qualify him for treatment under the criteria set out by the hospital for determining eligibility for such treatment. The SACC found that under the prevailing resource constraints, and in accordance with Sections 27(1) and 27(2), the hospital had adopted guidelines that were not unreasonable and had neither applied them unfairly or irrationally when the decision to deny treatment was taken. The Court declared that it could find "no reason to interfere with the allocation undertaken by those better equipped ... to deal with the agonising choices that had to be made."¹² The SACC made no attempt to dispute whether the resources available for health generally, or dialysis treatment specifically, were appropriate but instead, restricted its role to an assessment of the rationality of the methods through which budgetary decisions had been made by those responsible for setting the health budget. Soobramoney's claim of a violation of his right to health was unsuccessful.

In a second case, a constitutional challenge was made by Treatment Action Campaign (TAC, a South African non-governmental organisation representing HIV-positive pregnant women) against the government with regards to restrictions on the provision of Nevirapine to pregnant women to prevent peri-natal HIV transmission.¹³ The South African government had announced that it would introduce provision of the drug for mother-to-child-transmission only in certain pilot sites — thus denying most mothers access to treatment — on the basis that the efficacy of the treatment was unproven, and moreover, country-wide provision would be too costly in terms of infrastructural capacity, in particular, capacity to

¹² *Ibid*, Judgment CCT 32/97, para. 59

¹³ Minister of Health v Treatment Action Campaign (TAC), 2002, SA 721 (CC)

provide counselling and testing. The SACC ruled in favour of TAC, finding that the restriction of Neveapine to pilot sites excluded those who could reasonably be included in the programme and that the government's policy violated the Constitution's right to health. The SACC issued a positive ruling, which ordered that the drug be made available to mothers giving birth in state institutions without delay, and that reasonable measures be taken to extend the testing and counselling facilities throughout the public health sector.

It may appear, from the ruling in the TAC case, that the SACC had departed from its previous, Soobramoney, position of non-intervention in resource allocation decisions and had made a move towards defining what the right to health guarantees in light of limited available resources. That is, the order would guarantee, for all petitioners, access to a particular treatment or intervention. This appearance is, however, deceiving. Whilst the difference in ruling between the Soobramoney and TAC cases may be of interest in and of itself, for purposes here, viz. the role of the right to health in mobilising resources for its fulfilment, what is most important is to note the basis upon which each ruling had been made despite the difference in outcome. In neither case did the Court intervene in the issue of appropriate resource allocation and prioritisation. In the Soobramoney case, the ruling was explicit in its sentiments of non-interference in resource allocation decisions, and in the TAC case, though not explicit, the Court's decision would not require the South African government to either allocate additional resources, or re-allocate existing resources, to health since Neveapine was available and the cost of provision was almost zero as a pledge had been given by suppliers to provide the drug for free, and where testing and counselling were also available it could be administered within the state's existing resources. Rather, the rulings in both cases were equally determined by reference to the procedures through which the respective decisions

to provide, or not provide, a treatment had been made. In this sense, the burden upon the state reaches only so far as to justify that it has ensured these procedures pass the test of *reasonableness*,¹⁴ i.e. are the procedures for deciding whether to allocate, or not allocate, resources for \times health need transparent and participatory, and does the decision in question adhere to those procedures in a way that is non-discriminatory and reasonable? As a consequence, the right to health jurisprudence of the SACC has provided little to no guidance as to the substantive content of the right.

The approach of the SACC comes as little surprise in the absence of some specified criteria for determining the appropriateness of resource allocation and prioritisation. Indeed, this approach is one that has similarly been adopted by the UN Committee on Economic, Social and Cultural Rights (CESCR), with respect to its process for reviewing complaints and assessing the extent to which a state has complied with the progressive nature of its obligations under the Optional Protocol, and in recent academic thinking on the right to health also.¹⁵ But if the right stops at this type of reasonableness level, it is merely a right to an outcome that reasonably adheres to a procedure for allocating resources towards health, a right with necessarily no substantive content? Despite reasonableness being a substantive test, it is a weak one. It only identifies the wide range within which the right and its associated duties must fall so as not to be deemed ‘unreasonable.’ It does not determine the precise content of the right or the associated duties.

¹⁴ Reasonableness used here as a normative standard derived from the values of the South African Constitution.

¹⁵ The OP-ICESCR adopts a methodology for assessing compliance with the progressive nature of a State’s obligations to fulfil the right to health that is, in essence, a test of procedural reasonableness. UN Optional Protocol to the International Covenant on Economic, Social and Cultural Rights, Article 8(4). Authors such as Tobin, J. *Supra* n. 9; and Gruskin, S., and N. Daniels. “Justice and Human Rights: Priority Setting and Fair Deliberative Process.” (2008) have also adopted this view.

To what extent, then, is this kind of a right to health useful for actually promoting health? This is precisely the question asked by many social rights supporters. If the specific complaint is that there simply isn't enough health-spending going on or that the health-spending that is going on is inefficient, the institutional monitor is redundant (failing a grave violation of due process or a gross misapplication of the principles governing resource allocation) and the health status quo remains. This result is particularly disappointing when the type of health intervention being denied is of the very basic kind. If the right to health is to have 'teeth' it seems intuitive that the monitoring body must have in its toolkit the ability to review, more specifically, the appropriateness of the decisions giving rise to the denial of access to particular health goods, services and facilities. This, however, implies a somewhat more expansive interpretation as to the scope of the right. Is this alternative interpretation available to the court within what can be deemed as legitimate? Analysing the right to health jurisprudence of other countries provides an opportunity to test whether it is.

B. Courts and resource allocation: experiences from South America

Though analysis of the decisions arrived at in the South African cases is one main trail in search of the limits to the right to health, which rightly should be explored, it is important that the search not be overly restricted to, reliant on or informed by those cases alone. In mapping out how the right to health has been operationalised in light of resource limitations generally, the "wave of lawsuits"¹⁶ concerning the right in other countries should not be neglected since the jurisprudence of those other countries, particularly in South America, depicts a somewhat different landscape. In South Africa, as already discussed, the Constitutional Court has made

¹⁶ Mæstad, O. et al "Assessing the Impact of Health Rights Litigation: A Comparative Analysis of Argentina, Brazil, Colombia, Costa Rica, India, and South Africa," In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011, p. 273

clear that it will not intervene in the allocation of limited resources and that the right does not give rise to individual entitlements to specific health goods, services and/or facilities. The long and vast experience of health rights litigation in South America, however, points to the contrary. The discussion that follows illustrates this point drawing on the right to health jurisprudence of the Costa Rican Constitutional Court.¹⁷

Since the turn of the 21st Century, the right to health in Costa Rica has been increasingly claimed before the Sala Constitucional (or Sala IV).¹⁸ Unlike many of its South American counterparts, however, the right to health in Costa Rica is not constitutionally protected. So why and how has this increasing caseload been dealt with before the Court? A 1989 constitutional amendment, which saw the very creation of the Sala IV, made an amendment to Article 48 to provide every individual with the right to present *recursos de amparo*¹⁹ to the Sala IV to maintain or re-establish the enjoyment of rights enshrined in the Constitution *as well as* those fundamental rights established in international human rights instruments to which Costa Rica is a party.²⁰ Since Costa Rica is a party to the ICESCR, amongst other

¹⁷ The Costa Rican experience is used here as an illustrative example of the general South American picture. A similar story can be told through the right to health jurisprudence of the Brazilian courts, see e.g. Ferraz, O.L.M. “Between Usurpation and Abdication? The Right to Health in the Courts of Brazil and South Africa.” (2009a) and Columbian courts, see e.g. Yamin, A.E., et al. “Colombia: Judicial Protection of the Right to Health: An Elusive Promise?” In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011

¹⁸ The number of health and medicine cases filed with the Sala IV has risen from fewer than 50 between 1989 and 1999 cumulatively, to over 500 in 2008 alone. Wilson, B.M. “Costa Rica: Health Rights Litigation,” In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011, p. 140

¹⁹ Remedy for the protection of constitutional rights

²⁰ Translation from the Constitution of Costa Rica, (Constitución Política de la República de Costa Rica) Título IV Derechos y Garantías Individuales, Artículo 48

international human rights instruments containing the right to health,²¹ the amendment to Article 48 permits individuals to file claims to the right to health with the Sala IV.

Notwithstanding this change, during the earlier years of the Sala IV's existence, the Court's approach to cases concerning the right to health was, without exception, one of deference. To illustrate, a case in 1992 was filed by the Association of the Fight against AIDS (*Asociación de Lucha contra el SIDA*) claiming a right to the provision of an antiretroviral drug which the *Caja* (the incumbent institution governing state-funded health goods, services and facilities) had denied access to on grounds that the particular drug did not form part of the government's list of official medicines, was too costly to provide and was not a cure for the disease. The Court ruled against the petitioner, accepting the *Caja*'s arguments that "the cost of acquiring the medications implies a very large sacrifice for socialised medicine [and] the scientific data presented indicates that [the medicine] is not a cure for the patient."²² In this case, the Court played a highly non-interventionist role with respect to the allocation of resources and supported the notion that such decisions be left the domain of the incumbent governing institution, the *Caja*.

In an instance almost of *déjà vu*, in 1997 three individual HIV patients claiming a right to the provision of an antiretroviral medicine, which had been prescribed, filed a case against the *Caja*. Since, as in the 1992 case, the prescribed drug was not on the government's list of official medicines, the *Caja* made the same cost and non-curative-based argument for denying state-funded access to it. The decision of the

²¹ For example, Costa Rica is party to the Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of the Child, and the American Declaration of the Rights and Duties of Man, all of which contain protections of the right to health in articles 12, 24 and 11, respectively.

²² Resolution 280-92, quoted in Wilson, B.M. *Supra* n. 18, p. 142

Sala IV in this case, however, was an about-turn on that of 1992. The Court argued, “[w]hat good are the rest of the rights and guarantees ... [or] the advantages and benefits of our system of liberties, if a person cannot count on the right to life and health assured.”²³ The Court ordered the Caja to fund provision of the medicine. The justification given by the Court in its ruling on this case has been particularly influential on the jurisprudence that has followed and also explains, in large part, the significant rise in cases filed and won concerning not only state-funded access to antiretroviral medication but state-funded access to health goods, services and facilities, more generally also.²⁴ In continuing to make its rulings along such justificatory lines the Sala IV has effectively declared its lack of faith in the Caja’s ability to make responsible resource allocation decisions and only through fulfilment of the Court’s orders can this misallocation be rectified. To this end, the Court has defined which goods, services and facilities it deems the right to health guarantees and the proportion of resources that should be directed towards providing them, which stands in distinct opposition to the South African Court’s, more restricted, interpretation of its role as the gatekeeper for ensuring fulfilment of the right to health.

But whilst the Sala IV’s correctional role to widen access to such goods, services and facilities may be seen as generally favourable for improving health — particularly in the eyes of those social rights supporters who hold the SACC’s reasonableness approach so belligerently in contempt — it has been equally criticised for its ignorance as to the budgetary implications such widening may have had. Critics of the Sala IV argue that in its ignorance it has overstepped its role in

²³ Resolution 5934-97, *Ibid*, p. 143

²⁴ For example, Wilson asserts that the justification given for the ruling in this case “is frequently cited in subsequent health rights decisions.” *Ibid*

the allocation and prioritisation of resources and in the process its orders have acted to distort health priorities and divert resources away from important health interventions towards expensive treatments for uncommon diseases.²⁵

Though there is not yet a rigorous empirical basis upon which to gauge the budgetary impact of health litigation in Costa Rica, i.e. whether diversion and distortion of resources is indeed taking place, it is not unreasonable to suggest that if the right to health jurisprudence continues along hitherto lines, some form of either macro, meso or micro diversion and/or distortion is inevitable. If all Costa Ricans were to turn to the Sala IV to remedy the Caja's denial to provide state-funded access to health goods, services and facilities for all ailments — serious or non-serious, cheap or expensive — either many more resources would have to be directed away from other important human needs towards health or the resources allocated for health programmes already prioritised by the state would have to be redirected and be completely employed for funding health-through-litigation. Either scenario is likely to have undesirable consequences. Resources should serve the population at large in all domains of life, and health only by litigation is likely to produce an overall negative distributional effect on health equity, particularly since there is evidence from Brazil, Argentina and Columbia to suggest that those who reach the courts do not tend to be those who are already most disadvantaged.²⁶ This

²⁵ For example, according to one Caja director “21% of the Caja's medicine budget is required to treat just 6,789 patients.” Ávalos, Á. (2005) “Costosa oleada de amparos,” *La Nación*, 06 June, quoted in Wilson, B.M. *Ibid*, p. 145

²⁶ In Brazil, Ferraz finds that the propensity to bring right to health claims to court is closely correlated with socio-economic status. Ferraz, O.L.M. “Brazil: Health Inequalities, Rights and Courts.” In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011a, p. 88; In Argentina, Bergallo finds that the majority of litigants are based in areas of higher than average income and are represented by private, rather than legal aid-funded, lawyers. Bergallo, P. “Argentina, Courts and the Right to Health: Achieving Fairness Despite ‘Routinization’ in Individual Coverage Cases.” In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011, p. 55; In Columbia, Yamin et al. find that those in the contributory regime (available only to the better-off) file claims six times more often than those in the subsidised regime. Yamin, A.E. *Supra* n. 17, p. 115

gives plausibility to an intuition as to the overstepping of the court's role in resource allocation decision making and indeed validly characterises a charge of "usurpation."²⁷ Moreover, the costs generated under such an interpretive scheme would, most probably, be overly burdensome. So then what, if anything, can be drawn from analyses of the right to health jurisprudence of the South African and South American courts to help deal with the central resources dilemma? Is a right to an outcome that reasonably adheres to a procedure for allocating resources towards health all that the right to health can be?

C. Shedding more light on the central 'resources' dilemma

Though a more cautious approach to scoping obligations avoids the perils of resource diversion and/or distortion and is, according to Ferraz, better than a situation of being "embarrassed"²⁸ it may be ineffectual for the task at stake. That is, fulfilling health. Such being the case, health is perhaps served best not by the language of rights at all but rather by petitioning the goals of governmental social policy. But given that the justification of the right to health is based on the notion that health, or rather the lack of health, threatens fundamental interests to such a significant degree that it justifies the generation of obligations on others to protect it, it follows that health must sit within the human rights domain. This acknowledgment then brings us back to the original problem: if the human right to health requires that it be substantive, then there is a necessity to determine its substance. So then is the only remaining option one where the right stretches to state-funded provision of particular health goods, services and facilities, the determination of which is to be decided haphazardly by the monitoring institution,

²⁷ Ferraz, O.L.M. *Supra* n. 17

²⁸ "[I]t is better to be somewhat discredited in the eyes of impatient rights activists and commentators (the South African Constitutional Court's predicament) than embarrassed (the Brazilian STF situation)." *Ibid*, p. 21

as in the South American experience? Or, is the dichotomy between the two approaches in fact a false one; is there not a ‘third way’?

The discussion that follows unfolds on the basis that there is a third way. The third way need not see the South African-type and Costa Rican-type conceptions in opposition; nor need it require the twisting or distorting of either conception for them to be seen as convergent. Rather, in acceptance of the limits resource scarcity inescapably poses to the determining-parameters-task, it asks whether there is an appropriate framework available to determine substantively some minimal level of health, which characterises what in fact the right guarantees. The remainder of this chapter is preoccupied precisely with such enquiry.

II. A third way to deal with the resources dilemma

A. Substantive minimum: concept and justification

Though the discussion has so far concentrated on grappling with the complexities brought about by the obligation to progressively realise the right to health, to an undefined level of health, states party to the ICESCR are at the same time committed to “a core obligation to ensure the satisfaction of, at the very least, minimum essential levels of the rights enunciated in the Covenant.”²⁹ In the case of the right to health, the Committee, in its General Comment 14, has identified these minimum core obligations as follows:

²⁹ The idea of minimum obligations was first introduced by the CESCR in its General Comment No. 3, UN Committee on Economic, Social and Cultural Rights “General Comment No. 3. The Nature of States Parties’ Obligations.” (GC3 from here on) para. 10; and later more fully substantiated the concept in its General Comment No. 14, UN CESCR “General Comment No. 14. The Right to the Highest Attainable Standard of Health.” (GC 14 from here on) para. 43

- (a) To ensure the right of access to health facilities, goods and services on a non-discriminatory basis, especially for vulnerable or marginalised groups;
- (b) To ensure access to the minimum essential food which is nutritionally adequate and safe, to ensure freedom from hunger to everyone;
- (c) To ensure access to basic shelter, housing and sanitation, and an adequate supply of safe and potable water;
- (d) To provide essential drugs, as from time to time defined under the WHO Action Programme on Essential Drugs;
- (e) To ensure equitable distribution of all health facilities, goods and services;
- (f) To adopt and implement a national public health strategy and plan of action, on the basis of epidemiological evidence, addressing the health concerns of the whole population; the strategy and plan of action shall be devised, and periodically reviewed, on the basis of a participatory and transparent process; they shall include methods, such as right to health indicators and benchmarks, by which progress can be closely monitored; the process by which the strategy and plan of action are devised, as well as their content, shall give particular attention to all vulnerable or marginalised groups.³⁰

Apart from those obligations identified as minimum core, the CESCR has also identified the following as “obligations of comparable priority:”

- (a) To ensure reproductive, maternal (pre-natal as well as post-natal) and child health care;
- (b) To provide immunization against the major infectious diseases occurring in the community;
- (c) To take measures to prevent, treat and control epidemic and endemic diseases;
- (d) To provide education and access to information concerning the main health problems in the community, including methods of preventing and controlling them;
- (e) To provide appropriate training for health personnel, including education on health and human rights.³¹

³⁰ *Ibid*

³¹ *Ibid*, para. 44

The Committee has stressed that minimum obligations are not subject to progressive implementation; they are instead “non-derogable.”³² Unlike the implicit resource-conditional element of the right to health, which is to be progressively realised, a state cannot attribute failure to meet its minimum core obligations to a lack of available resources unless it can “demonstrate that every effort has been made to use all resources that are at its disposition in an effort to satisfy, as a matter of priority, those minimum obligations.”³³ Though the standard against which a state has to demonstrate its lack of available resources may be stricter for the minimum core than the progressive element of the right, it does appear that any concession contradicts the Committee’s strong statement of non-derogability. Nevertheless, even this position, as Tobin notes, is a distinct departure from the Committee’s former exposition of minimum core obligations in its General Comment No. 3, which states “that any assessment as to whether a state has discharged its minimum core obligations must also take account of resource constraints applying within the country concerned.”³⁴ Both the exposition of the list itself and the subsequent move from resource-sensitivity to a kind of implementation-immediacy should (all other things being equal) make the exercise of surmounting the central resources dilemma more practicable. So why hasn’t it already been dealt with?

The Committee’s move to such specificity comes not without controversy. Critics of the minimum core concept in General Comment 14 have suggested that its foundations are unstable, its practicality questionable and as a consequence

³² “[A] State party cannot, under any circumstances whatsoever, justify its non-compliance with the core obligations..., which are non-derogable.” GC14 *Supra* n. 29, para. 47. This categorical statement does, however, only refer to those obligations listed in para. 43 and not those listed in para. 44.

³³ GC3 *Supra* n. 29

³⁴ *Ibid* Quoted in Tobin, J. *Supra* n. 9, p. 239

“pretends a determinacy that does not exist.”³⁵ To take the impracticality criticism first, the obligations contained in the Committee’s minimum list are, by nature, assumed to be affordable. However, it can reasonably be argued that absolute compliance with *all* of them may, for some states, still be beyond their ability.³⁶ The inflation in the number and nature of obligations, when compared to the Committee’s first articulation of the minimum, (which simply referred to the provision of basic primary health care subject to affordability)³⁷ more greatly dissociates the list of obligations from any understanding of whether the state has the capacity to comply with them. In the context of forming the basis of a principled justification for a third way to deal with the central resources dilemma, this is particularly problematic. Rather than militate against charges of ‘usurpation,’ this version of minimum core obligations under resource-constrained conditions could in fact serve to exacerbate them.³⁸ Otherwise, under such conditions, minimum obligations would simply have to be ignored, defeating the whole substantive exercise.

³⁵ Young, K. “The Minimum Core of Economic and Social Rights: A Concept in Search of Content.” (2008) p. 114

³⁶ For example, accepting the global distribution of resources as given, Benjamin Mason Meier suggests that the minimum obligation to provide essential medicines is an obligation which can be fulfilled only by very few States. (Meier, B.M. “Employing Health Rights for Global Justice: The Promise of Public Health in Response to the Insalubrious Ramifications of Globalization.” 2006, pp. 735-736) which is based on the note made by Robert Robertson “there is an assumption, though a rebuttable one, in the eyes of the CESCR that every state possesses sufficiency resources for subsistence purposes if they define resources broadly enough and are sufficiently aggressive in resource acquisition.” (Robertson, R.E. “Measuring State Compliance with the Obligation to Devote the ‘Maximum Available Resources’ to Realising Economic, Social and Cultural Rights.” 1994)

³⁷ GC3 *Supra* n. 29, para. 10

³⁸ See e.g. Liebenberg, S. “Socio-Economic Rights: Revisiting the Reasonableness Review/Minimum Core Debate.” In *Constitutional Conversations*, Woolman, S., and M. Bishop (eds.) 2008, p. 313. “The concept of minimum core obligations ostensibly compels the courts to transgress the boundaries of their institutional legitimacy and competence, thus undermining the separation of powers doctrine. The process of defining and enforcing minimum core obligations results in the courts usurping government’s policy-making functions.”

Critics have not only pointed to the impracticality of realising the Committee's minimum for the highly resource constrained. The criticism that the minimising of obligations to an absolute core necessarily jeopardises the full realisation of the right and diminishes the value and applicability of the right for those facing deprivation — albeit beyond the satisfaction of the minimum — in more resource-abundant states, is also well established.³⁹ In the context of responding to the central dilemma this could also be problematic. If obligations are to be sufficiently minimised to be of practical relevance for guiding resource allocation and prioritisation in more highly resource-constrained states, they will, as a consequence be of less relevance in those states where resources are more abundant and where the dilemma operates at a much higher point on the resources and needs scale. The extent to which the minimum core approach deals with the dilemma in order to ultimately mobilise resources to improve health beyond the minimal in middle to high-income contexts remains a valid question and is one that is discussed in the sub-section that follows.

Both criticisms, however, stem from the same general concern: whether minimum obligations can indeed be a universally specified applicable standard. If minimum obligations are to be universal and immediately implementable, they may either present an unfeasibly ambitious 'floor' for some whilst being reduced to an undesirably pessimistic 'ceiling' for others. It is arguments such as this which have led many sceptics to conclude that minimum obligations can be of little to no use as a practical tool for assessing the extent to which the right to health, or economic

³⁹ For example, Toebe asserts that "States could be encouraged to put the elements not contained by the core into an indefinite," Toebe, B. "The Right to Health," In *Economic, Social and Cultural Rights: A Textbook*, Eide, A. et al. (eds.) 2001. Quoted in Young, K. *Supra* n. 35; Also, Craven argues that the Committee's minimum core is primarily focussed on assessing compliance in developing States. Craven, M. *The International Covenant on Economic, Social and Cultural Rights: A Perspective on its Development*. 1995, pp. 145-146

and social rights more generally, have been fulfilled.⁴⁰ Does this conclusion then put the final nail in the minimum obligations coffin? Not necessarily. Whilst it is acknowledged that with the Committee's minimum core approach come particular practical problems, a cautious continuation of the concept may still be warranted.

If the progressive realisation of the right to health requires the taking of steps, which are "deliberate, concrete and targeted,"⁴¹ minimum obligations provide the pathway. Assuming progression implies the achievement of "ever higher levels of fulfilment of rights,"⁴² minimum obligations signal to states the initial standard they are required to progress from, rather than progressing (or not) from a starting position of doing nothing. Indeed, this justification seems to be commensurate with the Committee's original justification of minimum core obligations in which it stated that if omitted the ICESCR "would be largely deprived of its *raison d'être*."⁴³

However, the initial starting point — although being beyond doing nothing — need not be specified so extensively as in the Committee's list of six-plus-five obligations. This is the case since the methodology for compiling the list is "based on the Committee's experience in examining states parties' reports over many years:"⁴⁴ a methodology, which as Tobin notes, is "fraught with danger."⁴⁵ When there is no systematic manner in which states parties refer to specific issues in their reports submitted to the Committee, the assumption that such issues can be inductively transposed into valid minimum obligations is somewhat tenuous. There is no

⁴⁰ Young, K. *Supra* n. 35, p. 164, 174-175

⁴¹ GC14 *Supra* n. 29, para. 30

⁴² Tobin, J. *Supra* n. 9, p. 242

⁴³ GC3 *Supra* n. 29

⁴⁴ *Ibid*, para. 6

⁴⁵ Tobin, J. *Supra* n. 9, p. 243

consistent understanding of, or consensus on, the minimum core concept across states, whether observed in their reports or in practice.⁴⁶ As a consequence, the Committee's approach to deriving its minimum list is methodologically and conceptually unsound, an unsoundness that necessarily leaves open the possibility for a more modest construction of the minimum: one that is more sensitive to the realities of acute resource scarcity faced by the poorest states, and indeed, to the idea of human rights considered throughout this thesis.

B. *A conditional conception of the minimum*

Only when the assumption that the minimum is guaranteed for all individuals holds does it make sense to disregard scarcity as a non-compliance justifier and characterise fulfilment of the minimum as immediately implementable. However, it is likely that for many states this assumption does not in fact hold. Accordingly, the obligation to fulfil the minimum remains conditional.⁴⁷

Deriving obligations along conditional lines is then characterised by a two-step process. The task firstly calls for a description of the 'goods' an individual requires in order for their fundamental interests to be satisfied (to some minimal level) and

⁴⁶ Tobin notes "the reality is that states do not refer to their minimum core obligations in their reports in any uniform way." And, "[s]tate practice simply does not provide any consensus with respect to the list of minimum core obligations identified by the ESC Committee." Tobin, J. *Supra* n. 9. To take just a few examples, the German Federal Constitutional Court has developed the doctrine of the 'vital minimum' or 'minimum level of existence.' German Federal Constitutional Court, (BVerfGE) 45, 187 (229). The Swiss Federal Court has found that Swiss courts can enforce an implied constitutional right to a 'minimum level of subsistence.' E.g. Swiss Federal Court, V. v. Einwahrnergemeine X und Regierungsrat des Kanton Bern, BGE/ATF 121I 367, October 27, 1995. The Argentine Supreme Court has held that, with respect to the right to health, the duty to provide access to medical services requires the provision of essential medical services in case of need. Argentine Supreme Court, Reynoso, Nida Noemí c/ INSSJP s/amparo, May 16, 2006. Quoted in International Commission of Jurists. *Courts and the Legal Enforcement of Economic, Social and Cultural Rights: Comparative Experiences of Justiciability*. 2008, p. 25

⁴⁷ Conditionality applies here in the same sense as it is applied in Chapter 2. The right to the minimum is conditional on "additional practical and normative considerations." Bilchitz, D. *Poverty and Fundamental Rights: The Justification and Enforcement of Socio-Economic Rights*. 2007, p. 78

since receipt of these goods is, by nature, conditional it secondly requires a test of whether full provision of these goods is possible within the particular community given the prevailing contemporary human, social and economic constraints faced. By implication, this is a test of the degree to which scarcity — or any other “countervailing consideration”⁴⁸ — may justify ‘impossibility’ in cases where there exists a shortfall in the provision of the specified goods. Both steps, however, carry with them certain complexities.

Taking the first step first, the minimal description of health to which individuals have a right refers to a basket of health goods, services and facilities (from here onwards referred to as a health basket) that is specified precisely, is conceptually valid and empirically appropriate. But the crucial question relates to the sum of such a basket. If it is not informed by the Committee’s aggregate assessment and extrapolation of state reports, on what basis is its content to be prescribed? The answer to this question has so far eluded consensus and, according to Young’s damning critique, may even be beyond the discourse’s powers.⁴⁹ However, since what is sought is a prioritising of temporal targets so that threats to fundamental interests are protected against, it should be possible to identify these parts by means of fulfilling an appropriate set of criteria. To avoid the pitfalls already discussed the criteria should allow for the sum of the basket to change over time, with respect to the temporal changes in economic, social and environmental conditions, but would nonetheless still satisfy the following abstract thresholds:⁵⁰

⁴⁸ It is worth noting here that although there are a number of constraints identified as possible impossibility-makers - such as the degree of urgency of the interest or the level of sacrifice required to realise the right - the most notorious, and the one which is focused upon here, is the scarcity of resources. *Ibid*

⁴⁹ Young, K. *Supra* n. 35

⁵⁰ The criteria are derived from the minimalist conception of human rights articulated in the previous chapter and represent a broadening of King’s healthy subsistence threshold in determining minimal social rights. King, J. *Judging Social Rights*. 2012, p. 29

1. a subsistence threshold meeting basic health needs, physical or mental;
2. an importance threshold ensuring the health basket is responsive to the most urgent health needs; and
3. a feasibility threshold ensuring the health basket is amenable to population scale-up.

In terms of moving off from the first step, the minimal character of the subsistence, importance and feasibility thresholds should not be too contentious as reflecting the way in which threats to fundamental interests may be protected against.⁵¹ It is climbing to the second step that is more perilous. This is where the majority of critics lurk. The basic objection to the conditional conception is that with it comes an implicitness that the prevailing contemporary human, social and economic constraints necessarily render full attainment of the health basket impossible. According to the impossibility objection, ascribing intrinsic resource conditionality to the description of the right inevitably imposes only a “weak,” duty on the state to secure the health basket: a duty with no immediacy, which reduces economic and social rights generally, and the right to health specifically, to mere rhetoric. So a conditional obligation to guarantee the health basket, in this light, fares no better in surmounting the resources dilemma than the South African reasonableness approach already criticised. But does conditionality have to equate to rights-weakness?

Notwithstanding the many examples of existing and generally accepted rights that are, at the same time, conditional, (such as the right to freedom of movement, which is conditional on good standing and on certain standards of overall safety

⁵¹ A detailed discussion of the three threshold criteria (subsistence, importance, and feasibility) will be the focus of Chapter 4.

being met) in the case that the condition is resource-based, such a conclusion is dependent on the assumption that there is no valid test for determining whether resources actually are sufficient to secure the basket of health goods and as a consequence violations could never be adequately ascertained. It could be argued, however, that such an assumption may be erroneous.

Though conditionality may appear to imply that resources are always insufficient to realise full attainment of the health basket, this may not always be the auto-result if a valid test for assessing whether “maximum available” resources are sufficient or insufficient for achieving it can be specified. Such a test would need to operationalise and give precision to the concept of maximum available resources rather than absolve this complex task to the notion of “progressive realisation.” This is crucial. The test is not one of *reasonableness*. Specifically, it needs to be a test of *extent* and could, say, range from 0 (the health basket being perfectly unaffordable within the given resource set) to 1 (the health basket being perfectly affordable). As such, the closer the result is to 1, the less incomplete-attainment is able to be justified by the condition of resource insufficiency; indeed, whenever the result is equal to 1 any instance of incomplete-attainment of the health basket cannot be justified, which, therefore, would signal a violation.

The obligation does not then, on this account, exist as an absolute immovable threshold across resource contexts and as a consequence conditionality need not preclude it from being an immediate one. Rather, states have an immediate unconditional obligation to secure the maximum level of the health basket that is affordable and have a progressive obligation to fully secure it as soon as resources are sufficient to do so. If the test is precise enough, then the criticism that conditionality creates only weak rights may be rendered invalid.

C. *Assessment under impossibility and progression beyond the basket's fulfilment*

Giving meaning to maximum available resources and testing the degree to which the health basket is affordable begins to close the hatch through which states can escape and analysing the variance between expected and actual attainment provides a signal as to compliance or non-compliance. But analysing variance alone may not always reveal the full picture. To illustrate, recall the scale of 0 to 1. Hypothetically, the test has revealed that for state \mathcal{X} full attainment of the health basket is unaffordable: it only has the resources available to fulfil 0.7 of the basket. According to the framework set out above, the unconditional obligation incumbent on the state is therefore to ensure that 0.7 of the basket is fulfilled. This is the expected level and is an obligation of result.⁵² The test has further revealed that state \mathcal{X} is in fact fulfilling 0.7 of the basket, which signals state \mathcal{X} has complied with its obligation to fulfil the right to health, (the variance between expected and actual level of attainment is zero). But this result is just that: a *signal*.

When the test reveals full attainment is impossible within the given resource set, (i.e. is <1) it is not sufficient to draw full conclusions with respect to compliance or non-compliance from looking at the equivalence, or difference, between the expected and actual attainment levels only. Rather, the state has an additional obligation to justify that its reasoning for prioritising the 0.7 of its community for whom the basket has been attained over the 0.3 for whom it has not, is adequate and reasonable. This is an obligation of conduct.⁵³ The question of whether a state has complied with its obligation of result under impossibility conditions must therefore be examined in light of the means through which the result has been

⁵² "The obligation of result requires States to achieve specific targets to satisfy a detailed substantive standard." Maastricht Guidelines on Violations of Economic, Social and Cultural Rights, para. 7

⁵³ "The obligation of conduct requires action reasonable calculated to realise the enjoyment of a particular right." *Ibid*

produced. For example, who are the excluded; are they women, children, persons of a certain ethnicity? Are the individual elements within the health basket represented fairly or are there some health goods that are over-represented whilst others are completely ignored? Below full attainment of the health basket is where obligations of result and of conduct must work in tandem. Returning to the hypothetical example, if a further assessment reveals that the 0.7 of the health basket that state \mathcal{X} has provided has been provided according to sound criteria, the signal of compliance holds. If, on the other hand, the state's justification for denying access to the 0.3 is deemed unreasonable the signal of compliance folds.

The reconciling of both the substantive-type and procedural-type conceptions of the right to health provides a response to the criticism that speaking of health as a human right is inapplicable in contexts where resources are highly constrained and where the total health basket will always be unattainable. But if the health basket is indeed a minimal standard, how useful is it for dealing with the health claims of individuals in wealthier countries? When it is possible to conclude with reasonable confidence that a state has sufficient resources to fully provide the health basket, and providing it will not result in the redirection of resources away from other equally important beneficiaries and/or have an overall negative distributional effect, the state has an unconditional obligation to fully provide the health basket. This is likely to be the case in the majority of middle to high-income countries. But what becomes of the right to health and obligations to fulfil it once the health basket has been fully attained?

One answer might be to impose an additional progressive duty on the state; once the health basket has been fulfilled the state has an obligation to move as “expeditiously” and “effectively” as possible towards realising ever-higher standards

of health.⁵⁴ But what becomes of the right if it is an entitlement to ever-higher standards of health? It cannot be defined substantively without the likelihood that resources will be inappropriately distorted, violating the condition of burdensomeness. But if all it can be is a right to an outcome that reasonably adheres to a procedure for allocating resources towards health, the criticism posed earlier still applies: it would offer no added value to 'health.' It appears inappropriate, therefore, for obligations beyond fulfilment of the health basket to demand that they be of some result, i.e. that certain levels of health be realised at given levels of resource availability, or that they be of conduct. Obligations with respect to health above fulfilment of the health basket thus collapse to zero. By association, the right to health extends only so far as having the health basket fulfilled. It is a right to a minimum level of health.

The implications of this difference in ability to give meaning to the right to health above and below full attainment of the health basket is crucial to the normative account and the empirical strategy set out in this thesis. Conceptually and practically, it makes sense to speak of health as a human right at the minimal level since at this level the right generates an unconditional obligation (of both result and conduct) to fulfil it and compliance with this obligation can be measured systematically. However, the innate lack of substantive specificity within the obligation to progressively realise a right beyond fulfilment of the health basket not only renders a measurement of compliance with it, in any systematic form, impracticable, it more importantly renders rights talk impotent for the real promotion of health beyond the minimal standard. This is not to say that individuals living in high and middle-

⁵⁴ Such an obligation would at least be in line with the Committee's sentiments with regards to the applicability of the minimum core in richer States. UN CESCR "Poverty and the International Covenant on Economic, Social and Cultural Rights: Statement of the Committee on Economic, Social and Cultural Rights to the Third United Nations Conference on the Least Developed Countries," para. 18

income countries — or to be specific in countries where resources are sufficient to fulfil the health basket — should not expect to be provided with access to life-prolonging dialysis treatment or access to life-saving medicines, for example. On the contrary. It would not be unreasonable to argue that access to such rudimentary treatments should be part of the state health system in states that can reasonably afford them. But what it is to say is that efforts, which seek to challenge the denial of particular health goods specifically, or the non-enjoyment of health beyond fulfilment of the health basket, more generally, are best served by seeing these deprivations not as violations of the human right to health but either as a violation of some kind of citizenship right, as Tasioulas would call it,⁵⁵ or as a more abstract form of inequality of opportunity or distributive injustice. On dealing with the central resources dilemma above fulfilment of the health basket, the right to health is redundant.

In defining the right to health as a right to a basket of health goods, the empirical challenge that remains is to distinguish between those deprivations below full attainment of the health basket that exist as a result of factors beyond the state's control and those in which the state may be a contributing, if not causal, factor. State compliance with the obligation to fulfil the health basket is therefore a function of its ability and willingness to do so.

⁵⁵ "Towards a Philosophy of Human Rights." Legal, Moral and Political Philosophy Colloquia, Institute of Advanced Legal Studies, London, 14 January 2013 (2013a); and Tasioulas, J. "What is the Contribution of Human Rights to Global Health?" Global Health Lab Discussions, London School of Hygiene and Tropical Medicine, London, 8 October 2013 (2013b)

III. Operationalising obligations: ability

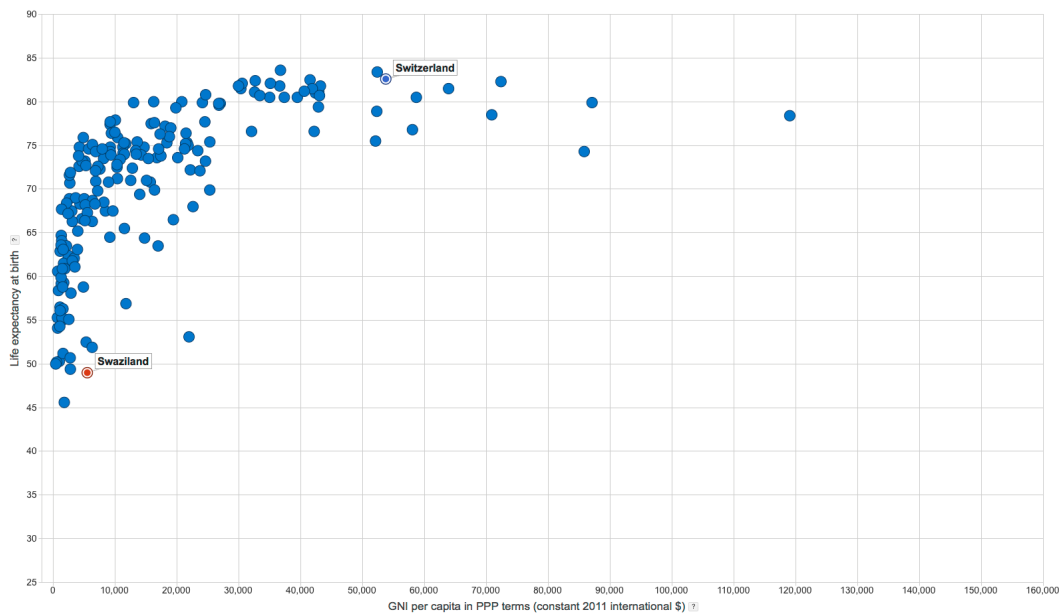
By now, it is clear that the obligation incumbent on each state is determined with reference to its ability to fulfil a substantively defined basket of health goods and not according to whether or not it fulfils this basket absolutely. A measurement of compliance, therefore, requires an understanding of what in fact amounts to ability. So far, ability and maximum available resources have been used, more or less, as interchangeable terms. But what are these available resources: are they financial, human, natural, technological? And might it be the case that efforts made on the part of the state to comply with its obligations are a function of factors other than ‘resources’? The discussion that follows seeks to put flesh on the ability/resources bones in order to identify and set limits to the factors, which may facilitate or militate against a state in its fulfilment of the right to health.

A. Financial Resources

It comes as little surprise that the relationship between income and health is a positive one. Income is necessary for the provision of all kinds of health goods, services and facilities. From the very basic (such as basic sanitation, immunisation, and health education) to the more advanced (such as medicines, the running of specialist health facilities and the recruitment and training of specialised medical staff). As figure 3.1 depicts, using life expectancy at birth as a proxy for health, countries with higher incomes tend also to be healthier. Thus the fact that the Swiss enjoy better health than do the Swazi (life expectancy in Switzerland is near to twice that of Swaziland) may largely be explainable by the fact that Switzerland’s income is eight times greater.⁵⁶ Income plays an important role in determining a state’s ability to fulfil the health basket.

⁵⁶ UNDP Human Development Index, 2014

Figure 3.1: Income and health, World 2013



Source: UNDP Human Development Index

Importantly, it is a country's total income that matters for explaining ability, not the amount of the national budget it actually spends on health. Alston and Quinn report several examples from the ICESCR's drafting history instantiating this point.⁵⁷ For example, it may be the case that two countries with the same national income, Y , choose to apportion their incomes differently. One country chooses to devote 10 percent of Y to health, whilst the other chooses to devote only 2 percent. Where assessing compliance is concerned, the task is not an assessment of what the expected level of health attainment should be given the employment of either 10 percent or 2 percent of the respective national income. This, as Bilchitz convincingly asserts, would "allow the government to avoid realising rights merely by virtue of its allocation of the budget."⁵⁸ Rather, it is an assessment of whether,

⁵⁷ For example, the Lebanese representative noted "it must be made clear that the reference [to resources] was to the real resources of the country and not to budget appropriations." Mr. Azkoul, Lebanon, Quoted in Alston, P., and G. Quinn. "The Nature and Scope of States Parties' Obligations under the International Covenant on Economic, Social and Cultural Rights." (1987) p. 178

⁵⁸ Bilchitz, D. *Supra* n. 47, p. 228

with a national income of Y , resources that could *in principle* be allocated to health are sufficient to fulfil the health basket, regardless of what it *actually* spends.

Because the state has an unconditional obligation to fulfil the health basket as soon as resources are sufficient to do so, there is an expectation that states must mobilise the resources within its control so that this level is indeed fulfilled. This, however, implies a kind of principle of resource distribution over which there may not be consensus. To take up the example above, it may be the case that a national income of Y is in principle sufficient to fulfil the health basket. Country i spends 10 percent of Y and fulfils the health basket completely. Country j spends only 2 percent of Y and fulfils only 20% of the health basket. According to the argument proposed so far, Country i is fully compliant with its obligation to fulfil the right to health whilst Country j is non-compliant to the tune of 80%. But what if the population of Country i has through a democratic process chosen a national economic system that promotes progressive redistributive policies so that the health basket can be attained by all, whilst the population of Country j has through a similar democratic process opted for a system that promotes more liberal redistributive policies, at the expense of health basket attainment for all.⁵⁹ Necessitating Country j to reallocate resources to health so that the health basket is fulfilled may impose a more egalitarian conception of resource distribution than the one to which it necessarily subscribes. A move, which it could be claimed, violates Country j 's right of self-determination.⁶⁰ Can, then, labelling Country j as non-compliant still be done so with legitimacy? I think it can.

⁵⁹ Liberal here referring to liberalism in the economic sense. That is, an economic system underpinned by the philosophy that supports and promotes laissez-faire economics and private property in the means of production.

⁶⁰ A right of self-determination in the sense that nations have the right to determine what their domestic standard of justice is and that it takes precedence over any demands for the achievement of cosmopolitan/transnational justice. Buchanan, A. "Equality and Human Rights." (2005) p. 86

In countries where the right to health has been formally recognised (either through the ratification of international treaties or by incorporating specific provisions relating to it in domestic legislation) the mere act of recognition, by association, signals a commitment to at least some form of egalitarian distributive justice.⁶¹ Allen Buchanan argues that human rights norms in the conventional understanding (that being the understanding embodied in the main human rights legal instruments) carry the moral egalitarian assumption — what he calls moral equality — that “we are all obliged to help ensure that everyone has the opportunity for a decent life,”⁶² and he goes on to argue that these obligations are not limited to those, which are correlative of rights in the so called ‘negative’ sense.⁶³ However, according to Buchanan, the obligation that underpins moral equality despite being greater than owing nothing is far from owing everything. Rather, the form of distributive justice embodied in human rights is of the minimally egalitarian kind.⁶⁴ Thus, if a state has formally recognised and subscribed to the right to health it is unlikely that the form of distributive justice embodying it will be at odds with that, which is morally accepted in the domestic domain. They are both minimal. An obligation that requires, for example, Country *j* to reallocate resources to health until the health basket is fulfilled can, therefore, be reasonably defended as legitimate.

⁶¹ Human rights documents and discourse routinely connect the aims of human rights to principles of egalitarian justice. As Griffin notes, the Universal Declaration of Human Rights is specified by a “wholesale inclusion of justice among human rights,” and that it “includes not only procedural justice, but also distributive justice and fairness.” Griffin, J. *On Human Rights*. 2008, pp. 186-187.

⁶² Buchanan, A. *Supra* n. 60, p. 82

⁶³ The reasons Buchanan gives for why these obligations stretch further than the ‘negative rights only’ are similar to those already presented in the previous chapter with respect to the negative/positive rights divide, Chapter 2, pp. 13-14, 17-19. As such, they need no further elaboration here.

⁶⁴ “Human rights can be both essentially egalitarian and yet limited in their demands.” Buchanan, A. *Supra* n. 60, p. 77

The quantum of financial resources considered available must, therefore, be all of those over which the state has control. Yet this formulation still lacks precision. Whilst it has been established that “maximum available” financial resources refer to the income that has been accumulated by the state, which could in principle form part of the national budget, what about those resources that could in principle be received from overseas? Since Article 2(1) of the ICESCR provides that “Each State Party to the present Covenant undertakes to take steps, individually and through *international assistance and co-operation* ... with a view to achieving progressively the full realization of the rights recognized in the present Covenant,”⁶⁵ it could indeed be presumed that maximum available resources for the fulfilment of economic and social rights generally, and the right to health specifically, are endowed with an international dimension as well as a domestic one. For the purposes of measuring ability, this assumption needs to be examined more closely. Specifically, if there is such an international obligation to provide assistance to fulfil the right to health,⁶⁶ what is its nature and scope and what implications does it have for determining a state’s ability to fulfil the health basket?

Though the provision in Article 2(1) is one attempt at making the duty of international assistance and cooperation a legally binding one,⁶⁷ its meaning is far from being generally accepted. This is not only the case with reference to the critical work that has been done on the use of the phrase as a result of the provision but also with reference to whether, and how, the provision should have been articulated

⁶⁵ UN ICESCR *Supra* n. 1 (emphasis added)

⁶⁶ Such obligations are often also referred to as transnational obligations, extraterritorial obligations or as shared responsibilities. Skogly, S. “Global Responsibility for Human Rights” (2009); and Salomon, M. *Global Responsibility for Human Rights: World Poverty and the Development of International Law*. 2007

⁶⁷ Similar provisions can also be found in the UN Convention on the Rights of the Child, Article 24(4)

in the Covenant in the first place.⁶⁸ The central difficulty exposed in discussions of obligations that travel beyond the state border is determining precisely where these obligations begin and end. According to Sigrun Skogly, “it would be neither pertinent, nor practical, to imply that all states are responsible for all human rights enjoyment everywhere. Rather, there has to be a relatively direct link to activities of the state across borders.”⁶⁹ Accordingly, those that dismiss the very existence of international obligations do so on the basis that it is nigh impossible to establish causal, moral responsibility between a state’s action or omission in a foreign territory on the one hand and a violation of an individual’s right living in another territory on the other.⁷⁰ This difficulty is only exacerbated in the strand of the tripartite typology that is under investigation presently: fulfilment.⁷¹

To paint an illustrative picture, state parties (assumed wealthier) have an international obligation to provide assistance, to the extent that available resources allow, to fulfil the right to health for individuals of other (assumed poorer) states.⁷² Even under the unrealistic simplification that there are only two types of state

⁶⁸ In discussing the drafting history of the ICESCR in so far as the provision of international assistance and cooperation is concerned, Alston and Quinn quote: “consensus did not extend much, if at all, beyond this general proposition.” Alston, P. and G. Quinn *Supra* n. 57, p. 189

⁶⁹ Skogly, S. “Transnational Human Rights Obligations.” (2002) p. 795

⁷⁰ The literature analysing the causal role of many explanatory factors (including international institutions, domestic institutions, history, culture, disease, factor endowments, and much else) is vast. Yet, an established causal link between action or omission and deprivation across borders remains to be seen. See, e.g. Polly Vizard’s critique of Pogge’s institutional understanding of human rights. Vizard, P. “Pogge vs Sen on Global Poverty and Human Rights” (2006); Pogge, T. *World Poverty and Human Rights, 2nd edition*. 2008; Pogge, T. “Human Rights and Global Health: A Research Program” (2005); and Pogge, T. “Assisting the Global Poor.” In *Ethics of Assistance: Morality and the Distant Needy*, Chatterjee, D.K. (ed.) 2004, Chapter 13

⁷¹ The tripartite typology, introduced in Chapter 1, to respect, protect and fulfil the right to health within a State is likewise useful for understanding the nature and scope of obligations that live extraterritorially. Indeed many commentators advocate its use for the purpose of interpreting international obligations. See e.g., Tobin, J. *Supra* n. 9; Skogly, S. (2006) Skogly, S. *Beyond National Borders: States Human Rights Obligations in International Cooperation*. 2006; Craven, M. *The International Covenant on Economic, Social and Cultural Rights: A Perspective on its Development*. 1995

⁷² GC14 *Supra* n. 29, para. 39

parties: one group (group wealthy) that has the resources available to provide assistance, and another group (group poor) that requires that assistance if it is to provide health for its community, still, a ‘direct link’ cannot be attributed. The obligation does not reveal precisely what group wealthy ought to do in order to be compliant. Neither does it reveal if all members of group wealthy are under an obligation to assist group poor. Likewise it does not reveal whether group wealthy ought to assist every member of group poor or only a selection, and if only a selection, on what basis this selection be made. This, as Tobin notes, “is a perfect example of an imperfect obligation.”⁷³

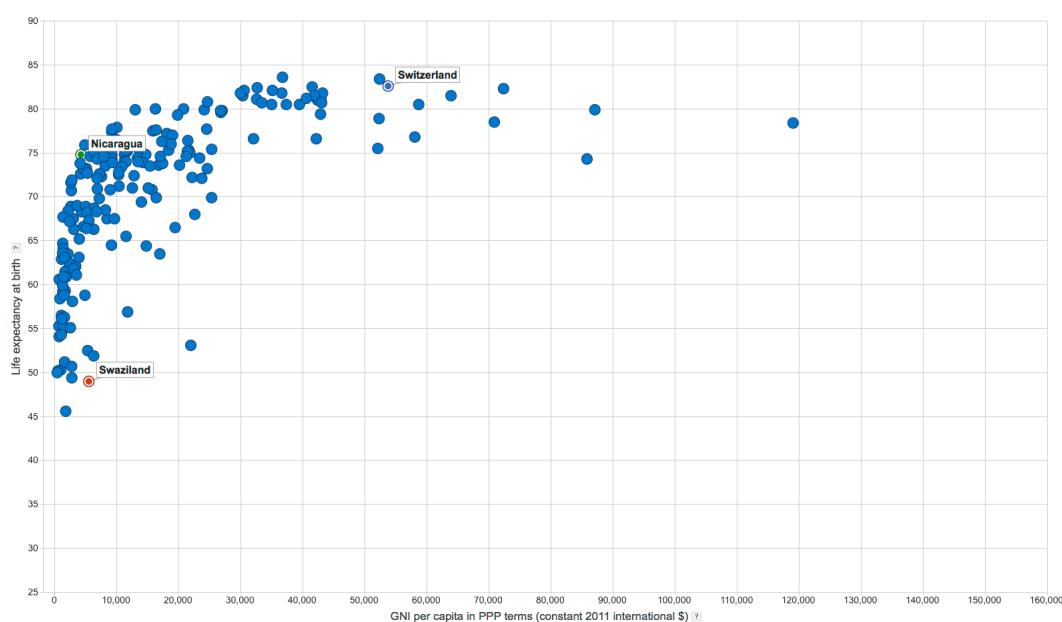
Though imperfectness does not wipe international obligations clean of *any* moral significance, what it does generate is an obligation with limited strength. Under this scheme an international obligation to provide (financial) assistance for the fulfilment of the right to health requires only that a state “give genuine consideration to its capacity to do so in light of its available resources,”⁷⁴ which along with the sentiments of some states during the drafting of the ICESCR, represents little more than a moral vision. Whilst it may be possible, eventually, to specify the content of an international obligation,⁷⁵ grappling with the debates concerning global social justice is too complex a task to be attempted here. For this reason, and for the purposes of explaining ability in this analysis, a state’s maximum available resources are deemed to be only those that are owned and controlled *within* the domestic state.

⁷³ Tobin, J. *Supra* n. 9, p. 341 (using the notion of imperfect obligations in the Kantian sense that imperfect obligations are grounded by the notion that everyone has a duty to be beneficent; leaving discretion as to what, to whom and how often assistance be provided.)

⁷⁴ *Ibid*, p. 342

⁷⁵ The Health Impact Fund, pioneered by Thomas Pogge, could be one such way to operationalise an international obligation. “Human Rights and Global health: A Research Program.” In *Global Institutions and Responsibilities: Achieving Global Justice*, Barry, C., and T. Pogge (eds.) 2006

Figure 3.2: Similar income and differing health, World 2013



Source: UNDP Human Development Index

Without financial resources, making any significant advancements in domestic population health will be difficult. As seen in terms of a bivariate correlation, more income indeed relates to better health outcomes. However, the fact that advancements in population health may not be possible without income does not necessarily mean that it is guaranteed if and when more income becomes available. There are, for instance, many countries with similar (low) levels of income that at the same time have significantly different levels of health. As Figure 3.2 illustrates, whilst Switzerland has both a higher income and higher level of health compared with Swaziland, Nicaragua has almost precisely the same income as Swaziland, yet Nicaraguans can expect to live more than 25 years longer. Why then is the level of health so much better in Nicaragua if the financial resources available to the state are more or less the same? There must be more to ability than the level of national income alone.

B. *Beyond financial resources: the rest of ability explained*

An explanation of the level of health each state should be able to achieve requires more than considering only the financial resources available to it. The degree of explanation can be, and for purposes here needs to be, increased by introducing more variables to the equation. One important variable is the number, mix, quality and distribution of human resources, or human capital. Without a sufficient number of adequately funded and trained health professionals it is unlikely that states would be able to achieve the health-related MDGs, address key health problems such as HIV, TB and malaria, or indeed fully provide the health basket.⁷⁶

Whilst the degree of importance attributed to human capital as a requirement for a healthy health system is by no means controversial, it may still seem that in an assessment of a state's ability to fulfil the health basket its presence as an additional variable is superfluous. It could instead be argued that the availability of financial resources instrumentally encapsulates a state's ability to provide human resources also: the more financial resources it has the more doctors, nurses and other health professionals it is able to recruit, train and employ. In a perfectly operating market for health workers, this would indeed be the case. There would be no need for an additional human capital variable for explaining ability; income would be a good enough proxy. However, the market for health workers is far from perfect. There is an estimated shortage of almost 4.3 million doctors, midwives, nurses and support workers worldwide and that shortage is felt most acutely in countries where health workers are needed most. A situation that has been described by the WHO as a "global crisis."⁷⁷

⁷⁶ Mercer, H. et al. "Human Resources for Health: Developing Policy Options for Change," In *Towards a Global Health Workforce Strategy*, Ferrinho, P., and M.R. Dal Poz (eds.) 2003

⁷⁷ WHO "The World Health Report 2006 - Working Together for Health," (2006) p. 12

An understanding of the factors that contribute to the shortage is important for explaining ability. The shortage may be due to, for instance, the increasing incidence and prevalence of disease; the fact that people are living longer and need more care in later life; or that the economic and social incentives to train, work and live as a health professional in certain countries are simply not sufficiently strong, often resulting in migration from already resource poor states to more developed states, coined the brain drain/brain gain.⁷⁸ In each of these cases, or indeed a mixture of all three, it would be unrealistic to assume that a state's ability to fulfil the health basket is a matter of money alone. If a state has the financial resources to provide access to certain medicines and treatments, which in principle could satisfy full attainment of the basket, yet despite employing the maximum human resources it has available there are still too few health workers to administer those medicines or operate the equipment to give the treatment, it cannot necessarily be expected to fulfil the basket entirely in the short to medium term. Once again, it is important to note that the level of human capital available to the state is not the number of health workers it actually employs. In the same vein as the problems using actual rather than potential spending of financial resources generates, it could be the case that sufficient (or at least more than is currently being employed) human capital exists within the state, but it is underemployed. The measure of human capital therefore needs to be a measure of the human resources that in principle are available to the state. That is, a measure of the long run potential of the state's ability to fulfil the health basket.

In determining the expected level of health attainment, it is possible to increase the explanatory power of ability further. Beyond financial and human resources, there

⁷⁸ *Ibid*, p. 101

are many other variables that may influence a state's capacity to fulfil the health basket, some, over which the state has little to no control. The nature and density of the population, the political situation of neighbouring countries, favourability of the physical environment to the delivery of health services, to name but a few. If, for instance, states with highly dispersed populations are revealed to have systematically lower health attainment than would be expected given their respective levels of income and human capital, the inclusion of a variable that captures a state's relative population density would make the expected attainment indicator more sensitive to the geographic realities faced by those states in fulfilling the health basket. However, with an explanation of ability down to its atomic level come some obvious practical difficulties. If the measure of ability is to include everything that could potentially provide a reason for not doing better, the list of explanatory variables would be unwieldily long. It is, therefore, practically necessary to limit the number of explanatory variables to those which, theoretically and empirically, are most significant.

The trade-off between creating an indicator of expected health attainment that is as sensitive as possible to the micro functions of ability and creating an indicator that is feasible, useful and informative across states would be more difficult to reconcile should the significance of factors other than those identified be substantial. These are, however, likely to be small in terms of their respective explanatory power.⁷⁹ For these combined reasons, ability here is determined to be a function of income, human capital, population density and the mortality environment.

⁷⁹ Studies on the impact of micro environmental factors on health are relatively scarce. However, from what we do know, the evidence seems to suggest that the impact is as expected: positive, (higher quality environments are associated with better health outcomes) but it is very small when compared to the strength of other socio-economic determinants. See, e.g. OECD. *Determinants of Health Outcomes in Industrialised Countries*. 2000 which shows that the explanatory strength of physical environmental factors, such as water and soil quality, as well as noise and air pollution, are outstripped to the tune of 7 times by financial resources and 16 times by human capital.

IV. Conclusions

The obligation articulated in Article 2(1) of the ICESCR that each State Party is to progressively realise the right to health to the maximum of its available resources provides a pragmatic solution to the problems applying a blanket, absolute duty gives rise to. It is concessive. It acknowledges that economic and social conditions can, and do, differ from state to state and therefore what can be expected from states in terms of health outcomes must be relative to the maximum resources at its disposal. Reiterating the idea presented in Chapter 2, the obligation to fulfil the right to health is conditional. However, this conditionality is both a virtue and a curse. Once it has been acknowledged that the obligation to fulfil the right to health is determined with reference to a state's maximum available resources, the questions that quickly follow are then: what resources are potentially available to a state for right to health purposes?⁸⁰ And what level of resources must be allocated by a state to health as opposed to other worthy social goals?⁸¹ These questions are key and form the basis of this chapter: in light of the fact that resources will always be insufficiently available to satisfy all health needs, what is the role of the right to health in mobilising resources to fulfil health needs given that is not possible to meet them all?

Attempts to deal with this dilemma in principle and practice have led to the right to health being interpreted either as a right to an outcome that reasonably adheres to a procedure for allocating resources towards health, or as a substantive right to all kinds of health interventions provided to whoever steps up to the legal plate. Both interpretations are an unsatisfactory response to the central resources dilemma. The

⁸⁰ Robertson, R. *Supra* n. 36, p. 695

⁸¹ Griffin, J. *Supra* n. 61, p. 100

contribution offered in this chapter, however, is that these two approaches need not be considered the only options available. Instead it has proposed a third way. The third way suggests that the right to health is a right to the attainment of a basket of minimal health goods, services and facilities but the absolute fulfilment of the health basket is not what is required of the state. Rather, fulfilment of the health basket is conditional on the state's ability to provide it.

The third way offers a framework for determining, substantively, the content of the right to health, which is sensitive to the needs and interests of both its beneficiaries and its duty-bearers: firstly by defining how a basket of minimal health goods, services and facilities might be characterised, and secondly by mapping out how the degree to which this basket is affordable might be tested. According to the third way, the obligation incumbent upon the state is to provide as much of the health basket as it is able to and therefore measuring the extent to which a state meets or falls short of this level can be a starting point for assessing compliance with this obligation. Since ability is taken care of in the assessment, any shortfall could be described as signalling unwillingness on the part of the state to mobilise its available resources for health. Before determining the degree of meeting or falling short, however, the first step is to define precisely what this basket of health goods, services and facilities consists of. And to this task is where the next chapter now turns.

Defining the health basket

Introduction

In Chapter 3, I argued that the right to health should be understood as entailing a conditional obligation on states to fulfil a minimum health basket. This obligation is conditional due to that fact that the resources available for right to health purposes are limited. The unconditional obligation is therefore to fulfil as much of the minimum health basket as states are able to. This is the ability condition. Though the list of minimum obligations as defined by the Committee includes the absolute provision of items such as shelter and housing, essential drugs and vaccines as well as the taking and making of preventative and curative measures to curb the spread of disease, it has been argued that this list is vague, extensive and, moreover, is founded upon unsound methodological grounds. Instead, unconditional obligations must both respond to the most urgent of health needs faced by the acutely deprived whilst also be set sensitively to the ability of the duty bearer to provide interventions for such deprivation.

It was also argued in the previous chapter that the first step in determining what the unconditional obligation is for each state must concern the definition of a health basket and that the contents of this basket must be determined through the fulfilment of a three-part criteria: (i) that it characterises the meeting of basic

physical health needs: subsistence; (ii) that it is responsive to the most urgent of health needs: importance; and (iii) that health interventions exist that can be scaled-up to the population level: feasibility.

Any methodological approach to deriving such a basket is likely to be in some part contentious. That being so the approach offered here is a stake in the ground; it mounts a persuasive case that an appropriate evaluative framework for defining the content of the health basket, which is objective, valid and reliable is available by looking to the methodologies of public health and health economics. Specifically, Section I discusses the appropriateness of filling the basket through a primary health care (PHC) strategy. A description of primary health care in its different guises is outlined and a framework for relating the basket of goods, services and facilities to those that are considered essential elements of a system of primary health care is offered. Section II sets out to identify the health issues that are most important at the population level, disaggregated by sex and age. Importance is determined through an analysis of the degree to which mortality resulting from different health issues can be avoided; specifically, through calculating ‘avoidable mortality.’ Identifying the health issues that carry the heaviest burden is, however, only a partial step to specifying the health basket. What remains is to determine whether health interventions exist that are both effective and cost-effective and can feasibly be scaled up to the population level. This is the task taken up in Section III.

I. Subsistence: health for all and primary health care

More than 30 years after the Declaration of Alma-Ata, “health for all,”¹ though still incomplete for many countries, remains the ultimate goal. Picking up the baton for the next generation vision of health-for-all, the Millennium Development Goals (MDGs)² adopted in 2000, and their successor the Sustainable Development Goals (SDGs),³ have been backed by the widest constituency in development history,⁴ underscoring the notion that primary health care is the key to making health-for-all a reality.⁵ Whilst acknowledging the obvious overlap between the different layers of health care, (primary, secondary and tertiary) evidence, which tests the health-promoting influence of primary health care specifically, suggests that interventions at the primary level could deal with up to 90% of health care demands in low-income countries,⁶ and in OECD countries, health systems which are primary care-orientated are more likely to deliver better health outcomes with more equitable

¹ Declaration of Alma-Ata, International Conference of Primary Health Care, Alma-Ata, USSR, 6 - 12 September 1978

² The MDGs set out eight specific targets, which include reducing the proportion of people suffering from hunger, reducing child and maternal mortality whilst increasing reproductive health, reducing the spread of, and increasing access to treatment for, HIV/AIDS as well as reducing the incidence of other major diseases.

³ “One of the main outcomes of the Rio+20 Conference was the agreement by member States to launch a process to develop a set of Sustainable Development Goals (SDGs), which will build upon the Millennium Development Goals and converge with the post 2015 development agenda.” UN Introduction to the Proposal of The Open Working Group for Sustainable Development Goals (2014)

⁴ “The eight Millennium Development Goals (MDGs) ... form a blueprint agreed to by all the world’s countries and all the world’s leading development institutions.” *Ibid*

⁵ Declaration of Alma-Ata. *Supra* n. 1, Part V; In her recent address, Margaret Chan, Director General of WHO, remarked: “When I took office at the start of last year, I called for a return to primary health care as an approach to strengthening health systems. My commitment has deepened. If we want to real the health-related Goals, we must return to the values, principles, and approaches of primary health care.” Margaret Chan, Director General, World Health Organisation Address to the 61st World Health Assembly, Geneva (2008)

⁶ World Bank. *Better Health in Africa: Experience and Lessons Learned*. 1994 p. 56

distributions of health in populations at lower costs.⁷ So what is primary health care?

At Alma-Ata, primary health care was defined as “the first level of contact of individuals, the family, and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.”⁸ It envisioned:

universal coverage of basic services such as education on methods of preventing and controlling prevailing health problems; promotion of food security and proper nutrition; adequate safe water supply and basic sanitation; maternal and child health, including family planning; vaccination; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential medicines.⁹

At this time, the way in which services were to be delivered shifted from an emphasis on being large-scale and hospital-based to being smaller-scale and community-based: “putting the ‘public’ into public health.”¹⁰ The fundamental focus on equity and on including the excluded, not only in terms of how the benefits from health are distributed but also in terms of making decisions on how those benefits are optimised, set the scene for a new kind of health planning to which social justice became an integral part. Programmes were to be balanced towards those with a preventative focus, which sought to deal with the underlying determinants of health such as livelihoods, education and the environment. As Lawn et al. assert, primary health care under Alma-Ata “presented a shift in thinking

⁷ WHO. *What are the Advantages and Disadvantages of Restructuring a Health Care System to be More Focused on Primary Care Services?* 2004; Macinko, J., B. Starfield, and L. Shi. “The Contribution of Primary Care Systems to Health Outcomes Within OECD Countries, 1970-1998.” (2003)

⁸ Declaration of Alma-Ata *Supra* n. 1, Part VI

⁹ Hall, J. and R. Taylor. “Health For All Beyond 2000: The Demise of the Alma-Ata Declaration and Primary Health Care in Developing Countries.” (2003) p. 18

¹⁰ Lawn, E. et al. “Alma-Ata 30 Years On: Revolutionary, Relevant, and Time to Revitalise.” (2008) p. 919

that saw health not merely as a result of biomedical interventions but also an outcome of social determinants.”¹¹

Although all WHO members in Alma-Ata unanimously adopted the comprehensive primary health care vision at the time, the Declaration still had its critics. With particular exception being taken to its so-called idealism, these critics complained that the interventions were specified only in broad terms and the goal of achieving complete population coverage would be too expensive and thus unachievable for developing, low-income states.¹² In spite of the initial optimism surrounding the Declaration and its potential for giving substance to the right to health, (specifically that it linked a rights-based approach to a viable strategy for attaining it)¹³ as far as the framework here is concerned, its provisions do indeed suffer as much from vagueness and open-endedness as do those contained in General Comment 14. Just as Tobin notes, “this list reflects several of the elements which are included in the *heavily criticised* list of minimum core obligations advanced by the ESC Committee in its General Comment on the Right to Health.”¹⁴ As a consequence, a straightforward transplant of the list of provisions in the Declaration to a list of items to be included in the health basket would be of limited use; with respect to the health basket criteria, the two are inconsistent.

¹¹ *Ibid*

¹² McNamara, R.S. Address to the Board of Governors by Robert S. McNamara. Presidential speech, Washington DC: World Bank (1980) (“Even if the projected - and optimistic - growth rates in the developing world are achieved, some 600 million individuals at the end of the century will remain in absolute poverty.”)

¹³ Particularly when read in conjunction with other contemporary instruments such as the CESCR’s General Comment 3 and the Programme of Action of the International Conference on Population and Development. UN Committee on Economic, Social and Cultural Rights “General Comment No. 3: The Nature of States Parties’ Obligations;” UN Population Fund. Programme of Action of the International Conference on Population and Development, Report of the International Conference on Population and Development (1995)

¹⁴ Tobin, J. *The Right to Health in International Law*. 2012, p. 251 (emphasis added)

Though this may be the case, it does not necessarily follow that the elements of primary health care are at odds with the health basket in and of itself. Primary health care as “the first level” of health care remains highly in tune with the notion that the basket must contain basic, important and urgent goods and be a standard each and every individual can expect to have guaranteed. Rather, in acknowledging the vast number of health issues which may present, even at the primary level, and the limitations to the human and financial requirements for dealing with them, what is necessary is an assigning of priorities for instituting control measures of a primary health care kind. Then it is those measures, which use the scarce human and financial resources available most efficiently, effectively and equitably that will be prioritised, and hence will define how the health basket is comprised.

Within one year of the Declaration’s operation, another, more simple approach had indeed been proposed, which advocated focus on a selection of interventions justified on the basis of “epidemiological importance and technological affordability, and a more top-down management approach.”¹⁵ This approach is what would become to be known as ‘Selective Primary Health Care’;¹⁶ an approach considered more “feasible, measurable, rapid, and less risky.”¹⁷ Specifically, interventions under the selective primary health care approach were often the outputs of centrally planned vertical programmes, were often directed towards child health and discrete individual tropical diseases, and were intended as ‘entry points’ into the health care system. Initially, the precise content of the selective package was not wholly consistent. For example, in their seminal paper, Walsh and Warren recommended several interventions for inclusion in the package, including

¹⁵ Lawn, E. et al. *Supra* n. 10, p. 921

¹⁶ Walsh, J.A. and K.S. Warren “Selective Primary Health Care: An Interim Strategy for Disease Control in Developing Countries.” (1979)

¹⁷ Lawn, E. et al. *Supra* n. 10

treatment for malaria in children under three years old,¹⁸ which disappeared in subsequent editions. However, in the years that followed, UNICEF's child survival revolution brought with it some standardisation and the number of interventions reduced to four. These four measurable interventions became known as GOBI: Growth monitoring, Oral rehydration therapy, Breastfeeding, and Immunisation.¹⁹ Three more components were then later added: food supplementation, family spacing and female education, and GOBI became GOBI-FFF.²⁰

This 'entry point' intention looks to be more reconcilable with the conception of the health basket proposed here. So then, does it follow that the health basket equates to providing selective primary health care? Unfortunately, the relationship between selective primary health care and defining the health basket may not be so elegantly direct. The selective primary health care model comes not without criticisms of its own, criticisms which may impede automatic equalisation with the health basket. Though GOBI-FFF, according to some, "created the right balance between scarcity and choice,"²¹ to others it was a "narrow technocentric approach that diverted attention away from basic health and socioeconomic development [and] did not address the social causes of disease."²² It cannot be denied that major advances in the control of vaccine-preventable childhood diseases were made under

¹⁸ Walsh, J.A. and K.S. Warren. *Supra* n. 16, p. 972

¹⁹ UNICEF. *The State of the World's Children 1982-83*. 1982

²⁰ UNICEF. *The State of the World's Children 2008*. 2007, p. 31

²¹ Evans, J.R., K.L. Hall and J. Warford. "Shattuck Lecture, Health Care in the Developing World: Problems of Scarcity and Choice." (1981) Quoted in Cueto, M. "The Origins of Primary Health Care and Selective Primary Health Care." (2004) p.1869

²² Berman, P.A. "Selective Primary Health Care: Is Efficient Sufficient?" (1982) Quoted in *Ibid*, p. 1870

GOBI strategies.²³ However, the types of interventions in question (particularly Oral rehydration therapy), according to critics, were merely short-run solutions to health issues that could be more sustainably solved with better access to adequate food, safe water and sanitation, for example. Moreover, the vertical nature of GOBI-FFF programmes meant that services were losing touch with the communities they were supposed to serve and were often ill-coordinated with other vertical programmes operating in parallel; such fragmentation often leading to inefficiencies in the form of administrative and specialist duplication, ignorance of the co-morbidities experienced by health service beneficiaries and the crowding out of other competing health issues.²⁴

Notwithstanding the problems the selective model's narrowness and verticality create, the way in which primary health care has been advanced in the recent past suggests that still the comprehensive aspirations of Alma-Ata are beyond what can reasonably be expected as 'minimal.' The approach to defining the health basket must therefore lie somewhere in between these two poles. It must be responsive to technical expertise and resource considerations but must, at the same time, be holistic, be responsive to the needs of communities and at least hint towards an ideal. Establishing priorities for deriving the health basket "thus requires two essential steps: selection of diseases for control and evaluation of different levels of medical intervention from the most comprehensive to the most selective;"²⁵ an approach that appears well suited to the minimalist nature of the health basket criteria proposed in Chapter 3.

²³ "By the late 1980s, the push for universal immunisation became the major focus of child survival, and global coverage of three immunisations with diphtheria, pertussis, and tetanus (DPT3) rose from 20% to 75% in just 10 years." Lawn et al. *Supra* n. 10, p. 920

²⁴ Briggs, C.J., P. Capdegelle, and P. Garner. "Strategies for Integrating Primary Health Services in Middle and Low-Income Countries: Effects on Performance, Costs and Patient Outcomes." (2003)

²⁵ Walsh, J.A. and K.S. Warren. *Supra* n. 16

In determining which health issues are to be selected for prioritisation in this two-step process, Walsh and Warren outlined four factors to be considered for the assessment: prevalence, morbidity, mortality and feasibility of control (including efficacy and cost).²⁶ These four factors still remain the basis upon which later criteria for prioritisation in health care have been built. For example, in Norheim and Gloppen's study, which sets out to assess the impact of health litigation on health outcomes, priority setting is based on "(i) the severity of disease if given standard care or left untreated; (ii) the effectiveness of the intervention; (iii) the cost-effectiveness of the intervention; and (iv) the quality of evidence for items i-iii."²⁷ According to Norheim and Gloppen, these factors characterise a set of criteria that is generally accepted in the public health and priority-setting literature.²⁸ As such, the most appropriate criteria for the prioritisation task at stake in this analysis is a merging and augmenting of the two framework variations above. Specifically, this includes an assessment of: (i) the burden of the health issue, that is its prevalence and severity; and (ii) the feasibility of control, that is the effectiveness and cost-effectiveness of the interventions available for preventing and/or treating the health issue with respect to both individual and population-wide coverage.

One obvious criticism that could be levelled at such a prioritisation strategy is that it is, like the selective model of primary health care discussed above, essentially a technocentric exercise. It makes no room for community participation in the process for deciding what goes in and what stays out of the health basket. A prioritisation process that excludes participation, the criticism goes, is problematic

²⁶ *Ibid*, p. 968

²⁷ Norheim, O.F. and S. Gloppen. "Litigating for Mediciens: How Can We Assess Impact on Health Outcomes?" In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011, p. 310

²⁸ *Ibid*

on a number of levels: specifically, it may be blind to available local knowledge, which leaves open the possibility that the resultant health basket does not in fact meet the community's *real* health needs; and more generally, it may even dissociate communities, particularly those already marginalised, from the process of health empowerment, which may in turn lead to worse health outcomes.²⁹ In terms of measuring a state's compliance with its obligation to fulfil the health basket, this raises issues of both a normative and empirical kind.

Participation places the wellbeing of individuals and communities at the centre of health policy. Normatively, health policy should be based on the priorities of those individuals and communities rather than the priorities of technical experts. To have some say in, and exercise some control over, the ways in which we are treated is an essential part of our humanity. Indeed, the essential requirement that the community be active participants in making the health-related decisions that affect them has been part of the mainstream health discourse for many years.³⁰ The Committee on Economic, Social and Cultural Rights has affirmed that a vital element of the right to health "is the participation of the population in all health-related decision making at the community, national and international levels."³¹ Provision for participation in the planning and execution of health policy is one of the Committee's core obligations.³² Empirically, if the health basket is indeed misaligned with real community preferences, any revealed deficiency in its provision

²⁹ See, e.g. de Vos, P., et al. "Health Through People's Empowerment: A Rights-Based Approach to Participation." (2013); Manandhar, D.S., et al. "Effect of a Participatory Intervention with Women's Groups on Birth Outcomes in Nepal: Cluster-Randomised Controlled Trial." (2004)

³⁰ The Preamble to the WHO Constitution asserts, "informed opinion and active cooperation on the part of the public are of the utmost importance in the improvement of the health of the people." Constitution of the World Health Organization Preamble.

³¹ UN CESCR (2000) "General Comment No. 14, The Right to the Highest Attainable Standard of Health."

³² *Ibid*, para. 43

may not in fact represent a lack of supply; it may instead be attributable to a lack of demand. The measure would not reveal what it is intended to reveal and would not, therefore, pass the test of validity.

So can a health basket derived without a participation-type element still be valid? Absolutely. Because the nature of the health basket under discussion is so minimal, these normative and empirical issues can be addressed. Whilst the health basket should indeed embody the priorities of the community it is supposed to serve, the proposed criteria for setting priorities are of such minimal character that it can be reasonably assumed that the vast majority of communities would by preference choose the types of health goods, services and facilities the criteria is likely to produce. The risk of priority-misalignment is very small. That being said, to resolve the empirical issue to a satisfactorily rigorous standard, the risk, however small, still needs mitigating. Of course there may be many demand factors that may bias health basket coverage rates downwards, irrespective of a state's efforts. But the lack of demand can be the result of a number of issues other than an outright lack of want or need. For instance, a lack of awareness of effective interventions, or physical or financial barriers to accessing services where effective interventions are provided: them being too far away and/or too costly to get to. The hypothesis that misalignment may exist does not, therefore, necessarily invalidate the priority-setting framework proposed if it can be tested. This, however, requires a more finely tuned, qualitative investigation; one that is reflective of the specific country circumstances. To this end, a case study of Brazil will be undertaken in the latter part of this thesis and a test of the degree to which priority misalignment exists will form part of the focus of Chapter 6.

Nevertheless, that priorities generated by the framework proposed be different from those elicited directly from the community is highly unlikely. By means of the data process described above, it is then possible to develop a valid framework for assigning priorities and, by association, a valid health basket. Consistent with Norheim and Gloppen's analysis, all criteria carry equal weight and priorities are assigned on the basis of all criteria being satisfied cumulatively.

II. Importance: measuring the health burden

A. What kind of burden

Though the framework has so far adopted the strategies taken by Walsh and Warren and Norheim and Gloppen for establishing the criteria for priority setting, it is at the point of defining how to measure these criteria where the framework developed here and these analyses depart. In attempting to measure population health status and the overall burden of specific health issues, the analyses mentioned above use measures, which not only take into account years of life lost to mortality, but account for the number of years of life lost to morbidity also. The disability-adjusted life year (DALY) developed in the 1990s is one such measure.³³ DALYs are helpful since they may help to reveal those health issues, which although may not necessarily lead to premature death, can nevertheless be severely debilitating (an important consideration for priority-setting in health). Whilst not being ignorant to the possible DALY-advantage to the task at stake, according to Nguyen et al., "such developments in the assessment of health status of a population have not

³³ The disability-adjusted life year (DALY) was originally conceptualised by Murray and Lopez in 1996 in work carried out by the WHO and World Bank as part of the Global Burden of Disease Project.

diminished the usefulness of mortality as an indicator.”³⁴ This assertion is founded on a number of persuasive bases.

Firstly, although prioritisation of health issues with respect to the degree to which they contribute to mortality alone may exclude those issues that whilst not being life-threatening are nevertheless severely debilitating (those of a mental or physiological kind, for instance) for the majority of most other major health issues the correlation between mortality and morbidity is remarkably strong.³⁵ Or, in other words, those health issues that are responsible for the majority of population mortality are also likely to contribute, in large part, to population morbidity. Likewise, measures aimed at reducing mortality will also tend to reduce morbidity. Secondly, the majority of the burden of ill health as measured by more sophisticated measures, such as in DALYs, is accounted for by mortality and this is only exaggerated in high mortality environments.³⁶ Thirdly and finally, mortality data tend to be less prone to measurement error than data on disability, particularly in low-income, developing environments. It is for these combined reasons that mortality, specifically premature mortality, alone was used by the Commission on Macroeconomics and Health (CMH) as the method for measuring the burden of disease.³⁷ In line with this same reasoning the framework that follows adopts the same strategy. This is not to say, however, that those health issues which are

³⁴ Nguyen, S., P. Jha, S. Yu, and F. Paccaud. “Indirect Estimates of Avoidable Mortality in Low-income and Middle-income Countries.” (2001)

³⁵ A simple correlation between 2012 global mortality and DALY estimates reveal an R^2 value of 0.9473, suggesting that almost 95% of variation in morbidity can be explained by mortality. WHO Global Health Observatory Data Repository (2014)

³⁶ For example, when looking specifically at the degree to which the DALY burden is carried by mortality, in Brazil, 65% of total DALYs lost are lost to mortality, in Botswana the figure is 75%. *Ibid.*

³⁷ WHO. *Improving Health Outcomes of the Poor: The Report of Working Group 5 of the Commission on Macroeconomics and Health*. 2002, pp. 22-23

burdensome with respect to morbidity but are not with respect to mortality, are not important. The strategy to use mortality as the measure of where a population's health priorities lie has been followed since importance is being discussed with respect to a minimal level of health, which meets basic physical health needs. All three of the reasons for using mortality alone discussed above are relevant in an ever-stronger sense when applied to a minimal conception of health.

Looking merely to total mortality rates for determining the most important of health issues, however, may not reveal where the most important, remediable issues in fact lie. For instance, it may be the case that for a given population a certain issue, say cardiovascular disease, contributes a great deal to total mortality in that population (in later years of life). But it may not necessarily follow that cardiovascular disease be a health issue that gains priority status for that population. This is because the mortality-contributing health issues of the population in question need to be prioritised with reference to the degree to which mortality as a result of these issues can be avoided versus the degree to which the resultant mortality may simply be an unavoidable part of the human condition. Rather, what is required is a measure of the extent to which issue-specific mortality could reasonably be averted through effective interventions that are generally available. This is a measure of 'avoidable mortality.'³⁸

³⁸ The concept of avoidable mortality, as a measure of the excess risk of dying, was first introduced by William Farr, a century and a half ago. Farr's work is distinguished by his use of newly available statistical mortality data to test social hypotheses. One of the hypotheses Farr tested was that towns in England were more unhealthy than districts in the countryside, and that there was a relationship between population density and the mortality rate. Then, using the 'healthiest districts' as a standard up to which the rest should theoretically be able to rise, he estimated the avoidable loss of life in the 'unhealthy districts.' *"The children of the idolatrous tribe who passed then through the fire to Moloch scarcely incurred more danger than is incurred by children born in several districts of our large cities ... a strict investigation of all the circumstances of the children's lives might lead to important discoveries, and may suggest remedies for evils of which it is difficult to exaggerate the magnitude."* Farr, W. "Letter to the Registrar General." In *Supplement to the 25th Annual Report of the Registrar General for the Years 1850-60*. 1864

By comparing the issue-specific mortality rates of a maximal high-mortality population with those of a baseline low-mortality population, the difference in issue-specific mortality can be deemed as avoidable. “Avoidable mortality (or the excess risk of dying) is thus a measure of how much the health of a population can be improved, using the lower mortality of another population as a feasible goal.”³⁹ So then, how should such a reasonable maximal and feasible baseline be set? In the Nguyen et al. study, since what the authors are interested in is avoidable mortality in low-income and middle-income countries, mortality patterns in low and middle-income countries characterise the high-mortality maximal. The study then constructs the mortality rates of non-smokers in a hypothetical high-income country and uses these as the low-mortality baseline. This approach was subsequently accepted and adopted by the CMH on grounds that “it is not unreasonable to think of this level of health ... as an ultimate aspiration,”⁴⁰ and that such a level seems valid “as the baseline in an attempt to delineate the maximum conceivable improvement.”⁴¹ For the purposes of the analysis here, this same reasoning has been applied. Specifically, mortality patterns in high-income countries have been used as the low-mortality baseline. The setting of a maximal higher-mortality population, however, needs a little more thought.

The analysis here is not, directly, concerned with measuring avoidable mortality in low and middle-income countries so it may not necessarily be appropriate to use mortality patterns in low and middle-income countries as the maximal as in Nguyen et al. Instead, the analysis uses the concept of avoidable mortality to assess the burden of disease and identify priorities on the basis that those health issues that

³⁹ Nguyen, S., P. Jha, S. Yu and F. Paccaud. *Supra* n. 34, p. 6

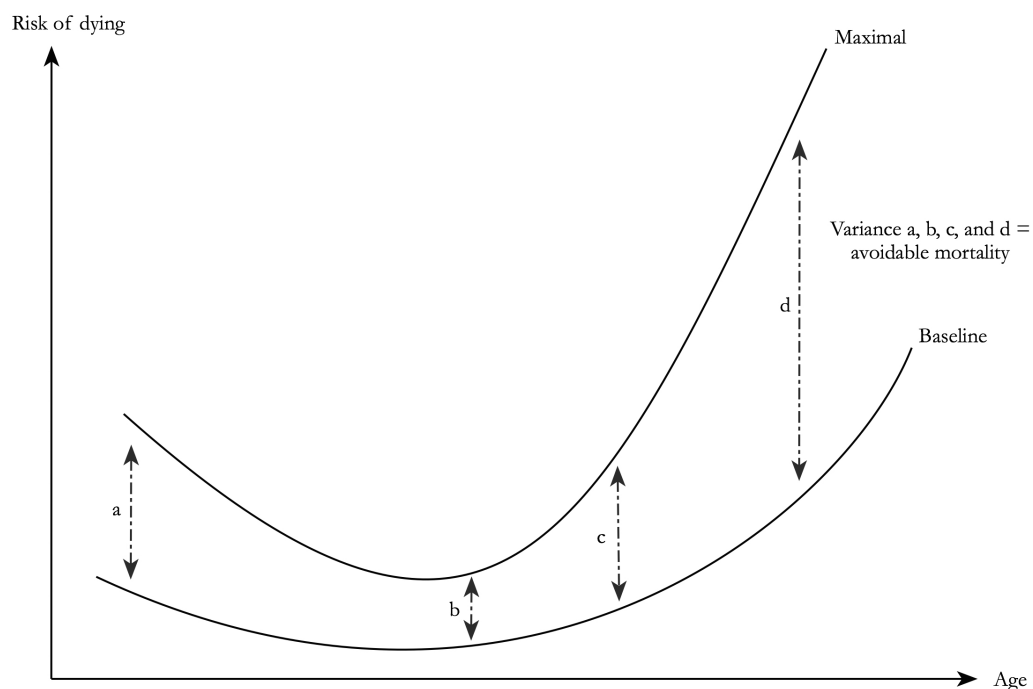
⁴⁰ WHO. *Supra* n. 37, p. 19

⁴¹ *Ibid*, p. 20

are most basic and can most easily be avoided should be prioritised; they are deemed most important. That being so, the maximal population needs to be one characterised by high-mortality where deaths from the most basic diseases are likely to be most prevalent. For this reason, the analysis here uses mortality patterns in low-income countries as the maximal population against which avoidable mortality will be measured.

Since avoidable mortality within populations differs over the lifetime, (a reasonable proportion of deaths in later years of life are unavoidable, whilst the majority in childhood are not) the degree of avoidable mortality must also be specified according to appropriate age intervals. Points a, b, c, and d in Figure 4.1 below illustrate how avoidable mortality can be calculated at given age intervals.

Figure 4.1: Avoidable mortality



B. Data and methodology

Estimates of deaths by cause, age and sex used in the following worked example are based on summary estimates of mortality rates for all WHO Member States⁴² for the year 2011 compiled by the Global Burden of Disease Project (GBD) of the WHO. The age groupings above age 5 in the GBD project (5 to 14, 30 to 49, 50 to 69) have been maintained. The age groupings below age 5 (0 to 27 days, and 1 to 59 months) have been summed to create a new age grouping of 0 to 4 years. Age, sex and issue-specific avoidable mortality has been estimated through a comparison of the risk of dying in low-income countries as the maximal population with that of high-income countries as the baseline population. Calculating these risks involved taking the following five steps:

Step 1. The number of cause categories specified in the GBD data have been reduced and simplified from 134 specific causes to 29 higher-level key groups, (Appendix A.1). This simplification has been undertaken with reference to the International Classification of Diseases (ICD)⁴³ and the groupings specified in Nguyen et al.⁴⁴ The first level classifications of the GBD have been maintained: (Level I) Communicable, maternal, neonatal and nutritional conditions; (Level II) Non-communicable diseases; and (Level III) Injuries.

Step 2. Total mortality rates, $({}_n m_x)$ and issue-specific mortality rates, $({}_n m_{x\delta})$ were given so that death ratios, $({}_n C_{x\delta})$ by sex and age interval — where n is the length of the

⁴² Mortality estimates are based on analysis of latest available national information on levels of mortality and cause distributions as at the end of May 2013 together with latest available information from WHO programs for causes of public health importance. Data, methods and cause categories are described in a technical paper: WHO. “WHO Methods and Data Sources for Global Causes of Death 2000-2011.” (2013e)

⁴³ WHO International Classification of Diseases (ICD)

⁴⁴ Nguyen, S., P. Jha, S. Yu and F. Paccaud. *Supra* n. 34, p. 16

age interval, X is the beginning age of the age interval, and δ is the specific issue — could be constructed as follows:

$${}_nC_{X\delta} = \frac{{}_nm_{X\delta}}{{}_nm_X} \quad (1)$$

Step 3. The risk of dying (${}_nq_x$) and the risk of dying due to a specific cause (${}_nq_{x\delta}$) by age and sex have been calculated for each population based on the multiple decrement life table technique as follows:⁴⁵

$${}_nq_X = 1 - e^{-n({}_nm_X)} \quad (2)$$

$${}_nq_{X\delta} = {}_nq_X({}_nC_{X\delta}) \quad (3)$$

Step 4. Avoidable mortality has been calculated as the difference in q between the two populations.

Step 5. The contribution each health issue makes to overall mortality by sex and age has been calculated by dividing the issue-specific avoidable mortality rate by the total avoidable mortality rate in the population.

C. Results

i) Age-sex avoidable mortality, all causes and first-level causes

Avoidable mortality by all health issues is greatest in the 50 to 69 age interval, where the excess risk of dying is 16.5% and 15.4% for females and males, respectively, (Table 4.1). Avoidable mortality is also greater for females than for males in the 30 to 49 age interval, however it is lower than that for males in the younger age intervals, 0 to 4 and 5 to 14. Though avoidable mortality is lowest for the 5 to 14

⁴⁵ Namboodiri, N.K., and C.M. Suchindran. *Life Table Techniques and Their Applications*. 1987 Chapters 6 and 9

interval, for the relative contribution avoidable mortality makes to the total risk of dying, the ranking differs: relative contribution is highest in the 5 to 14 age interval where almost all of the risk is avoidable for both females and males (95.6% and 94.5% respectively). For the 0 to 4 age interval the results are similar. At the other end of the age spectrum, ages 50 to 69, the results are vice versa. This means that the opportunity for improvement is greatest in the lower age intervals. These results are consistent with those found in Nguyen et al., specifically that “the proportion of avoidable mortality in the risk of dying thus decreases with age.”⁴⁶

Table 4.1: Risk of dying and avoidable mortality in low-income countries, all causes

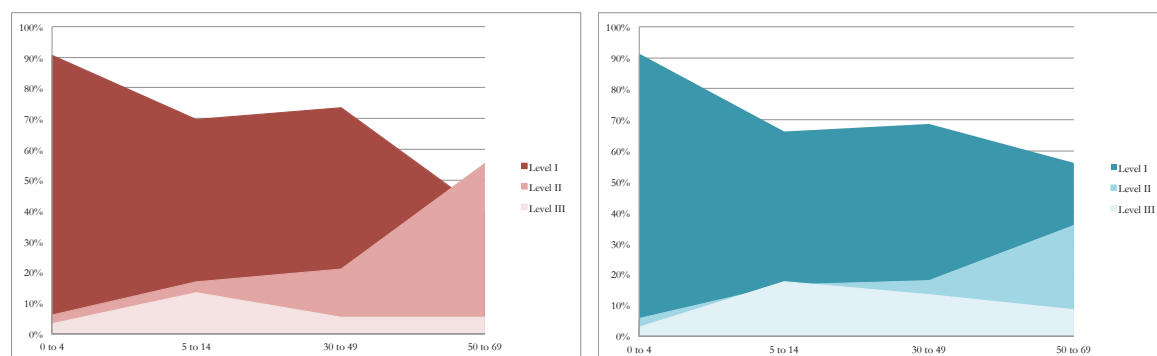
	Females				Males			
	0-4	5-14	30-49	50-69	0-4	5-14	30-49	50-69
Risk of dying in Low-income	8.5%	2.3%	11.0%	26.2%	9.5%	2.5%	12.0%	32.5%
Risk of dying in High-income	0.9%	0.1%	2.0%	9.7%	1.2%	0.1%	3.4%	17.2%
Excess risk of dying in Low-income country (avoidable mortality)	7.6%	2.2%	9.0%	16.5%	8.3%	2.4%	8.5%	15.4%
Relative contribution of avoidable mortality to total risk of dying in Low-income country	88.9%	95.6%	82.0%	63.0%	87.5%	94.5%	71.1%	47.2%

Illustrated in Figure 4.2, by GBD first-level causes, level I causes (Communicable, maternal, neonatal and nutritional conditions) are the largest contributors to avoidable mortality across all age intervals for males and all but the 50 to 69 interval for females. Perhaps unsurprisingly, these causes account for almost all of avoidable deaths in the 0 to 4 age interval (90.7% for females and 91.2% for males) and more than two-thirds in the 5 to 14 interval (69.8% for females and 66.1% for males). Whilst still making a significant contribution to avoidable mortality in later life, the relative threat from level I causes diminishes as age increases for both females and

⁴⁶ Nguyen, S., P. Jha, S. Yu and F. Paccaud. *Supra* n. 34, p. 11

males. From age 30 upwards, the majority of the reduced threat from level I causes is replaced by that from level II causes (Non-communicable diseases). For females in the 50 to 69 age interval level II causes are the main contributor to avoidable mortality. Full data tables are provided in Appendix A.2.

Figure 4.2: GDB level-specific avoidable mortality contributions, females and males



First level causes of avoidable mortality give initial guidance as to where the majority of the burden of ill health is carried. However, such aggregation does not reveal whether issues within that level category contribute in equal part to avoidable mortality or whether there are in fact very few health issues that make up the lion's share of the excess risk of dying. In order to determine the degree to which specific health issues contribute to overall avoidable mortality, an analysis of age-sex-issue-specific avoidable mortality is required.

ii) Age-sex-issue-specific avoidable mortality

In the 0 to 4 age interval, over 80% of avoidable mortality is attributable to only six issue-specific contributors with just one issue responsible for one quarter of avoidable mortality. The most important contributors are the same for both females and males in the age interval with only very minor variation in the degree of their respective percentage contribution: neonatal conditions (25.4% and 25%), parasitic

and vector diseases (17% and 17.2%), respiratory infections (16.7% and 16.9%), diarrhoeal diseases (11.9% and 12.1%), nutritional deficiencies (5.5% and 5.6%), and Childhood cluster diseases (4.6% and 4.7%), (Figure 4.3). In the 5 to 14 age interval, the profile is somewhat different from that of the earliest years of life, the biggest differences being the entry of HIV/AIDS (11.8% for females and 11.1% for males) and unintentional injuries (11.3% for females and 14.9% for males) to the list.

As age increases, the issue-specific avoidable mortality profile changes markedly. In the 30 to 49 age interval HIV/AIDS is by far the greatest contributor, making up over one third of all avoidable deaths for both females and males. Maternal conditions are the second most important contributor for females (12%) whilst Tuberculosis occupies the same spot for males (11.7%). Interestingly, however, other level I causes such as diarrhoeal diseases (5.8% and 5.7%), respiratory infections (4.5% and 5.9%), and nutritional deficiencies (3.5% and 3.1%) remain important throughout the life-span for both females and males.

Figure 4.3: Issue-specific avoidable mortality, females and males



D. Implications for prioritising health issues

The criteria for determining which items make up the health basket includes the criterion that the items must relate to health issues that are important with respect to their burden. The purpose of the exercise above is to demonstrate how cause-specific mortality data can be utilised to measure such importance. One of the key results from the test is that the health issues responsible for the burden are few in number, and accordingly, focus on these issues would improve the global mortality profile significantly. But it is in the task of ranking and prioritising health issues where the added value of using avoidable, rather than total, mortality is generated. For illustrative purposes, the differences in issue-specific burden rankings between total and avoidable mortality rates in females aged 30 to 49 are presented in Table 4.2.

The table reveals that differences in relative importance between the two measures are many. Maternal conditions, to take just one example, ranks as the 16th most important issue with respect to total deaths, however, ranks 2nd most important in terms of deaths that can be avoided. Such a finding indicates that though there may be certain health issues which carry with them a relatively high mortality rate within the population, the extent to which these issues can reasonably be avoided may be relatively small. By the same token, there are then health issues where the potential opportunities for improvement are great yet, if specified only by the total mortality rate, would otherwise not be prioritised. Measuring importance by the degree to which specific health issues contribute to avoidable mortality therefore sets a more achievable standard towards which states have an obligation to aim; a standard that is also more consistent with the notion of minimalism defended throughout this thesis.

Table 4.2: Issue-specific rankings, females aged 30 to 49

Health Issue	Death rate/ 100,000 (rank)	Avoidable mortality (rank)
Malignant neoplasms	1	5
Cardiovascular diseases	2	3
Unintentional injuries	3	8
Intentional injuries	4	19
Digestive diseases	5	10
Mental and behavioral disorders	6	29
Neurological conditions	7	18
Other noncommunicable diseases	8	11
Respiratory diseases	9	15
Endocrine, blood, immune disorders	10	16
Diabetes mellitus	11	17
Respiratory infections	12	7
HIV/AIDS	13	1
Other infectious diseases	14	14
Other neoplasms	15	22
Maternal conditions	16	2
Acute hepatitis C	17	28
Tuberculosis	18	6
Nutritional deficiencies	19	9
Diarrhoeal diseases	20	4
Acute hepatitis B	21	21
Meningitis	22	13
STDs excluding HIV	23	23
Parasitic and vector diseases	24	12
Encephalitis	25	20
Neonatal conditions	26	27
Sense organ diseases	27	26
Childhood-cluster diseases	28	24
Intestinal nematode infections	29	25

Returning to the specific task of health-issue-prioritisation, with this strategy in hand, the health issues that are responsible for the majority of deaths across age and sex have been identified as: (i) maternal conditions; (ii) neonatal conditions; (iii) parasitic and vector diseases; (iv) respiratory infections; (v) diarrhoeal diseases; (vi) nutritional deficiencies; (vii) childhood cluster diseases; (viii) HIV/AIDS; and (ix) Tuberculosis. It is worth acknowledging here the omission of mental health-related ailments amongst the items in the health basket. Because the health basket is determined with reference to the degree to which health issues contribute to mortality, not morbidity, it is unlikely that mental health issues be identified as

important through the framework. Comparing the differences between a health basket determined by mortality and one determined by morbidity would be an interesting and valuable exercise. However, at least at present, the quality and availability of morbidity data does not make this comparison possible.

Importance, however, is only one part of the health basket criteria. The process from identification of an important health issue to its inclusion in the health basket is not automatic. Rather what is additionally required is an assessment of whether there are indeed effective and appropriate interventions available that are cost-effective and can feasibly be scaled-up. Continuing on from the results of the preceding analysis, these two further tests will be explored in the remainder of this chapter.

III. Feasibility: assessing interventions

For each of the health issues identified and prioritised by the process outlined above, it is likely that there exist many effective interventions, which, if applied broadly across the population, would significantly reduce their respective burden. The literature on testing the effectiveness of different clinical interventions aiming to tackle individual and combined health issues is now vast and, for purposes here, will be drawn upon to identify and prioritise which interventions are most effective and most capable of being “scaled-up.”⁴⁷ Feasibility of delivery at high levels of population coverage is a central element of the effectiveness criterion. In acknowledgement of the wide variation in what is feasible across different resource environments, interventions will be chosen on the basis of amenability to high

⁴⁷ WHO. *Supra* n. 37, p. 25.

levels of implementation in low-resource environments. Feasibility in wealthier resource environments is therefore assumed.

It is worth being explicit here on the difference between the criterion of feasibility and the condition of ability. The feasibility threshold is applied at the health basket formation stage and essentially helps specify the health interventions that are to be included. The feasibility threshold is necessary since the health basket under consideration must represent some kind of minimal standard and as such needs to be amenable to population level scale-up across space. For instance, it could be the case that a particular health issue falls under the umbrella of primary health care and it has been identified as being important. Cancer could be just one example. However, when a diagnosis is made, it will often be made at a late stage of disease when people become symptomatic or when they have been suffering with long-term disabilities.⁴⁸ At this advanced stage of the disease, expensive high-technology interventions are required for treatment, such as radiation therapy, chemotherapy and even stem cell therapy.

These interventions are not ‘best buys’ in low and middle-income countries. According to the WHO and World Bank criteria for determining cost-effectiveness, an intervention is defined as ‘very cost-effective’ if it is capable of generating an extra year of healthy life for less than the average annual income per person (measured as GDP per capita) in the resource setting where it will be applied. Interventions that produce a healthy life year for more than the average annual income per person but still cost less than three times average per capita income are defined as ‘cost-effective.’ But to be considered a ‘best buy,’ an intervention also needs to be “pragmatic and feasible to implement in close to client, non-specialised

⁴⁸ WHO. *Global Status Report on Noncommunicable Diseases 2010*. 2010, p. 62

health-care settings.”⁴⁹ As such, expensive cancer therapies are not appropriate health basket candidates since they cannot be deemed minimal. This is why a feasibility threshold is required.

Prioritising a set of important, PHC-type best buys is therefore a pragmatic step in defining the content of a minimal right to health. But whilst a comprehensive set of best buy interventions most likely could be implemented universally in high-income countries, this may not be the case for low and middle-income countries. It is more likely these countries will still have to make choices. What can be expected of these countries in terms of delivery will depend on competing health priorities and the capacity of the health system to deal with them. This is essentially the condition of ability.

A. Maternal and neonatal health

Overall, substantial progress has been made towards achieving the fifth Millennium Development Goal of improving maternal health. Many countries have seen the number of mothers and newborns dying from maternal and neonatal conditions getting smaller and the coverage rates of effective interventions getting larger.⁵⁰ Though these observations do provide substance for initial optimism, still there remain close to 300,000 women who die each year during pregnancy, childbirth or soon thereafter,⁵¹ and around four million babies who die in the first 28 days of life.⁵² Whilst in most cases complications arising due to maternal and neonatal

⁴⁹ WHO. *Supra* n. 37; and *Ibid*, p. 67

⁵⁰ Bryce, J. et al. “Countdown to 2015 for Maternal, Newborn, and Child Survival: The 2008 Report on Tracking Coverage of Interventions.” (2008)

⁵¹ WHO. Global Health Observatory Data Repository, Global Burden of Disease, 2011 estimates

⁵² Lawn J., S. Cousens, Z. Bhutta, G. Darmstadt, J. Martines, and V. Paul. “Why are 4 Million Newborn Babies Dying Each Year?” (2004)

conditions cannot be predicted or prevented, with the appropriate intervention, most deaths arising from them could be.⁵³ The question that remains is then what is the most appropriate PHC intervention, or set of PHC interventions, that have the greatest potential for reducing mortality in mothers and newborns?

Over the past ten years, it has become clear that instead of thinking about maternal and newborn health as separate entities, the focus should be one more characterised by a “continuum of care,”⁵⁴ that is life-cyclical, and begins from before pregnancy and runs through to pregnancy, birth, the postnatal period and even into childhood. Starting from the continuum of care as an initial framework then, the next step is to determine what are the essential intervention packages within that frame.

To begin at the start of the continuum, pre-pregnancy, the most direct link between the use of contraceptive methods and maternal and newborn mortality is obvious: pregnancy is a prerequisite for maternal and neonatal death so to prevent pregnancy is to prevent maternal and neonatal deaths. But understanding the degree to which maternal and neonatal deaths can be avoided through contraception is a little less obvious; widening access to contraception has the potential to reduce maternal and neonatal mortality by even more than the revealed relative risk of dying from maternal or neonatal conditions suggests. It has a particular life-saving strength. This strength lies in the fact that the risk profile across target groups — women

⁵³ WHO. *Trends in Maternal Mortality: 1990 to 2010* WHO, UNICEF, UNFPA and The World Bank estimates. 2012a (The majority of maternal deaths are attributable to haemorrhage, infection, conditions related to high blood pressure (e.g. eclampsia), unsafe abortion, and obstructed labour.) WHO Global Burden of Disease, 2011 estimates. (The majority of deaths amongst newborns are caused by preterm birth, infection (predominantly tetanus), and asphyxia.)

⁵⁴ Kerber, K.J. et al. “Continuum of Care for Maternal, Newborn, and Child Health: from Slogan to Service Delivery.” (2007) The continuum concept has been resoundingly endorsed by the Countdown to 2015 movement, (in their associated Lancet Series papers), appears in the 2005 World Health Report and provides the framework of the Partnership for Maternal, Newborn and Child Health (PMNCH).

who wish to have more children and women who do not — differs. Specifically, the risk of maternal and neonatal death is greater in cases where women of reproductive age want to avoid pregnancy but are not using a modern contraceptive method, or in other words, where there exists an unmet need for contraception.⁵⁵ This increased risk of mortality manifests not only in the form of unsafe abortions but also from giving birth in adolescence or in older age and from shorter intervals between births, all of which could be tempered through a programme of family planning. To illustrate, take the simplified hypothetical case that the total risk of death from maternal and neonatal conditions is 1% (0.001/1,000). But for target group A (women who wish to have more children) the risk is lower, 0.1% (0.0001/1,000) and for target group B (women who wish to avoid pregnancy) the risk is higher, 1.9% (0.0019/1,000). Assuming that contraception prevents all pregnancies perfectly, provision of contraception where there is an unmet need (for target group B) would reduce the total risk to the target group A level, 0.1%.

Recent evidence suggests that this logic does indeed hold.⁵⁶ Yet, despite the slight rise in global coverage of contraception over the past twenty years, (from 54% in 1990 to 57% in 2012) over half of women of reproductive age in Africa, and more than one fifth in Asia, and Latin America and the Caribbean still have an acute

⁵⁵ Singh, S. et al. “Adding It Up: The Costs and Benefits of Investing In Family Planning and Maternal and Newborn Health.” (2009) (“In 2008, modern contraceptive use prevented 188 million unintended pregnancies, 1.2 million newborn deaths, and 230,000 maternal deaths and other negative health outcomes that would have occurred in the absence of any modern method use.”) p. 19

⁵⁶ For example, Ahmed, S., Q. Li, L. Liu and A.O. Tsui. “Maternal Deaths Averted by Contraceptive Use: An Analysis of 172 Countries.” (2012) (estimate that contraceptive use is likely to be responsible for preventing more than 272,000 maternal deaths each year and that by satisfying the unmet need for contraception globally, a further 30 percent of maternal deaths could be avoided.) Tsui, A.O. and A.A. Creanga. “Does Contraceptive Use Reduce Neonatal and Infant Mortality? Findings from a Multi-Country Analysis.” (2009) (present similar evidence, which suggests that the use of contraception significantly improves neonatal and infant survival and does so through two pathways: firstly, through preventing unwanted pregnancies, which may have resulted in neonatal death and, secondly, through longer intervals between births.)

unmet need for modern contraception.⁵⁷ This presents an opportunity for reducing, quite dramatically, mortality in mothers and newborns.

Beyond adolescence and pre-pregnancy-related interventions, several Lancet Series⁵⁸ have tracked interventions for single periods along the continuum also, such as maternal,⁵⁸ neonatal,⁵⁹ and child⁶⁰ survival. Meta analyses published as part of the Maternal Survival Series in 2006 suggest that the majority of maternal and neonatal deaths occur during the period of labour, delivery and the immediate postpartum period.⁶¹ In terms of prioritising interventions that are most effective for reducing these deaths, these findings provide a persuasive argument for prioritising those interventions that focus on skilled care given during labour and delivery. Indeed global estimates similarly indicate that a large proportion of the variance in maternal mortality rates between countries can be explained by whether births are attended by a skilled attendant or not,⁶² which has led to the joint UN and WHO advocacy of “skilled care at every birth” and the inclusion of proportion of births attended by a skilled health provider as one of the two indicators for measuring progress toward the fifth Millennium Development Goal.

Whilst it is acknowledged that where women give birth, who the attendant is and the ease of process to referral-level care (if and when it is needed) are all crucial

⁵⁷ WHO. Family planning Factsheet 351, May 2013 (2013d)

⁵⁸ Ronsmans, C., and W.J. Graham. “Maternal Mortality: Who, When, Where, and Why?” (2006)

⁵⁹ Lawn, J.E., S. Cousens, and J. Zupan. “4 Million Neonatal Deaths: When? Where? Why?” (2005)

⁶⁰ Black, R.E., S.S Morris, and J. Bryce. “Where and Why are 10 Million Children Dying Every Year?” (2003)

⁶¹ Ronsmans, C., and W.J. Graham. *Supra* n. 58

⁶² See e.g. Loudon, I. “The Transformation of Maternal Mortality” (1992); and De Browere, V., R. Tonglet, and W. van Lerberghe. “Strategies for Reducing Maternal Mortality in Developing Countries: What Can We Learn from the History of the Industrialised West?” (1998)

parts of the general effectiveness picture, determining precisely whose skills and which type of equipment dominate the causal pathway from skilled attendants to lower mortality is too complex a task to be discussed in any detail here. Instead, it is sufficient to note that recent evidence suggests that first-level care given during labour and delivery, that is care given in a local health centre by skilled midwives, is the strategy most likely to prevent obstetric deaths.⁶³ Indeed this has been borne out in the data from historical country studies of Sweden, the USA, England and Wales,⁶⁴ and from more contemporary studies of Malaysia and Sri Lanka.⁶⁵

Outside of the period of labour and delivery, assuming such first-level health centres are “close-to-client”⁶⁶ or close enough for women to give birth in, they are equally close in case of complications during the antenatal and/or those same skilled attendants can resolve postnatal problems quickly. One of the greatest threats to neonatal survival is infection, and more often than not the threat is one of tetanus as a result of unhygienic delivery.⁶⁷ Yet, tetanus deaths can easily be prevented by cleaner delivery practices and/or by immunising pregnant mothers with tetanus. Likewise for mothers living in areas where malaria is prevalent or for mothers living with HIV/AIDS, presumptive treatment of malaria or the rollout of antiretroviral drugs “can reduce incidence of low birth weight, stillbirths, and

⁶³ Campbell, O.M.R., and W.J. Graham. “Strategies For Reducing Maternal Mortality: Getting On With What Works” (2006); Bale, J., B. Stoll, A. Mack, and A. Lucas. “Improving Birth Outcomes: Meeting the Challenges in the Developing World” (2003); WHO. *The World Health Report 2005 - Make Every Mother and Child Count*. 2005

⁶⁴ Loudon, I. “Death in Childbirth: An International Study of Maternal Care and Maternal Mortality 1800-1950.” (1992)

⁶⁵ Pathmanathan, I., J. Liljestrand, and J.M. Martins. “Investing in Maternal Health: Learning from Malaysia and Sri Lanka.” (2003)

⁶⁶ WHO. *Supra* n. 37

⁶⁷ Bryce, J. et al. *Supra* n. 50

neonatal and maternal mortality.”⁶⁸ When considered under the continuum of care umbrella, the relationship between skilled attendants at birth and falling maternal and neonatal mortality may not, therefore, only be direct (in the sense that deaths are averted at the time of childbirth) but it may also operate indirectly as a means for distributing other services, which likewise save lives. Antenatal interventions can be administered effectively on time and/or postnatal problems can be resolved quickly by those same skilled attendants. This evidence challenges previous conventional wisdom, which advocated strategies focussed on antenatal screening and the training of traditional birth attendants, both of which have since been found to be neither the most effective nor cost-effective means for reducing maternal and neonatal mortality.⁶⁹

Analysing the cost-effectiveness of interventions with respect to the prevention and treatment of maternal and neonatal conditions is a challenging task, not least due to the number of conditions that may present and therefore the vast number of single or combined interventions it is possible to compare, but due to the difficulty of separating the costs and effectiveness of services that have mutual relationships with respect to joint costs and co-morbidities. Attempts to systematically specify the content of intervention packages aimed at preventing and/or treating these conditions that are most cost-effective, are therefore, relatively few. Amidst the dearth, however, from the studies that have attempted the task, a picture of consensus has emerged.

⁶⁸ WHO. *Supra* n. 63, p. 86

⁶⁹ *Ibid*, Chapter 4 and 5; Campbell, O. “What are Maternal Health Policies in Developing Countries and Who Drives Them? A Review of the Last Half Century.” (2001); Rooney, C. “Antenatal Care and Maternal Health: How Effective Is It? A Review of the Evidence.” (1992); Sibley, L.M., and T.A. Sipe. “What Can Meta-Analysis Tell Us About Traditional Birth Attendant Training and Pregnancy Outcomes?” (2004)

As part of the Disease Control Priorities Project (DCP) in 2004, Doherty and Govender conducted a systematic review of studies that had, up until that point, attempted to measure the cost-effectiveness of primary care services in developing countries. Whilst acknowledging methodological differences in measuring cost-effectiveness, the review revealed that in all studies where maternity-related interventions were considered, skilled birth attendance and antenatal care (including tetanus toxoid vaccination and routine malaria prophylaxis) are both cost-effective ways of reducing the burden of maternal and neonatal conditions.⁷⁰ Similar results were found in a study conducted for the Neonatal Survival Series in 2005.⁷¹ Later, in 2006, the DCP also analysed the costs of scaling-up access to modern contraception and the benefits with respect to reductions in maternal and neonatal mortality and morbidity from increasing the length of birth intervals and reducing the number of pregnancies taking place in adolescence.⁷² The study revealed that meeting the need for modern contraception would cost from as little as \$30 per DALY averted in South Asia to a maximum of \$60 per DALY averted in East Asia and the Pacific.⁷³ By international standards, and the criteria used here, this is very cost-effective. As such, the DCP considers meeting the need for contraception as one of global public health's "best buys."⁷⁴

⁷⁰ Doherty, J. and R. Govender. "The Cost-Effectiveness of Primary Care Services in Developing Countries: A Review of the International Literature." (2004)

⁷¹ Darmstadt, G.L., Z.A. Bhutta, S. Cousens, T. Adam, N. Walker, and L. de Bernis. "Evidence-Based, Cost-Effective Interventions: How Many Newborn Babies Can We Save?" (2005)

⁷² Cost-effectiveness in the DCP study is expressed as the cost per disability-adjusted life year (DALY) averted through the implementation of interventions in U.S. dollars for the year 2001. The DALY measure used includes years of life lost (YLL) for both maternal and neonatal outcomes plus maternal years lived with morbidity. Though the focus of the analysis in this chapter is an assessment of the degree to which interventions reduce mortality specifically, the morbidity element in this study (and others referred to throughout the chapter) is likely to be very small and therefore is a reasonable enough proxy for assessing costs per year of life lost.

⁷³ Levine, R. et al., "Contraception." In *Disease Control Priorities in Developing Countries*, Jamison, D.T. et al., (eds.) 2006, pp. 1193–1209.

⁷⁴ World Bank. *Why Contraception is Considered a Best Buy: Family Planning Saves Lives and Spurs Development*. 2007

B. *Child health*

Like maternal and neonatal mortality, around the world, childhood mortality is falling year-on-year. The rate of under-five mortality is now almost 50 percent lower than it was only twenty years ago. Yet, it is still the case that more than six and a half million children do not live to see their fifth birthday. The biggest concerns underlying these statistics are, however, that just shy of two thirds of these child deaths are a result of infectious diseases, the vast majority of which are easily preventable or treatable,⁷⁵ and that the burden is increasingly being carried by the most marginalised children living in the poorest regions of the world.⁷⁶ Improvement in reducing the rate of child mortality is clearly linked to improvements in wealth and economic development more broadly. And again, looking within the continuum, child health is also linked to improved maternal health and progress against maternal mortality. But there are also child-specific interventions, which have an unrivalled track record when it comes to the speed at which progress has been achieved, even in the presence of economic underdevelopment.

In their contribution to the Child Survival Series, Jones et al., estimated that by increasing current coverage levels of evidence-based interventions that are available today to universal coverage (specified at 99%), up to 63% of all child deaths could be averted.⁷⁷ These interventions include those that are preventative, (e.g.

⁷⁵ WHO Global Health Observatory Data Repository, Global Burden of Disease, 2011 estimates. (Pneumonia, diarrhoeal disease and malaria (in that order) are the prime causes of mortality in children aged from one month to five years old.)

⁷⁶ UN Millennium Development Goal 4: Reduce Child Mortality Factsheet, September 2008

⁷⁷ Jones, G., R. Steketee, R. Black, Z. Bhutta and S. Morris. "How Many Child Deaths Can We Prevent This Year?" (2003) (The measure and specification of interventions that are effective and evidence-based were determined through both systematic reviews by the authors of the Child Survival Group and from published articles with respect to the causal effect on reducing mortality from the major causes of under-five deaths.) pp. 66-68

immunisation including measles, BCG, polio, DPT, and Hib; insecticide-treated nets for prevention against malaria; adequate nutrition to prevent diarrhoea, pneumonia, malaria and measles; and water, sanitation and hygiene for the prevention of diarrhoeal disease)⁷⁸ and those which are treatments (e.g. oral rehydration therapies; antibiotics for pneumonia and dysentery; antimalarials; zinc and vitamin A supplementation).

So far as child health is concerned, the preventative and therapeutic interventions aimed at specific childhood diseases, as noted by Jones et al., are now widely accepted in the literature as both effective and cost-effective ways of preventing childhood disease, and therefore mitigating child mortality, particularly when delivered through an Integrated Management of Childhood Illness (IMCI) strategy.⁷⁹ However, there remains some disagreement with regards to the more wide-ranging preventative interventions, such as water and sanitation. Though it is acknowledged that these interventions are effective for reducing the burden of most childhood illnesses, particularly diarrhoeal disease,⁸⁰ their respective cost-effectiveness, in terms of the direct benefits specific to health, is contested. Indeed Walsh and Warren concluded that the cost per death averted for providing water supplies and sanitation is much greater than that of curative measures.⁸¹ This is, in

⁷⁸ This package of interventions has since been reiterated in the Lancet Childhood Pneumonia and Diarrhoea Series, for example in, Bhutta, Z.A. et al. "Interventions to Address Deaths from Childhood Pneumonia and Diarrhoea Equitably: What Works and at What Cost?" (2013)

⁷⁹ See, e.g. Bryce, J., C.G. Victora, J.P. Habicht, R.E. Black, and R.W. Scherpbier. "Programmatic Pathways to Child Survival: Results of a Multi-Country Evaluation of Integrated Management of Childhood Illness" (2005); Bryce, J., C.G. Victora, J.P. Habicht, J.P. Vaughan, and R.E. Black. "The Multi-Country Evaluation of the Integrated Management of Childhood Illness Strategy: Lessons for the Evaluation of Public Health Interventions." (2004)

⁸⁰ "An estimated 94% of the diarrhoeal burden of disease is attributable to the environment, and associated with risk factors such as unsafe drinking water, lack of sanitation and poor hygiene." Prüss-Üstün, A., and C. Corvalán. "Preventing Disease Through Healthy Environments: Toward an Estimate of the Environmental Burden of Disease." (2006) Quoted in Clasen, T.F., and L. Haller "Water Quality Interventions to Prevent Diarrhoea: Cost and Cost-Effectiveness." (2008) p. 1

⁸¹ Walsh, J.A. and K.S. Warren. *Supra* n. 16, p. 971

essence, the traditional selective vs. comprehensive primary health care debate in repeat. However, it may be too hasty to dismiss water and sanitation as viable candidates for the health basket based on these early studies since cost-effectiveness estimates of interventions aimed towards the underlying determinants of health for reducing mortality (e.g. investments in water and sanitation) are likely to be underestimated for a number of important reasons.

Firstly, the benefits tend only to be calculated in terms of reduced mortality from very few diseases, albeit diseases known to be precipitated, in large part, by a lack of access to water and sanitation, e.g. diarrhoeal diseases. But if reduced mortality from conditions other than these are taken into account, the additional benefits may be substantial.⁸² The reduced risk of mortality from nutritional deficiencies provides a good example.

In 2011, Fink et al. conducted a comprehensive study based on over one million children across 70 countries, which analysed the associations of access to drinking water and sanitation with child diarrhoea, stunting and mortality. Controlling for as many of the potentially confounding factors as possible, the study suggests that the provision of water and sanitation infrastructure has a strong protective effect across all of the child health outcomes measured. What is particularly interesting about this study, however, is that whilst the results correspond to what is generally already

⁸² The seminal study by Esrey et al. found that “the median reduction in morbidity for diarrhoea, trachoma, and ascariasis induced by water supplies and/or sanitation was 26%, 27%, and 29%, respectively; the median reduction for schistosomiasis and dracunculiasis was higher, at 77% and 78%, respectively. All studies of hookworm infection were flawed apart from one, which reported a 4% reduction in incidence.” Esrey, S.A., J.B. Potash, L. Roberts, and C. Shiff. “Effects of Improved Water Supply and Sanitation on Ascariasis, Diarrhoea, Dracunculiasis, Hookworm Infection, Schistosomiasis, and Trachoma.” (1991) Access to improved water and sanitation also lowers the risk of severe infection with other (non-fecally-transmitted) diseases, reducing the risk of child mortality from these diseases. Clasen, T. et al. “Cost-Effectiveness of Water Quality Interventions for Preventing Diarrheal Disease in Developing Countries” (2007); Caulfield, L.E., et al. “Undernutrition as an Underlying Cause of Child Deaths Associated with Diarrhea, Pneumonia, Malaria, and Measles.” (2004)

known in the literature with regards to water, sanitation and diarrhoea (the study suggests that access to high quality sanitation and a high quality water supply reduces the probability of child diarrhoea by 13% and 8%, respectively) the effect of water and sanitation on malnutrition is even greater. The risk of stunting is reduced by 9% and 27%, respectively.⁸³ The study suggests that the trend in mortality from these diseases is likely to be similar.

Secondly, the costs are estimated on the basis of being generally sufficient for all contexts. However, in more favourable contexts it may be possible to implement water supplies and sanitation at lower-than-estimated cost. And thirdly, the economies of scale from combining implementation of water supplies and sanitation may also be substantial. For example, sanitation combined with hygiene promotion and/or water pipe laying combined with sewerage pipe laying is likely, in total, to cost less and be more effective than the sum of each of the individual parts.⁸⁴

Bearing these limitations in mind, a more recent study, conducted under the auspices of the World Bank, estimates the average cost per life-year saved from improved access to water and sanitation to be significantly below the international benchmark for deeming an intervention “very cost-effective.” On average, the results reveal the cost per life-year saved is between 0.65 and 0.72 times GDP per

⁸³ Fink, G., I. Günther, and K. Hill. “The Effect of Water and Sanitation on Child Health: Evidence from the Demographic and Health Surveys 1986–2007.” (2011) It is also worthwhile noting that the results of one of the first systematic reviews of causal links between water, sanitation and hygiene (WASH) and nutritional status suggests that “WASH interventions confer a small benefit on growth in children under five years of age.” The study acknowledges, however, that all of the studies reviewed suffer in some way from study size and/or methodological quality issues and therefore the results should be treated as tentative until more rigorous large-scale results are reported. Dangour, A.D. et al. “Interventions to Improve Water Quality and Supply, Sanitation and Hygiene Practices, and Their Effects on the Nutritional Status of Children.” (2013)

⁸⁴ Cairncross, S., and V. Valdmanis “Water Supply, Sanitation, and Hygiene Promotion.” In *Disease Control Priorities in Developing Countries*, Jamison, D.T. et al., (eds.) 2006, Chapter 41

capita in Sub-Saharan Africa and between 0.75 and 0.82 time GDP per capita in other developing regions.⁸⁵ It is also worth noting that still, these estimates are likely to underestimate the true cost-effectiveness of water and sanitation for reducing child mortality. The estimates should be viewed as “lower-bound” since the estimated benefits do not account for any of the “positive spillovers”⁸⁶ generated from improved access to water, and in particular sanitation, whilst the costs have been estimated at the “upper-bound,”⁸⁷ which is likely to overestimate the true financial commitment required for their provision. Based on this more sensitive evidence, the provision of water and sanitation infrastructure does fit within what can be deemed as feasible given the criteria of effectiveness and cost-effectiveness.

C. *Adult health*

Of all the health issues responsible for avoidable deaths in the adult population analysed earlier, HIV/AIDS is by far the most important. Though the annual number of people dying from AIDS-related causes has been steadily decreasing worldwide, from a peak of 2.3 million in 2005 to an estimated 1.6 million in 2012,⁸⁸ 1.6 million deaths is still an alarming statistic particularly when disaggregated by

⁸⁵ Günther, I., and G. Fink. *Supra* n. 83, p. 27

⁸⁶ The mortality estimates used in the study “only capture the direct child mortality effects of water and sanitation infrastructure, that is, the private mortality benefits that accrue at the child or household level, without taking into account any positive externalities, and without taking into account morbidity effects.” It is not unreasonable to assume, however, that improved water and sanitation are associated with considerable improvements in morbidity and overall wellbeing.

⁸⁷ The study uses the “upper-bound” estimates of costs from Hutton and Haller (2004) to avoid an underestimation of the true costs of proving water and sanitation infrastructure. Hutton, G., and L. Haller. “Evaluation of Costs and Benefits of Water and Sanitation Improvements at the Global Level.” (2004)

⁸⁸ Estimates [2.1–2.6 million] in 2005 and [1.4–1.9 million] in 2012. WHO (2013) Global Health Observatory Data Repository

location: the bulk of the burden being carried by those living in countries where resources are most constrained.⁸⁹

The HIV/AIDS epidemic is a special health case. A panacea does not yet exist. But there is still reason for optimism. Recent breakthrough scientific findings have completely shifted the orientation of the discussion about how best to manage the HIV/AIDS epidemic. Arguments about the relative virtues and flaws of prevention strategies versus treatment strategies are now outdated. Instead, what has become clear is that the discussion needs to be one focussed on treatment *as* prevention, through the implementation of antiretroviral therapy (ART).⁹⁰ The life-saving and life-prolonging benefits of ART are manifestly evident.⁹¹ According to the Global Plan, the scaling up of ART had already averted 4.2 million deaths in low and middle-income countries by the end of 2012.⁹² Moreover, ART not only ultimately saves lives but also allows those individuals living with HIV to live longer, healthier lives. Recent studies confirm that people living with HIV in both high-income and low and middle-income countries who are in receipt of ART can expect to see improvements in their life expectancy to a level close to that seen in the general

⁸⁹ The mortality rate from HIV/AIDS in Sub Saharan Africa is 114 per 100,000 population compared the rest of the world where rates range between 4 per 100,000 population in Eastern Asia to 12 in South-Eastern Asia.

⁹⁰ “Treatment as prevention is a term used to describe HIV prevention methods in which people living with HIV use ART, independent of CD4 cell count, to decrease the chance of onward HIV transmission.” WHO. *Global Update on HIV Treatment: Results, Impact and Opportunities*. 2013b p. 43

⁹¹ Mahy, M., et al. “Estimating the Impact of Antiretroviral Therapy: Regional and Global Estimates of Life-Years Gained Among Adults.” (2010) (An estimated 14.4 million life-years have been gained among adults globally between 1995 and 2009 as a result of ART.)

⁹² WHO. *Global Monitoring Framework and Strategy for the Global Plan Towards the Elimination of New HIV Infections Among Children by 2013 and Keeping their Mothers Alive*. 2012b. Also, at the country level, the WHO’s Global Update on HIV shows that for Brazil, whilst non-AIDS-related mortality has remained generally static over the past three decades, AIDS-related mortality has fallen dramatically from 9.2 deaths per 100 person-years in 1986 to 1.4 deaths per 100 person-years in 2007-2009. This follows the trend in Brazil’s increased political (and legal) commitment to providing access to ART.

population.⁹³ For example, in one South African study of almost 40,000 people living with HIV, the authors report “patients starting ART have life expectancies around 80% of normal life expectancy.”⁹⁴ Between 2009 and 2011 overall life expectancy at birth in South Africa has increased from 56.5 to 60 years, which according to the South African Medical Research Council, has been due, in large part, to the rollout of ART.⁹⁵

Notwithstanding the life-saving and life-prolonging benefits of ART the most remarkable finding to come out of the latest research, from both clinical trials and programme settings, is confirmation of the preventative benefits of ART.⁹⁶ The landmark HPTN 052 trial in 2011, which reported that early initiation of ART lowers the probability of HIV transmission between couples with mixed HIV status by 96%,⁹⁷ has been closely followed by validation that ‘treatment as prevention’ also works at the population level. Evidence of substantial reductions in the rate of new HIV infections at the population-level has most recently come from studies of South Africa with, for example, one study reporting a 38% decline in the likelihood of new HIV-acquisition in communities where ART coverage is high (30 to 40% of all treatment-eligible individuals receiving ART) compared to communities where

⁹³ Nakagawa F, M. May, and A. Phillips. “Life Expectancy Living with HIV: Recent Estimates and Future Implications.” (2013)

⁹⁴ Johnson, L.F, et al. “Life Expectancies of South African Adults Starting Antiretroviral Treatment: Collaborative Analysis of Cohort Studies.” (2013) p. 5 (The average life expectancy of men starting ART varied between 27.6 years at age 20 and 10.1 years at age 60. For women the estimates were between 36.6 at 20 and 14.4 years at 60.)

⁹⁵ Bradshaw, D., R.E. Dorrington, and R. Laubscher. “Rapid Mortality Surveillance Report 2011.” (2012)

⁹⁶ Karim, S.S. and Q.A. Karim. “Antiretroviral Prophylaxis: A Defining Moment in HIV Control.” (2011) p. 24 (“There is now no doubt that antiretroviral drugs also prevent HIV infection.”)

⁹⁷ Cohen, M.S. et al. “Prevention of HIV-1 Infection with Early Antiretroviral Therapy.” (2011)

fewer than 10% of treatment-eligible individuals were receiving therapy.⁹⁸ And another showing that between 2004 and 2011 the proportion of individuals with suppressed viral load increased by 84% and 79% in Cape Town and Johannesburg, respectively, as ART was scaled up.⁹⁹ These developments have informed the 2013 WHO guidelines on the use of ART for treating and preventing HIV infection,¹⁰⁰ which if fully implemented, could prevent close to an additional 3.5 million new infections between 2012 and 2025 in low and middle-income countries.¹⁰¹

The recommendations flowing from this new evidence suggest that to maximise the benefits of ART individuals living with HIV should be diagnosed as early as possible, should be enrolled in care and should initiate ART in the early stages of the disease (or initiate ART immediately if the individual is pregnant or has both HIV and TB) so that viral load suppression is achieved and maintained. The steps in this continuum of HIV care comprise what has become known as the HIV “treatment cascade.”¹⁰² According to the WHO, fully implementing the 2013 guidelines with respect to the treatment cascade framework would expand the global pool of those eligible for ART to 25.9 million people: over 9 million more than those eligible under the 2010 guidelines, and almost 16 million more than current coverage.¹⁰³ Therein lies the most complex challenge generated by these new findings. The scaling up of HIV testing in contexts where people living with HIV

⁹⁸ Tanser, F. et al. “High Coverage of ART Associated with Decline in Risk of HIV Acquisition in Rural KwaZulu-Natal, South Africa.” (2013)

⁹⁹ Carmona, S. et al. “A Decline in Community Viral Load in Cape Town and Johannesburg, South Africa between 2004 to 2011.” (2013)

¹⁰⁰ WHO. *Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection*. 2013a

¹⁰¹ WHO. *Supra* n. 90, p. 11

¹⁰² *Ibid*, p. 53

¹⁰³ *Ibid* (2013 guidelines 25.9 million, 2010 guidelines 16.7 million, current coverage 10 million)

are often marginalised and hard to reach could be expensive. Extending access to ART for both treatment and prevention in contexts where the health system has been designed, in the first instance, with acute care in mind — and where often the health system is already struggling with providing just that — could be expensive. The success of ART therefore depends hugely on an increase in funding. So, in terms of constituting the health basket, can ART really be deemed feasible given the prescribed health basket criteria?

There is no doubt that the scale up of ART to close-to-universal coverage would demand a significant increase in financial and human resources. However, it is completely conceivable that the returns generated, particularly in the long run, would be even greater.¹⁰⁴ Epidemic impact is critical for assessing the cost-effectiveness of ART for both treatment and prevention and the evidence already presented suggests these effects are potentially very large.

Although cost-effectiveness of ART for prevention analyses are still in their infancy, two notable studies, again from South Africa, have recently taken up the challenge.¹⁰⁵ The first of these studies, conducted by Granich et al., tests the cost-effectiveness of ART for prevention according to four eligibility scenarios: the

¹⁰⁴ Long run costs are likely to reduce since over time, the scaling-up of ART would result in lower HIV-acquisition and thereby reduce the number of people eligible for, and requiring access to, ART. The accumulated benefits from lower transmission would therefore mean that the ART resource requirement would quickly begin to plateau and would ultimately decline.

¹⁰⁵ Whilst only population-level analyses will be discussed here, other studies have been conducted, which investigate the cost-effectiveness of ART for prevention within specific groups. For example, Gomez, G.B., et al. “The Cost and Impact of Scaling Up Pre-Exposure Prophylaxis for HIV Prevention: A Systematic Review of Cost-Effectiveness Modelling Studies.” (2013); Walensky, R.P., et al. “Cost-Effectiveness of HIV Treatment as Prevention in Serodiscordant Couples” (2013); Fasawe, O., et al. “Cost-Effectiveness Analysis of Option B+ for HIV Prevention and Treatment of Mothers and Children in Malawi” (2013); and Hallett, T.B., et al. “Optimal Uses of Antiretrovirals for Prevention in HIV-1 Serodiscordant Heterosexual Couples in South Africa: A Modelling Study.” (2011)

current scenario, the 2010 guidelines, the 2013 guidelines, and universal eligibility.¹⁰⁶ Based on a 90% adult testing coverage rate and a reduction in transmission rate of 92% the study finds that even at the highest ART coverage rate (with associated ART and monitoring costs) scaling up of ART costs less than \$200 per DALY averted over 40 years; well-below the WHO threshold for an intervention deemed very cost-effective.¹⁰⁷ In a second more recent study, Alistar et al., investigate the population health outcomes and cost-effectiveness of scaling up ART with respect to both the 2013 guidelines and universal coverage, using the current scenario as the baseline. The authors show that scaling up ART to the current guidelines and to universal coverage are both cost-effective.¹⁰⁸ Interestingly, however, the latter scenario appears to be more cost-effective over 20 years than over 10 years, despite the increase in associated costs. The authors suggest that cost-effectiveness is likely to be even greater over longer time periods.

Both studies recognise their own limitations; the primary one being the assumed rate of HIV testing coverage and the likelihood of retention versus dropout throughout the treatment cascade. According to the WHO, more than 50% of people living with HIV in the African region are unaware of their HIV status, and the rate of attrition throughout the cascade is high: approximately only one quarter of those people testing HIV-positive ever actually initiate ART.¹⁰⁹ These statistics

¹⁰⁶ Granich, R. et al. "Expanding ART for Treatment and Prevention of HIV in South Africa: Estimated Cost and Cost-Effectiveness 2011-2050." (2012) Where the eligibility criteria for this current situation is ≤ 200 CD4 cells/mm³; according to 2010 guidelines is ≤ 350 CD4 cells/mm³; according to 2013 guidelines is ≤ 500 CD4 cells/mm³.

¹⁰⁷ The results show that universal coverage would cost \$194 per DALY averted; South African GDP per capita (2012) \$7,352, World Bank; WHO threshold for very cost-effective is each DALY averted $\leq 1 \times$ GDP per capita.

¹⁰⁸ Alistar, S.S., at al. "Comparative Effectiveness and Cost-Effectiveness of Antiretroviral Therapy and Pre-Exposure Prophylaxis for HIV Prevention in South Africa." (2014)

¹⁰⁹ WHO. *Supra* n. 100, p. 54

would have to dramatically improve to see the kinds of reductions in DALYs averted and savings made reported in these studies. Nevertheless, increasing ART provision to at least the 2013 guidelines is likely to significantly reduce long run costs whilst substantially reducing the long run HIV burden.

The prevention and control of HIV/AIDS goes hand in hand with that of tuberculosis (TB). Since HIV increases the risk of progression to active TB, TB control is particularly challenging in countries where the prevalence of HIV infection is high. In sub-Saharan Africa, for example, TB remains the leading cause of death amongst people living with HIV. However, recent studies investigating the opportunistic infection-reducing power of ART have confirmed “ART is strongly associated with a reduction in the incidence of TB.”¹¹⁰ This only adds more weight to the argument for why ART is a viable candidate for inclusion in the health basket.

But what about non-HIV-related TB mortality? In 2012, 8.6 million people fell ill with TB and 1.3 million died from the disease.¹¹¹ TB occurs in every corner of the world. In 2012, the largest number of new TB cases presented in Asia, accounting for 60% of new cases globally. However, sub-Saharan Africa carried the greatest proportion of new cases per capita with over 255 cases per 100,000 population.¹¹²

Notwithstanding these sombre statistics, TB is treatable and curable. Directly observed treatment, short-course (DOTS) remains the key strategy for increasing

¹¹⁰ In low and middle-income countries ART was found to reduce the risk of TB by up to 65%. Suthar, A.B. et al. “Antiretroviral Therapy for Prevention of Tuberculosis in Adults with HIV: A Systematic Review and Meta-Analysis.” (2012) Quoted in WHO. *Supra* n. 100, p. 47

¹¹¹ WHO. Tuberculosis Factsheet 104, March 2015 (2015)

¹¹² *Ibid.*

the survival of those being treated and reducing transmission to others and is amongst *the* most cost-effective of any health intervention.¹¹³ The DOTS strategy and its successor (the Stop TB Strategy) involves “treating TB with multiple drug therapy in conditions where adherence to the regimen can be supported through direct observation, and monitoring the effectiveness of the treatment.”¹¹⁴ It focusses on commitment to a sustained national effort to control the disease and maintain its decreasing incidence.¹¹⁵ The combination of increased case detection and improved treatment success under DOTS has resulted in major achievements in TB care and control. “Between 1995 and 2012, 56 million people were successfully treated for TB in countries that had adopted the DOTS/Stop TB Strategy, saving 22 million lives.”¹¹⁶

Nevertheless, the potential to reduce the burden of TB even further with respect to both mortality and transmission is huge. Although the proportion of countries reporting to subscribe to the DOTS regimen covers almost all of the world’s population, (180 countries, including all 22 countries categorised as high-burden) it is estimated that 40% of cases go undetected globally and up to almost 60% at the regional level.¹¹⁷ The WHO goal is to detect 70% of cases. In order to reach this target, a concerted formal commitment to the prioritisation of funding for DOTS is required. One type of formal commitment would be for it to form part of the health basket.

¹¹³ Jamison, D.T. et al. *Supra* n. 73

¹¹⁴ WHO. *Supra* n. 37, p. 41

¹¹⁵ WHO. *Global Tuberculosis Report*. 2013c, p. 2

¹¹⁶ *Ibid*, p. 28

¹¹⁷ The estimated case detection rate for the African region in 2008 is around 42%. Lönnroth, K., et al. “Tuberculosis Control and Elimination 2010–50: Cure, Care, and Social Development.” (2010) p. 1816

It is now clear that maternal and neonatal health, child health and the health of those adults inflicted with HIV/AIDS and TB should be prioritised and as a consequence be included in the health basket. All issues have been identified by the avoidable mortality strategy as being important at the population level and the evidence has made clear that effective and cost-effective interventions do exist and that widespread delivery of these interventions is indeed feasible. In terms of defining the health basket, what the above review has revealed is that the basket is comprised as a kind of selective primary health care-PLUS, and includes: (i) meeting the need for contraception; (ii) having skilled attendants present at births; (iii) antenatal interventions (where there is a need) including tetanus immunisation; (iv) immunisation against childhood diseases; (v) adequate nutrition; (vi) improved access to water and sanitation; (vii) the rollout of antiretroviral therapy for people living with HIV; and (viii) treatment of infectious cases of TB. These eight interventions are the health goods, services and facilities, which constitute the health basket.

IV. Conclusions

The aim of this chapter has been to identify and implement a strategy for defining the contents of a minimal basket of health goods, services and facilities to which the right to health relates. Using the three-part criteria (subsistence, importance, and feasibility) as a guide, the health basket amounts to a package of primary health care. But the implementation of a primary health care package with respect to the right to health presents real challenges. No single system of primary health care can be universally applicable. Comprehensive primary health care remains outside of

what can reasonably be deemed minimal, whilst selective primary health care discounts the virtues of preventative measures, some of which are critical components of the right to health. The major challenge is to establish a package of interventions that still bears resemblance to the central primary health care ethos yet has the potential for population-level scale-up. This chapter has attempted to offer a framework to address that challenge.

Firstly, an analysis of avoidable mortality has provided a framework for prioritising those health issues that are most important with respect to the health burden they pose and has identified where the greatest potential for improvement in population health lies. The avoidable mortality analysis has shown that very few health issues are in fact responsible for the majority of avoidable deaths and hence has helped circumscribe the range of interventions to be considered as components of the health basket. Secondly, the analysis has used cost-effectiveness analysis to determine whether the identified effective interventions can feasibly be scaled-up to population-level coverage in the typical low-income country. The health basket is then made up of the health goods, services, and facilities that attend to important health issues, and can be feasibly delivered. It has eight components: (i) meeting the need for contraception; (ii) skilled attendants present at births; (iii) antenatal interventions (where there is a need); (iv) immunisation against childhood diseases; (v) adequate nutrition; (vi) improved access to water and sanitation; (vii) the rollout of antiretroviral therapy for people living with HIV; and (viii) treatment of infectious cases of TB.

Having a description of the health basket in hand solves the first problem posed by the task set out in this thesis: what kind of health do individuals have a right to? But it is important to remember that it does not solve the second problem: what level of

this kind of health do duty-bearers owe to individuals? To recall, fulfilment of the health basket is conditional; even in spite of its minimalism, full provision of the health basket ‘package’ still may be unaffordable for some states. Duty-bearers therefore have an obligation to provide as much of the health basket as they are able. So what remains with respect to assessing compliance with this obligation is an assessment of the degree to which the health basket is affordable. It is this assessment that forms the basis of the analysis in Chapter 5.

Signalling compliance

Introduction

To recall the argument made in Chapter 3, conditionality need not preclude obligations from being immediate. Rather, states have an immediate obligation to secure the maximum level of health that is affordable and have an immediate obligation to fully secure the set of health goods, services and facilities guaranteed under the right to health (the health basket) as soon as resources are sufficient to do so. This claim is made on the basis that if a test of the extent to which scarcity may justify a shortfall in the attainment of the health basket is precise enough, the criticism that conditionality creates only weak rights may be unjustified. So then, how is this test of extent to be specified? Or, to put it another way, how is it possible to determine what level of resources can be deemed “maximum available?”

To plausibly respond to the rights-weakness objection, the conditional conception must through some analytical framework provide an answer to this question. There have been, as yet, very few attempts at this enterprise and those that have made the attempt have been less than successful. Nevertheless, it does not necessarily follow from the extant situation that providing an answer is impossible or that the enterprise be abandoned absolutely. Rather, it may be the case that by looking to methodologies from disciplines other than human rights an appropriate framework

for determining the highest attainable standard of health given maximum available resources could be defended.

The purpose of this chapter is to demonstrate that there is a methodological candidate that can do such a job. It is one that is most commonly found in the toolkit of a microeconometrician. Specifically, this chapter uses stochastic frontier analysis to empirically study the affordability of the health basket given different levels of ability and assesses the degree to which states are meeting, or falling short of, the expected level of health basket attainment that has been deemed affordable.

In a bid to situate and distinguish the present analysis within and from methods that already exist, Section I starts with a brief history of the ways in which compliance has been most commonly measured to date, tracing the use of residual analysis in the social sciences more generally, and for measuring human rights in particular. Section II outlines the conceptual framework and empirical strategy, showing how the tools for measuring efficiency in the microeconomic sense can be applied to the measurement of a state's compliance with its obligation to fulfil the right to health. Section III describes the specific empirical models to be used as the basis for the analysis, Section IV outlines the procedures through which the qualitative description of the health basket produced in the preceding chapter is transformed into a composite quantitative index, and the data are described in Section V. Section VI presents the results, providing point estimates of the degree to which states are meeting or falling short of their obligations. Returning to the hypothesis that compliance with the obligation to fulfil the right to health is a function of a state's ability and willingness to do so, an assessment of the correspondence between the revealed estimates of compliance and indicators of willingness is also conducted in this section.

I. Methodological provenance

With respect to measuring compliance with the obligation to fulfil the right to health, the most basic approach is to take an estimate of how much it costs to provide a package of essential health interventions and then make qualitative decision on whether this package is reasonably affordable given a country's income level.¹ For instance, the Commission for Macroeconomics and Health estimated in 2001 that such a package would cost \$38 per capita by 2015.² This is equivalent to \$50 per capita in 2013 prices.³ To use Bolivia as an example, GDP per capita in Bolivia was \$2,868 in 2013. Providing the package would therefore cost 1.7% of GDP, and the assessment of maximum available resources would be concerned with the reasonableness of this cost. Whilst this rule of thumb-type approach may be useful for broaching the discussion of the resources problem, this is really where its use ends. It has no use for assessing compliance when the package is deemed unaffordable — indeed if a threshold below which provision of the package is deemed affordable can even be established — and more importantly, as is now clear, fulfilling the right to health requires more than just financial resources. Such a sweeping measure is far too insensitive to the complexities involved in solving the resources problem.

¹ The Committee on Economic, Social and Cultural Rights has used this kind of approach in its assessments on whether states are using their maximum available resources to fulfil economic and social rights. For example through comparing expenditures on health in the state under review against international indicators, such as UNDP's indicator that 5 percent of GDP should go to human expenditures (specified as basic education, primary health care, and basic water.) UN Committee on Economic, Social and Cultural Rights. "An Evaluation of the Obligation to Take Steps to the 'Maximum of Available Resources' Under an Optional Protocol to the Covenant." (2007)

² WHO. *Improving Health Outcomes of the Poor: The Report of Working Group 5 of the Commission on Macroeconomics and Health*. 2002

³ Calculated using the Consumer Price Index (CPI) inflation calculator available through the U.S. Bureau of Labor Statistics. (Original estimates were reported in 2001 prices).

There are, however, ways through which greater specificity on the ability/attainment equation can be provided. Quantitative social science methods in particular have much to offer in this regard. Towards the more advanced end of the statistical methods spectrum lies multivariate regression analysis. Regression analysis of the multivariate kind can be used to establish the direction, strength and significance of the relationship between an outcome variable and two or more explanatory variables. In a sense, multivariate analysis helps explain away competing factors that might contribute to the outcome of interest. When applied to measuring compliance with the obligation to fulfil the right to health, for instance, it can provide interesting insight into the extent to which national income, the availability of health professionals, geographical and other ‘random’⁴ factors individually and/or collectively explain particular health outcomes. In other words, it can be used to measure the extent to which ability explains health attainment.

Of course, a measure of the degree to which health attainment is determined by ability is valuable in and of itself. Still, in the words of Nobel Laureate in Economics, Paul Samuelson, “always look back. You may learn something from your residuals.”⁵ In estimating the relationship between ability and health attainment, it is unlikely that ability will explain all of the variation in health attainment, i.e. very few countries will have health attainment equal to the predicted value. The residual that is produced by the regression provides information with respect to the degree to which the actual level of health attainment deviates from the predicted value. The residual is the ‘unexplained effect’.

⁴ Random in the statistical sense where values are statistically independent of other values and are therefore unpredictable, rather than implying true randomness, i.e. objective unpredictability.

⁵ Samuelson, P. “Nobel Economists Lecture Series.” Trinity University, San Antonio, February 1985. Quoted in Cingranelli, D.L., and D.L. Richards “Measuring Government Effort to Respect Economic and Social Human Rights: A Peer Benchmark.” In *Economic Rights: Conceptual, Measurement and Policy Issues*, Hertel, S., and L. Minkler (eds.) 2007, p. 221

Residual-type analysis is by no means new. Its application has a long tradition in the social sciences, from Robert Solow's treatment of the residual in explaining economic growth through technological innovation,⁶ to Raymond Duvall and Michal Shamir's propensity of repression indicator developed through regressing sanctions on domestic violence.⁷ Existing efforts that attempt to measure some form of performance with respect to human rights standards have not been blind to the virtues of residual analysis either. For example, David Cingranelli and David Richards use the regression residual to estimate a government's efforts in fulfilling economic and social rights, (proxied by the Physical Quality of Life Index) given a country's GDP per capita level and whether the country is a signatory and/or party to the ICESCR.⁸ And similarly, in the civil and political realm, Todd Landman, David Kernohan and Anita Gohdes regress a measure of a country's civil and political human rights performance on a number of economic, political, and social factors that are commonly understood to influence their protection. Then the residual from the regression, the unexplained variance, is used as an indicator of "over" or "under" performance with respect to the protection of those rights.⁹

When it comes to measuring compliance with economic and social rights standards specifically, probably the most innovative and sophisticated method that uses residual analysis for setting benchmarks to date comes in the form of the Index of Social and Economic Rights Fulfilment (SERF Index), developed by Sakiko Fukuda-Parr, Terra

⁶ Solow, R.M. "A Contribution to the Theory of Economic Growth." (1956)

⁷ Duvall, R.D., and M. Shamir. "Indicators from errors: Cross-national time-serial measures of the repressive disposition of government." In *Indicator Systems for Political, Economic, and Social Analysis*, Taylor, C.L. (ed.) 1980, pp. 155-182

⁸ Cingranelli, D.L., and D.L. Richards. *Supra* n. 5

⁹ Landman, T., D. Kernohan, and A. Gohdes. "Relativizing Human Rights." (2012)

Lawson-Remer, and Susan Randolph.¹⁰ The SERF Index measures fulfilment across five economic and social dimensions: education, food, health, housing, and decent work. For each of the dimensions, outcome indicators are selected to reflect the enjoyment in the interests to which these dimensions relate, where this enjoyment is likely to be influenced by government policy. The SERF Index attempts to deal not only with the right-holder enjoyment aspect of the task of measuring compliance but with the duty-bearer obligation-fulfilment aspect also. Specifically, the innovation in the SERF Index methodology lies in its construction of an Achievement Possibility Frontier (APF), which specifies each duty-bearer's obligation with respect to the level of resources it has available. The feasible level of rights enjoyment is defined as the maximum level of achievement that has historically been achieved and is set simply by plotting each outcome variable against one input variable (GDP per capita, in \$US PPP) across all countries from 1990-2006, and fitting a curve to the maximum boundary observations. Then the SERF Index essentially measures the difference between the boundary, representing potential achievement, and a country's actual achievement; that is, the residual.

It has to be acknowledged that this approach was one of the first innovations in bringing quantitative methodologies to addressing the resources issue; it does more reasonably link the performance expected of a duty-bearer to its level of ability. Indeed the methodology that follows in this chapter has largely been inspired by it. It does, however, have numerous flaws.

¹⁰ Fukuda-Parr, S., T. Lawson-Remer, and S. Randolph. "Fulfilling Social and Economic Rights." (2015); Fukuda-Parr, S., T. Lawson-Remer, and S. Randolph. "Economic and Social Rights Fulfilment Index: Country Scores and Rankings." (2010); and Fukuda-Parr, S., T. Lawson-Remer, and S. Randolph. "An Index of Economic and Social Rights Fulfilment: Concept and Methodology." (2009)

Firstly, the SERF Index methodology provides very little normative account of the indicators that characterise rights enjoyment. Returning to the methodological idea set out in Chapter 1, “the qualitative distinction made between and among categories in any attempt to classify social phenomena necessarily precedes the process of quantification.”¹¹ Whether the indicators that underpin the SERF Index have been selected on the basis of a careful qualitative unravelling of human rights concepts or instead on the basis of operational ease is not evident. This lack of evidence by itself could suggest the latter.

Secondly, and perhaps most importantly, the SERF Index is methodologically too simplistic to deal with the complexities that come with measuring economic and social rights fulfilment generally, and right to health fulfilment in particular. Consider the heterogeneity of the countries included in the analysis. Outliers and statistical noise are likely. As a result, setting the boundary to the highest level of health historically attained by any country leaves open the possibility — even probability — of it being hinged on very few extreme observations, with the vast majority of the data in fact lying far below it. This could potentially overestimate the degree of cross-country non-compliance to a significant extent. For example, the level of GDP per capita, PPP for Kenya in 2013 is roughly the same as that for the Philippines in 1994.¹² If it is assumed, for illustrative purposes, that the Philippines attained the maximum level of health historically achieved at that given level of GDP per capita, does it make sense that Kenya be expected to achieve in 2013 the level achieved by the Philippines in 1994? Obviously the two countries differ in a number of

¹¹ Landman, T. “Social Science, Methods and Human Rights.” In *The SAGE Handbook of Human Rights: Volume 1*, Mihr, A., and M. Gibney (eds.) 2014, p. 194. Quoting Sartori, G. “Concept Misinformation in Comparative Politics.” (1970)

¹² GDP per capita, PPP (current international \$) was 2,794.98 for Kenya in 2013 and 2,774.84 for the Philippines in 1994. World Bank. World Development Indicators. (2015)

significant ways. And these differences may affect the residual, positively or negatively, regardless of the duty-bearer's action or inaction.

The level of health that has previously been attained with the same given level of GDP per capita may, then, be too insensitive a target against which to measure compliance. Instead, the boundary must be set with a greater degree of methodological sophistication, allowing for the entry of multiple explanatory factors and for some sensitivity to statistical noise. The residual analysis that follows builds on the SERF Index methodology in an attempt to go some way to meeting that demand.

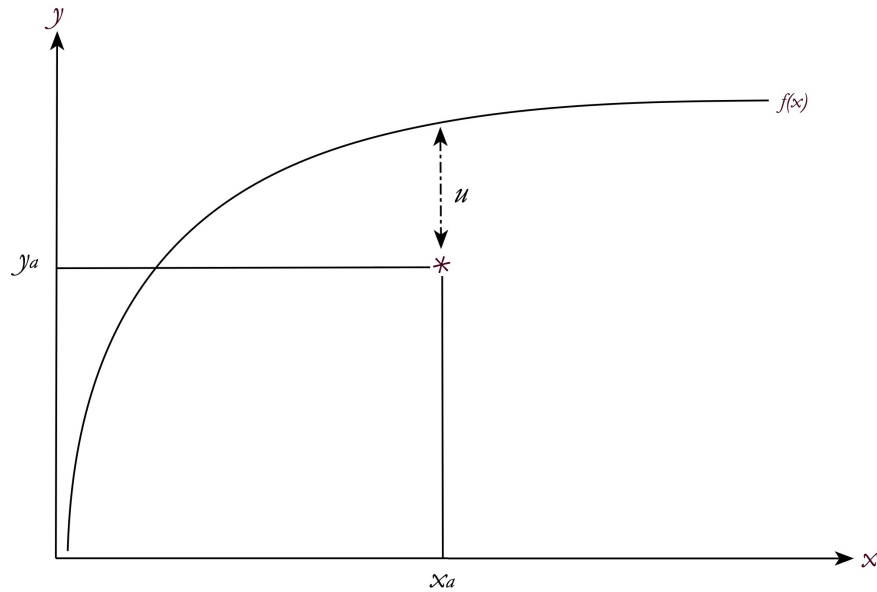
II. Conceptual framework

The analysis that follows borrows from the analytical toolkit of microeconometrics; specifically, those tools that are used to estimate production function frontiers. According to William Greene, “the frontier production function is an extension of the familiar regression model based on the microeconomic premise that a production function ... represents an ideal, the maximum output attainable given a set of inputs.”¹³ With the setting of this ideal comes the theoretical proviso that all observations will lie below it. As such, estimation of the production frontier is generally used as a means to another analytical end: the analysis of technical efficiency. Analysis of technical efficiency in the microeconomic sense refers to the degree to which producers are successful in allocating the inputs they have at their disposal to produce certain outputs in an effort to meet some specified objective.

¹³ Greene, W.H. “The Econometric Approach to Efficiency Analysis,” In *The Measurement of Productive Efficiency and Productivity Growth*, Fried, H.O., K. Lovell, and S.S. Schmidt (eds.) 2008, p. 92

This objective could be to minimise the number and level of inputs to produce a given output (input-approach), or to maximise output with a given number and level of inputs (output-approach). By means of estimating the production function a measure of efficiency emerges since what it corresponds to is the distance between the actual observation and the expected estimate of the ideal.

Figure 5.1: Output approach to measuring technical efficiency



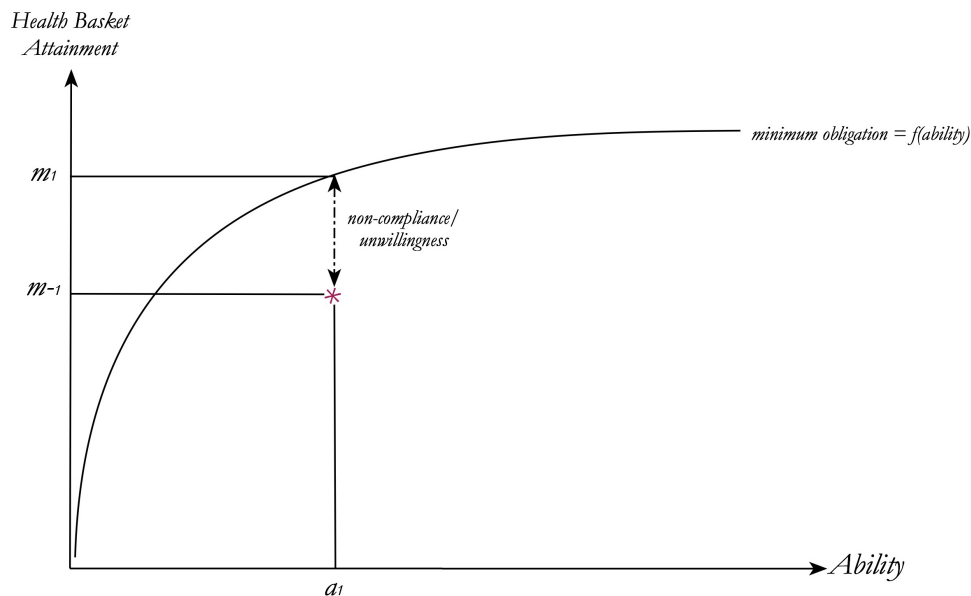
The standards against which efficiency is measured are provided by the production frontier, $f(x)$ in Figure 5.1. A producer using x_a inputs to produce a single output of y_a is inefficient to the tune of u since it is operating beneath $f(x)$.

In the case of measuring the extent to which a state complies with or falls short of its obligation to fulfil the right to health the same notion of efficiency can be applied. Each state can be treated as a decision making unit that *produces* the health basket under the behavioural assumption that it operates to maximise attainment of the basket (output) given its ability to do so (inputs). Maximum expected attainment at different levels of ability can then be predicted and it is these expected values that set

the minimum obligation frontier. Compliance, like efficiency, can then be measured as the difference between observed attainment of the health basket and the expected level of attainment, or in other words, the level states have an unconditional obligation to provide.

The standards against which states can be measured are provided by the minimum obligation frontier in Figure 5.2. For example, it is expected that for a state with an ability level of a_1 , attainment of the health basket should be at level m_1 ; state a_1 has an unconditional obligation to fulfil m_1 level of the health basket. According to the hypothesis proposed throughout this thesis: that compliance with the right to health is a function of a state's ability and willingness to fulfil it, provision of the health basket at any point below the frontier, such as m_{-1} , may signal unwillingness on the part of the state to mobilise its maximum available resources to fulfil the right to health, which in turn signals non-compliance with the obligation to do so. The degree of non-compliance can then be measured as the distance between the observed level provided and the level set by the minimum obligation frontier, in this example: $m_{-1} / (m_{-1} + m_1)$.

Figure 5.2: Measuring compliance with the obligation to fulfil the right to health



Essentially, there are two main methodologies for measuring efficiency: the mathematical (non-parametric) approach, and the econometric (parametric) approach. The two techniques have both virtues and limitations in their respective bids to envelop data and there is no prescriptive rulebook for which method is best.¹⁴ Though the technical differences between the two methods are many, their relative advantageousness can be assessed with reference to two central methodological characteristics:

- i. The econometric approach is parametric so the shape of the frontier has to be specified from the very beginning. This could make the model vulnerable to functional form misspecification. The mathematical approach, on the other hand, is non-parametric so has the advantage that no assumption has to be made as to the shape of the frontier.
- ii. The econometric approach is stochastic, which allows for the model to distinguish between the effects of inefficiency and the effects of random noise. The mathematical approach, however, is deterministic and provides only a general measure of inefficiency, which is likely to hide within it random noise, and hence risk being either under or overestimated.

Deciding when one method should be chosen over the other comes down to an assessment of appropriateness to the individual dataset and the research question(s) being asked. Presently, the primary objective of the analysis is to reveal the presence and degree of non-compliance within and across states. The data involved are, by nature, highly heterogeneous, of widely differing quality, and are therefore likely to carry noise. As such, the certain advantages of a model, which allows for real non-compliance to be distinguished from random noise must outweigh the potential

¹⁴ See, e.g. Greene, W.H. *Ibid.*, pp. 112-114

limitations posed by a risk of form misspecification. It is for these combined reasons that this study proceeds along an econometric path.

There exist a number of studies that have ventured into some form of stochastic frontier analysis in a health-output-orientated context. The first and most well known are the studies by Evans et al.,¹⁵ presented in the 2000 World Health Report under the auspices of the WHO,¹⁶ which presents an assessment of the relative performance of national health care delivery systems across the 191 WHO member States. Using the production function framework, two health care outcomes were used as outputs (disability adjusted life expectancy, and a composite measure of achievement across five dimensions: health, health inequality, responsiveness-level, responsiveness-distribution, and fair-financing) whilst spending on health care and the level of education were treated as inputs. The study opted for a form of the ‘fixed effects’ model based on that proposed by Schmidt and Sickles¹⁷ and used a five-year panel dataset (1993-1997).

Though recognised for their innovation in, and evolution of, the measurement of inefficiency in health care delivery on a macro scale, the authors of the WHO study soon found themselves at the centre of critical attention. For example, Williams questioned the normative content of the study, calling it “dangerously opaque;”¹⁸ Gravelle and colleagues re-ran the analysis using different definitions of efficiency and different estimation methods and suggested the WHO’s ranking and efficiency

¹⁵ Evans D., A. Tandon, C. Murray, and J. Lauer “The Comparative Efficiency of National Health Systems in Producing Health: An Analysis of 191 Countries” (2000a); and Evans D., A. Tandon, C. Murray, and J. Lauer. “Measuring Overall Health System Performance for 191 Countries.” (2000b)

¹⁶ WHO. *The World Health Report 2000 - Health Systems: Improving Performance*. 2000

¹⁷ Schmidt, P., and R. Sickles. “Production Frontiers with Panel Data.” (1984)

¹⁸ Williams, A. “Science or Marketing at WHO? A Commentary on ‘World Health 2000.’” (2001) p. 99

scores lacked robustness;¹⁹ Hollingsworth and Wildman found fault in the authors' choice to use the fixed effects method and presented evidence to suggest more flexible panel data techniques would do the job better;²⁰ and Greene criticised the study's failure to accommodate a procedure for distinguishing real inefficiency from cross-country heterogeneity.²¹

To confront the deficiencies of the WHO study in a direct way, several of the aforementioned critics reanalysed the WHO data, many of which produced substantially differing results.²² Although the aims and the questions asked of the WHO study — and its descendants — are very different from those under investigation here, both are subject to similar methodological issues. Unlike these previous empirical works, however, the theory upon which this study is based has much more solid and clearly defined foundations. Deciding how output and input measures are determined and how possible forms of heterogeneity should enter the model here is, therefore, much less of an arbitrary, solely statistical, job.

With its theoretical foundations in hand, this study aims to assess the extent to which states comply with their obligation to fulfil the right to health by estimating a frontier production function by panel data stochastic frontier models using a longitudinal

¹⁹ Gravelle, H., R. Jacobs, A.M. Jones, and A. Street. "Comparing the Efficiency of National Health Systems: A Sensitivity Analysis of the WHO Approach." (2002)

²⁰ Hollingsworth, J., and B. Wildman. "The Efficiency of Health Production: Re-estimating the WHO Panel Data Using Parametric and Nonparametric Approaches to Provide Additional Information." (2003)

²¹ Greene, W.H. *Supra* n. 5, pp. 216-250; and Greene, W.H. "Distinguishing Between Heterogeneity and Inefficiency: Stochastic Frontier Analysis of the World Health Organization's Panel Data on National Health Care Systems." (2004)

²² For example, mean inefficiencies for the two output measures, DALE and COMP were reported in the Evans et al. study as 0.220 and 0.174, respectively. This is compared to Greene's truncation model, which produced estimates of 0.196 and 0.153 (Greene, W.H. *Ibid.*, p. 974) The study by Gravelle et al. presented inefficiency score correlations, between their estimates and those produced in the WHO study, ranging between 0.597 and 0.998 (Gravelle, H., R. Jacobs, A.M. Jones, and A. Street. *Supra* n. 19, p. 16.)

dataset made up of health, financial, and geographical data. To this end, it is assumed that each state operates in order to maximise attainment of the health basket and produces that health basket according to the following basic stochastic production function:²³

$$y_{it} = \alpha + X'_{it}\beta + v_{it} - u_i \quad (1)$$

$i = 1, \dots, N$ and $t = 1, \dots, T$ where N is the state, T is the year, y_{it} denotes the output (Health Basket Attainment) and \mathbf{X}'_{it} is the set of inputs (financial and human resources). Since the production function under consideration is stochastic, the error term has two components: \mathbf{v}_{it} is the random component, which represents the stochastic noise in the production function, and \mathbf{u}_i in this case represents the non-compliance component, which measures the distance between y_{it} and the frontier. Estimation of \mathbf{u}_i is the central focus of the analysis that follows.

With estimation of the basic stochastic model come several assumptions with respect to the combined error term, $\mathcal{E}_i = \mathbf{v}_{it} - \mathbf{u}_i$:

1. It is assumed that \mathbf{v}_{it} has a zero mean and is normally distributed.
2. \mathbf{u}_i is constrained to always be non-negative; $\mathbf{u}_i \geq 0$, and is assumed to be distributed independently of \mathbf{v}_{it} and of the regressors.
3. Since in this case the panel is short, \mathbf{u}_i is assumed to be time invariant.

The production function itself can take various functional forms. However, the most commonly used (and the only two to be mentioned here) are the Cobb-Douglas

²³ Aigner, D., K. Lovell, and P. Schmidt. "Formulation and Estimation of Stochastic Frontier Models." (1977); Meeusen, W., and J. van den Broeck. "Efficiency Estimation from Cobb-Douglas Production Functions with Composed Error." (1977)

(CD) and translog specifications. The CD production function is the simplest and has the advantage of being easy to estimate and interpret since it requires the estimation of few parameters. There is, however, a price to pay for such simplicity: it assumes elasticities of factor substitution are constant, which may be rather unrealistic particularly for this analysis since different states are likely to have different ‘production’ elasticities and the elasticity of substitution between inputs is likely to $\neq 1$. As a result, many analysts have opted for more general, flexible functional forms, which relax the restrictions on elasticities of substitution. In this regard, the translog production model is used most often. For the same reasons, this study will proceed using a non-separated version of the flexible translog form where, in line with the theoretical assumption that output is optimised, the production function has two properties: the marginal products of inputs are positive and the function is concave, i.e. as inputs increase output also increases but at a decreasing rate.²⁴

III. Stochastic frontier models

A. Fixed Effects model

The simplest panel data model in an efficiency measurement context is the fixed effects model, such as that proposed by Schmidt and Sickles,²⁵ and applied by Evans et al.²⁶ The time invariant fixed effects model is simple because it requires no assumption with respect to the distribution of \mathbf{u}_i nor does it require the assumption

²⁴ That is, the first order derivatives $\partial y / \partial \mathbf{x}_1$ and $\partial y / \partial \mathbf{x}_2$ are positive, and the second order derivatives $\partial^2 y / \partial \mathbf{x}_1^2$ and $\partial^2 y / \partial \mathbf{x}_2^2 = \beta_{11}$ and β_{12} are negative.

²⁵ Schmidt, P., and R. Sickles. *Supra* n. 17

²⁶ Evans D., A. Tandon, C. Murray, and J. Lauer. *Supra* n. 15

that the \mathbf{u}_i are uncorrelated with the \mathbf{v}_{it} and the other regressors. The \mathbf{u}_i values are treated as state-specific constants so that the basic model in (1) becomes

$$\begin{aligned} y_{it} &= (\alpha - u_i) + X'_{it}\beta + v_{it} \\ y_{it} &= \alpha_i + X'_{it}\beta + v_{it} \end{aligned} \quad (2)$$

where α represents the frontier intercept and the \mathbf{u}_i capture the degree of non-compliance. The fixed effects model can be estimated using the ‘within’ estimator, which corresponds to the Corrected Ordinary Least Squares (COLS) estimator where the parameters in (2) are estimated by OLS and the intercept is shifted up to the observation of the best performing state so that all other residuals are non-positive. Here, the state with the maximum α_i is assumed to be fully compliant (when $\mathbf{u}_i = 0$) and every other state-specific α_i is measured as a deviation from this benchmark. The differences in \mathbf{u}_i amongst states should, therefore, be interpreted as *relative* rather than *actual* non-compliance.

$$\begin{aligned} \hat{\alpha}_i &= \max (\hat{\alpha}_i) \\ \hat{u}_i &= \hat{\alpha} - \hat{\alpha}_i \end{aligned} \quad (3)$$

There is therefore an implicit overestimation of compliance in the fixed effects model; it is unlikely that the best performing state in the sample is fully compliant. This would not be problematic if all the analysis was seeking to do was to provide a ranking of all states with respect to compliance. But this is not all that is required. What is additionally sought is a more precise estimate of compliance. Since there is no way of testing the extent of compliance-overestimation, the revealed fixed effects estimates must be interpreted with this limitation in mind.

Nevertheless, since there is no requirement to make any assumptions with respect to \mathbf{u}_i , estimates of the \mathbf{u}_i and the parameters in the fixed effects model are consistent as

$N \rightarrow \infty$ and/or $T \rightarrow \infty$. At the same time however, because the fixed effects model creates no space for other time invariant variables to enter it, whatever the model may gain in robustness it may well lack in precision. Specifically, the fixed effects, that is the α_i and ultimately the u_i , will be capturing not only the variation in time invariant non-compliance across states but will also be capturing any time invariant heterogeneity. A problem emphasised by Greene and others.²⁷ The degree to which this problem is indeed problematic is dependent on the nature of the data under investigation: the degree of heterogeneity. In this analysis the data cover the whole world, encompassing quite different disease and population environments. Time invariant heterogeneity is, therefore, likely to play an influential role in a state's ability to 'produce' health and ignoring it in the modelling process will likely result in erroneous estimates of u_i . As a result, the fixed effects model can be treated as a base model against which others, that can accommodate time invariant heterogeneity, may be compared.

B. *Heterogeneous Random Effects model*

In the foregoing fixed effects model it was assumed that the u_i were fixed but were allowed to be correlated with the regressors and with the v_{it} . In the random effects model the alternate assumption is made: the u_i are randomly distributed with a constant mean and variance, but are assumed to be uncorrelated with the regressors and with the v_{it} . The v_{it} are assumed to be symmetric, have zero mean and constant variance. Pitt and Lee first applied the time invariant random effects model to a panel data version of stochastic frontier analysis.²⁸ By assuming that the u_i are random,

²⁷ Greene, W.H. "Reconsidering Heterogeneity in Panel Data Estimators of the Stochastic Frontier Model." (2005); Greene, W.H. *Supra* n. 21; Kumbhakar, S.C., and K. Lovell. *Stochastic Frontier Analysis*. 2000

²⁸ Pitt, M., and L. Lee. "The Measurement and Sources of Technical Inefficiency in the Indonesian Weaving Industry." (1981)

rather than fixed, the random effects model provides an entrance for time invariant covariates.

As noted above, with respect to measuring compliance across states worldwide, there are important variables, (\mathbf{z} 's) besides inputs, (\mathbf{x} 's) that could influence the position or the shape of the frontier and/or the efficiency distribution. There are, however, a number of ways in which this heterogeneity (the \mathbf{z} 's) can enter the model: i) as additional shift parameters in the production function; ii) in the conditional mean of the \mathbf{u}_i ; and/or iii) in the variance of either or both parts of the combined error term, σ^2_v and/or σ^2_u . Fortunately, this choice need not be dilemmatic. The previous chapters have provided a theoretical basis upon which to make the decision. In Chapter 3, it was argued that a state's ability to fulfil the right to health is not solely determined by the inputs it has at its disposal, those being financial and human resources. In addition, other environmental factors over which the state has little to no control may also facilitate or impede a state in its efforts to do so. These \mathbf{z} 's have already been identified as mortality density and population density and, since they are additional determinants of ability, they should appear as shift parameters in the production function. As such, the standard stochastic frontier model in (1) becomes

$$y_{it} = \alpha + X'_{it}\beta + z'_i\gamma + v_{it} - u_i \quad (4)$$

where \mathbf{z}'_i is the vector of time invariant environmental variables. These \mathbf{z} 's are state-specific and can shift the frontier by changing α or can change the shape of the frontier by influencing both α and β .

The random effects model can be estimated with estimators based on OLS, which require no assumption on the distribution of the \mathbf{u}_i , (although the \mathbf{u}_i are still required to be non-negative). However, if an assumption on the distribution is tenable, maximum likelihood estimation (MLE) is feasible, which makes estimation more precise since it can exploit distributional information which OLS estimators cannot. In this case, the distribution of the error components in (4) remains to be determined. Given the non-negativity of \mathbf{u}_i the choices are generally limited to half-normal, truncated-normal, exponential, or gamma. For simplicity, here the normal-half-normal distribution is applied to the model so that

1. $\mathbf{v}_{it} \sim \text{iid } N(0, \sigma^2_{\mathbf{v}})$ the random error term is assumed to be normally distributed
2. $\mathbf{u}_i \sim \text{iid } N^+(0, \sigma^2_{\mathbf{u}})$ the non-compliance term is non-negative and half-normal.²⁹

The next step is to obtain estimates of state-specific non-compliance. Because the process for estimating the parameters only produces an estimate of the combined error term, $\boldsymbol{\varepsilon}_i$, Jondrow et al.'s conditional mean estimator (JLMS)³⁰ is applied to separate non-compliance from the combined error term.

²⁹ Whilst some authors have noted that the assumption in ii. (that the mean value of \mathbf{u}_i is zero) is a significant restriction to the stochastic frontier analysis, it is used and treated here as a first-step upon which more sophisticated extensions can be built.

³⁰ Jondrow, J., K. Lovell, I. Materov, and P. Schmidt. "On the Estimation of Technical Inefficiency in the Stochastic Frontier Production Function Model." (1982)

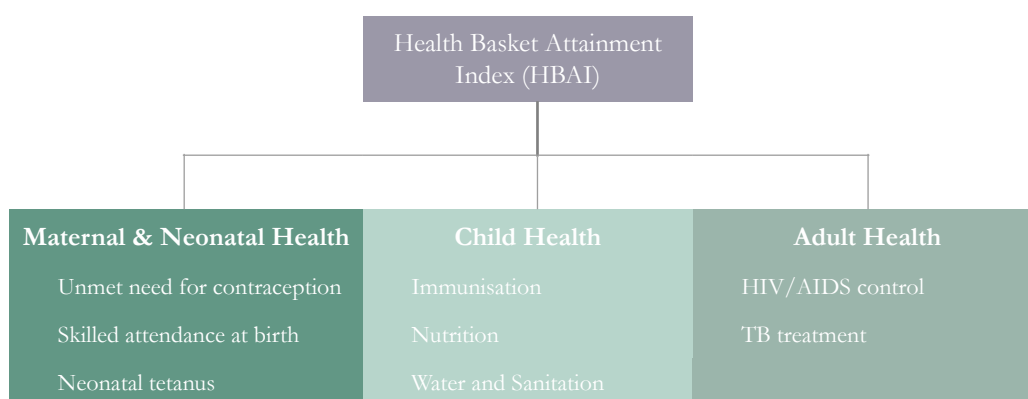
IV. The Health Basket Attainment Index

Before an assessment of the degree to which the health basket is affordable can be conducted, a measurable health basket has to be constructed. A qualitative description of the health basket has already been provided in Chapter 4. What is now required is a summing of the qualitative definition to produce a composite, quantitative index. This composite index captures the level of rights enjoyment with respect to the right to health and will, from this point onwards, be referred to as the Health Basket Attainment Index (HBAI). The multidimensional approach to calculating the HBAI is implemented following a four step sequence that consists of: i) determination of the dimensions and indicators; ii) normalisation of the indicators; iii) weighting of the indicators and dimensions; and iv) aggregation of the indicators into dimension indices and aggregation of the dimension indices into the HBAI.

A. Dimensions and indicators

The HBAI is three-dimensional and is characterised by (i) maternal and neonatal health; (ii) child health; and (iii) adult health. It is worth restating that although these three dimensions have been identified as reasonable candidates for inclusion in the index at the present time, this is not to say that the dimensions, or the indicators that flow from them, have to be static. On the contrary. The analytical process through which dimensions and indicators are identified should be continuously revisited so that as population health and responses to it evolve over time, the HBAI can be adjusted accordingly. Still, the HBAI methodology allows for measurement of each individual dimension as well as yielding an overall score.

Figure 5.3: The HBAI Framework



Methodologies for constructing indices broadly fall into two categories: input and output. Input indices measure the various components used or policy choices taken in order to achieve some outcome, on the assumption that these components and/or choices are believed or known to generate the outcome. Output indices only measure the outcome of interest. In the interest of measuring the three dimensions of the HBAI both methodologies are possible: an input index would measure skilled attendance at birth, child immunisation rates, and treatment of infectious diseases, for instance, whilst an output index would measure mortality rates. Both are potentially valid but the choice in this case is straightforward. Because the fundamental question at stake is the degree to which the state is fulfilling its responsibilities with respect to producing each individual's health, the index must be a measure of the types of policy choices the state has taken in order to precisely produce each individual's health. Mortality, on the other hand, can be affected by many factors other than those that are controllable by the state. For these reasons the indicators that flow from the dimensions in the HBAI are those of an input kind. The HBAI framework in Figure 5.3 reflects this.

B. Normalisation

When combining multiple measures into a composite index it could be the case that different indicators are measured in different units. Therefore a transformation, or normalisation, of the data is required in order to adjust for differences in ranges, directions, and variances. There are a number of established methods of normalisation used in the construction of composite indices,³¹ however since all indicators in the HBAI are reported in percentage terms with minimums of 0 and maximums of 100, scale invariance is avoided. Accordingly, all values can be easily transformed into normalised values between 0 and 1 using the min-max method so that:

$$I_{qc}^t = \frac{x_{qc}^t - \min_c(x_q^t)}{\max_c(x_q^t) - \min_c(x_q^t)} \quad (5)$$

where $\min_c(x_q^t)$ and $\max_c(x_q^t)$ are the lowest and highest accepted values of the specific indicator x across all countries c at time period t .

C. Weights

The subject of weightings seems to perennially fascinate critics in the domain of composite index making, whatever the application. In the end, regardless of which method is used, weights are essentially value judgements. But whilst it is obvious that weights should not be applied arbitrarily, there will always be disagreement on which less arbitrary strategy does the job best. Ideally, weights should either be assigned according to revealed individual or social preferences, according to the internal structure of the data, or be traced back to a sound normative argument. In the first instance, it may be the case that preferences, values and judgements can be elicited

³¹ See, e.g. OECD. *Handbook on Constructing Composite Indicators: Methodology and User Guide*. 2008, pp. 83-88

from qualitative analyses, (e.g. expert opinion, or public opinion) or in the second instance through some empirical exercise (e.g. factor analysis, principal components analysis, or cluster analysis). However, both of these methodological strands come with their own shortcomings,³² which may explain why so many composite indices that aim to measure some form of wellbeing revert to using equal weights.³³

The assigning of equal weights does not imply *no weight* but rather implicitly implies that each indicator carries equal worth. This can be problematic if, normatively, not all dimensions and indicators are of equal importance and should not, as a consequence, be equal drivers of the composite index. This is the standard criticism. In the case of the HBAI, however, equal weights can be justified on the simple basis that there is, as in the words of ul Haq, “no *a priori* rationale for giving a higher weight to one choice than to another.”³⁴ For this reason the HBAI will start from a position of equal weighting within and across dimensions. But it is just that: the first step in an “iterative public debate” about what the weights should be.³⁵

D. *Aggregation*

The HBAI is an aggregation of the three weighted-dimension indices using the geometric mean. The geometric, rather than arithmetic, mean is used for the same

³² Since preferences are likely to reflect local conditions, they may not necessarily translate from one place to another. Thus, for making international comparisons, it is likely that weights elicited from opinions will deliver inconsistent, contradictory results. And although factor analysis based on principal components reduces the risk of double counting (through grouping individual indicators according to their degree of correlation) the correction does not necessarily produce a measure that reveals the theoretical importance of the associated indicator.

³³ For example, the Human Development Index (HDI), the OECD Better Life Index, and the Multidimensional Poverty Index

³⁴ ul Haq, M. “Reflections on Human Development.” (1995) Quoted in Klugman, J., F. Rodriguez, and H.J. Choi. “The HDI 2010: New Controversies, Old Critiques.” (2011) p. 14

³⁵ “Since any choice of weights should be open to questioning and debating in public discussions, it is crucial that the judgements that are implicit in such weighting be made as clear and comprehensible as possible and thus be open to public scrutiny.” Anand, S., and A.K. Sen. “Concepts of Human Development and Poverty: A Multidimensional Perspective.” (1997) p. 6

reasons that prompted the change in aggregation method of the Human Development Index (HDI) in 2010: the additive form implies perfect substitution across indicators and dimensions,³⁶ which, as noted by many critics of the old HDI, is problematic on several counts.³⁷

Firstly, perfect substitutability implicitly assumes that the indicators within the composite index are “mutually preferentially independent.”³⁸ To take the indicators in the HBAI as an illustrative example, the arithmetic scheme would assume there are no synergies or conflicts between the indicators so would assess the marginal contribution of each indicator separately and add them together to generate a total value. The combined impact of multiple deprivations in, say, access to contraceptives, skilled attendance at birth, food, water, sanitation and access to ART, on health would be no greater than the (linear) sum of each of the parts. Secondly, perfect substitutability allows for the situation where poor performance in one dimension could be compensated for by a sufficiently good performance in another. For example, two countries, one with dimension scores of 0.1, 0.2, and 0.9 and another with dimension scores of 0.4, 0.4, and 0.4 would under the arithmetic model have the same overall HBAI score despite having hugely different domestic health situations. Both of these results seem antithetical to the task at stake. The three dimensions are not mutually exclusive parts, are deemed to be of equal importance, and the HBAI should represent a measure of all that the right to health guarantees.

³⁶ “There are constant marginal returns to improvements in each dimension, and therefore the marginal rate of substitution between dimensional achievements is also a constant.” Klugman, J., F. Rodriguez, and H.J. Choi. *Supra* n. 34, p. 12

³⁷ For example, Nathan, H.S.K., S. Mishra, and B.S. Reddy. “An Alternative Approach to Measure HDI” (2008); Desai, M.J. “Human Development: Concepts and Measurement.” (1991)

³⁸ Debreu, G. “Topological Methods in Cardinal Utility Theory.” In *Mathematical Methods in Social Sciences*, Arrow, K.J., S. Karlin, and P. Suppes (eds.) 1960, pp. 16-26.

A geometric scheme of aggregation can, in part, mitigate these limitations and does appear more appropriate. Specifically, at low values, the marginal rate of substitution using the geometric form is lower than that of the arithmetic form, which is constant. This means that countries with low scores in one dimension will require much higher improvements in another to improve the overall HBAI. Recalling the example above, under the geometric scheme, the first country's HBAI score would be much lower than that of the second country, (0.26 and 0.4, respectively) which already seems more intuitive. Moreover, the marginal utility from an improvement in one of the dimensions is much higher when the absolute HBAI score is low. For example, if both countries in the example were to make improvements in the first indicator by 0.1, the first would improve its HBAI score to 0.33 (28%) whilst the second would improve to 0.43 (8%). This would therefore provide low-performing states with an incentive to focus on improvements in those areas in which people are most acutely deprived and where the need is most urgent.

The HBAI will then involve a two-step aggregation using the geometric form:

$$(D_{Birth}^{1/3} \cdot D_{Child}^{1/3} \cdot D_{Adult}^{1/3}) \quad (6)$$

The first step is the geometric aggregation of the indicators within dimensions to produce three dimension indices, and the second step is the geometric aggregation of the three dimension indices into the total HBAI.

V. Data and descriptives

The data set used in the analysis is a panel data set observed for 186 countries, covering 157 of the 162 parties to the ICESCR and 186 of the 194 member

countries of the WHO.³⁹ Any country for which data on more than two input and/or environmental variables were missing is not included. The panel data are observed over a five-year time period (2007-2011), though South Sudan is observed only in one year (2011), resulting in an unbalanced panel of 926 observations. The variables in the data set can be allotted to three main groups: the output variable, which here represents enjoyment of the right to health; the input variables, which are the inputs required to guarantee the right to health; and the environmental variables, which are not inputs but nevertheless affect a state's ability to fulfil the right to health. The data are described in Table 5.1 below and all methods of calculation are summarised in Appendix B.1.

Table 5.1. Descriptive Statistics, compliance

Variable	Min	Max	Mean	SD
HBAI	23.93	98.96	77.24	15.72
GNIC	103.60	85596.00	11879.07	13271.79
HK	1.10	13.30	7.54	3.03
MORTDEN	1.00	5.00	2.71	1.31
POPDEN	1.77	7405.29	176.65	574.82
CC	-1.70	2.45	-0.07	0.99
GE	-2.16	2.26	-0.05	0.97
VA	-2.17	1.67	-0.09	0.99

A. Output variable, y_{it}

The composite index (**HBAI**) described above is used as the output. The HBAI should theoretically be made up of nine indicators.⁴⁰ However, given data limitations, not all of the nine indicators are included in the HBAI applied in the analysis that

³⁹ Parties to the ICESCR excluded from this analysis are Democratic People's Republic of Korea, Liechtenstein, Monaco, San Marino, and the State of Palestine. WHO members excluded are Cook Islands, Marshall Islands, Nauru, Niue, and Tuvalu. These countries have been excluded on the basis that data for more than two input and/or environmental variables were missing.

⁴⁰ Maternal Health: unmet need for contraception, skilled attendance at birth, and neonatal tetanus; Child Health: immunisation, nutrition, water and sanitation; Adult Health: HIV/AIDS control, and TB treatment.

follows. Instead, a reduced form of the HBAI is used, which includes the following four indicators:

- i. Births attended by skilled health personnel
- ii. Measles immunisation coverage amongst 1-year-olds
- iii. Population using improved sanitation facilities
- iv. Successful completion rate for new pulmonary smear-positive tuberculosis cases

where i. represents the maternal health dimension, ii. and iii. represent the child health dimension, and iv. represents the adult health dimension. Data for indicators i., ii., and iv. have been obtained from the WHO's Global Health Observatory, whilst data for indicator iii. has been obtained from the UN's Millennium Development Goals Indicators database. The HBAI variable enters the model in log form.

B. *Input variables, \mathbf{x}'_{it}*

Two variables are modelled as the inputs to the production process of health basket attainment: Gross National Income per capita (**GNIC**) and mean years of schooling in the adult population (**HK**). These indicators are, respectively, proxies for the level of financial and human resources available to the state; both of which are essential components of a state's ability to fulfil the right to health. GNIC measures GNI per capita converted to current international dollars using PPP rates. Data for GNIC have been obtained from the World Bank's International Comparison Program database. HK measures the average number of years of education received by people aged 25 and older. Data for HK have been obtained from the United Nations Development Programme. Both input variables also enter the production function in log form. Since the production function is of the non-separated translog form, the squares and cross product terms of the input variables are also included.

C. *Heterogeneity variables, \mathbf{z}'_i*

Two further variables are included in the model, which are indicators of cross-country heterogeneity: the density of the population (**POPDEN**) and the density of mortality in the population (**MORTDEN**). These two variables are added as additional conditions placed on a state's ability to fulfil the right to health. POPDEN is measured as the number of people per km² of land area and is included in the production function on the basis that for states where population density is low, attainment of the health basket may prove more difficult, precisely because of its low population density status. POPDEN data have been obtained from the World Bank and appears in the model in logs. MORTDEN is the WHO's measure of the burden of disease by region, which classifies countries by five mortality strata based on their respective child and adult mortality rates. The scale of the variable ranges between 1 (very low child and very low adult mortality) to 5 (high child mortality and very high adult mortality) and the proposition underwriting its inclusion in the production function is the notion that the higher the mortality density the more difficult attainment of the health basket would be given the input set; those inputs would have to spread more thinly. Since these variables of cross-county heterogeneity are time invariant, they are observed only for 2011.

D. *Willingness variables*

The hypothesis that the non-compliance residual, the \mathbf{u}_i , is unwillingness can be tested by correlating the \mathbf{u}_i terms with willingness variables. Willingness can be revealed through investigating “the traditions and institutions by which authority in a country is exercised.”⁴¹ This is how Kaufmann, Kraay, and Zoido-Lobaton, and later

⁴¹ Kaufmann, D., A. Kraay, and M. Mastruzzi. “Governance Matters VIII: Aggregate and Individual Governance Indicators 1996–2008.” (2009) p. 5

with Mastruzzi, define “governance.”⁴² The types of traditions and institutions they identify under their governance umbrella include: (i) the processes through which governments are selected and monitored; (ii) the capacity of the government to effectively formulate and implement sound policies; and (iii) the respect of citizens and the state for the institutions that govern economic and social interactions among them.⁴³ To that end, the variables that provide indicators of this willingness are: the perception of government effectiveness (**GE**), the perception of the extent to which citizens have a civil and political voice with which to hold governments to account (**VA**), and the perception of the extent to which corruption is controlled (**CC**). Data for GE, VA, and CC are obtained from the World Bank’s Worldwide Governance Indicators database and are all measured on a scale ranging between -2.5 and 2.5 with higher values corresponding to a greater degree of state willingness to mobilise its maximum available resources with respect to providing the level of the health basket deemed affordable. All willingness variables are observed only for 2011.

E. Estimates for missing values

The proportion of observations for which data are missing is summarised by year and variable in Appendix B.2. Proxies for these missing values have been obtained by computing estimated values from a regression of the respective values on all other observed data within the complete data set. For example, if a country is missing a value for the measurement of births attended by skilled health personnel, all other observed data are used as independent variables to predict a value by regressing them on births attended by skilled health personnel. Because the degree of missingness for the births attended by skilled health personnel variable, particularly, is very high, the

⁴² *Ibid*; Kaufmann, D., A. Kraay, and P. Zoido-Lobaton. “Aggregating Governance Indicators” (1999a); and Kaufmann, D., A. Kraay, and P. Zoido-Lobaton. “Governance Matters.” (1999b)

⁴³ Kaufmann, D., A. Kraay, and M. Mastruzzi. *Supra* n. 41

data set for imputing values for it has been extended to include observations spanning 2005-2012. The multiple imputation process has been carried out using the Amelia II program.⁴⁴ The analysis that follows is, therefore, based on data for all 186 countries.

VI. Results: signalling ability and willingness

The production model is specified as a full, non-separated, translog stochastic frontier model, which includes the squares and cross product terms of the input variables \mathbf{x}'_{it} . Table 5.2 presents the estimated production functions based on both the fixed effects model and the heterogeneous random effects model. Both models appear to provide reasonable and significant estimations of the parameters with both input coefficients, GNIC and HK, and their squares behaving as expected; that is the input coefficients both have positive signs and their squares are negative. This suggests that the results are consistent with the theoretical production function assumption of health basket optimisation provided in Section I. In both the fixed effects and heterogeneous random effects model, between the two inputs, the role of human resources dominates in explaining health basket attainment and does so to a very similar degree: (68% and 70%, respectively). The explanatory power of financial resources, however, differs significantly across the two model estimates and the specific coefficients appear somewhat counterintuitive.

⁴⁴ AMELIA II Version 1.6.4. See Honaker, J., G. King, and M. Blackwell. "AMELIA II: A Program for Missing Data." (2012) for software documentation.

Table 5.2. Estimated frontier production models

Variable	Fixed Effects Model	Heterogeneous Random Effects Model
CONSTANT		3.2396 (0.1262)*
GNIC	0.2955 (0.0524)*	0.0866 (0.0369)*
HK	0.6802 (0.1006)*	0.6974 (0.0653)*
HK ²	0.1091 (0.0508)*	-0.0264 (0.0313)
GNIC ²	-0.0091 (0.0087)	0.0090 (0.0064)
GNICHK	-0.0810 (0.0194)	-0.0672 (0.0124)
MORTDEN		-0.0174 (0.0036)
POPDEN		0.0189 (0.0022)*
s	0.1432	
R ²	0.6375	
λ		10.8505 (1.6799)*
σ		0.2365 (0.0002)*
σ_v		0.0217
σ_u		0.2355
<i>Analysis of estimated \mathbf{u}_i</i>		
Mean	0.4713	0.1625
SD	0.1589	0.1349
MIN	0.0000	0.0120
MAX	0.8158	0.6777
\mathbf{u}_i Correlation		0.6457
Rank Correlation		0.6704

Estimated standard errors in parentheses

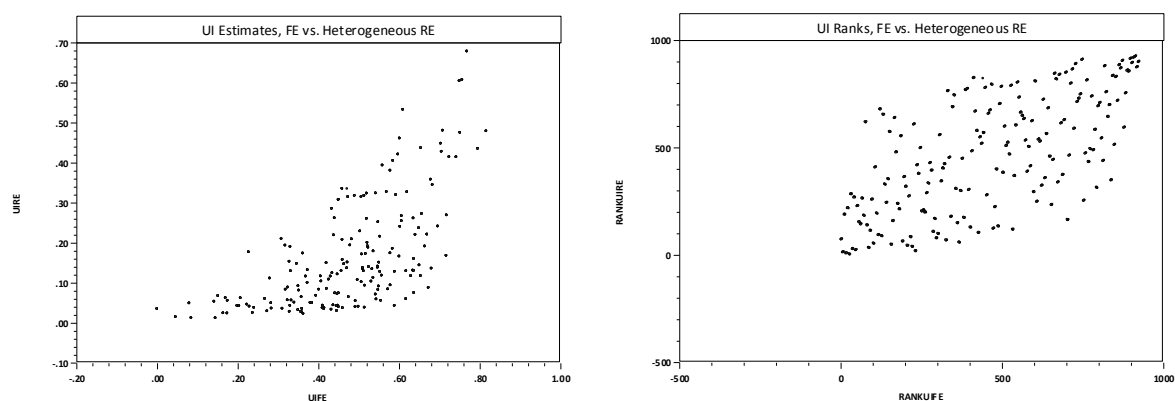
*Indicates significant at the 95% level

The covariates of cross-country heterogeneity, introduced into the heterogeneous random effects model, also have coefficients of the expected sign: the higher the mortality density the lower is health basket attainment, and the higher the population density the higher is health basket attainment. This result is reassuring. But the reason for including indicators of cross-country heterogeneity in the model is based on the hypothesis that a model that provides no method of accommodating them would capture the heterogeneity in its estimate of the \mathbf{u}_i and, as a consequence, the \mathbf{u}_i would be overestimated. In compliance terms, this would mean that the level and/or degree of non-compliance is much more widespread than it in point of fact is. A model, which allows for the inclusion of the \mathbf{z} 's, should therefore rid the \mathbf{u}_i of such

misplaced time invariant heterogeneity and the estimate of non-compliance should be smaller.

In both models, it is expected that non-compliance exists; \mathbf{u}_i is expected to be >0 . In the fixed effects model non-compliance is measured as deviation from the estimate given by the best performing state. In the heterogeneous random effects model it is measured by $\lambda = \sigma_{\mathbf{u}}/\sigma_{\mathbf{v}}$. If all states were fully compliant, $\sigma_{\mathbf{u}}$ would be zero and therefore λ would be zero. In the presence of non-compliance λ is expected to be significantly different from zero, indeed the larger the value of λ the greater is the degree of non-compliance. The results from the heterogeneous random effects model suggest that there is significant non-compliance across countries; the value for λ of 10.8505 is sizeable and is dominated by $\sigma_{\mathbf{u}}$, (0.2355/0.0217). But it is in the comparison between the two \mathbf{u}_i estimates where the more interesting result is found. Incorporating the \mathbf{z} 's in the model has had the expected result with respect to the mean and variation in \mathbf{u}_i : the heterogeneous random effects model estimate, which accommodates heterogeneity, is three times smaller than the fixed effects model estimate, which accords to the hypothesis articulated above. In the fixed effects model, time invariant heterogeneity does appear to be masquerading as non-compliance.

Figure 5.4: Non-compliance estimates and state rankings



The estimates and rankings of state non-compliance for the two models are plotted in Figure 5.4. The estimate correlation of 0.65 and rank correlation of 0.67 show that the two models produce markedly different results, which suggests that compliance is significantly affected by the density of mortality in the population and the density of the population itself. Between-model variation in both the estimates and the rankings appears to be greatest around the mid-point. With respect to the state rankings, there is some correspondence towards the upper end of the range. The full list of compliance scores and rankings is provided in Appendix B.3. Table 5.3 shows the between-model differences in state rankings between the top and bottom 10 performers. Model specification is evidently a critical issue.

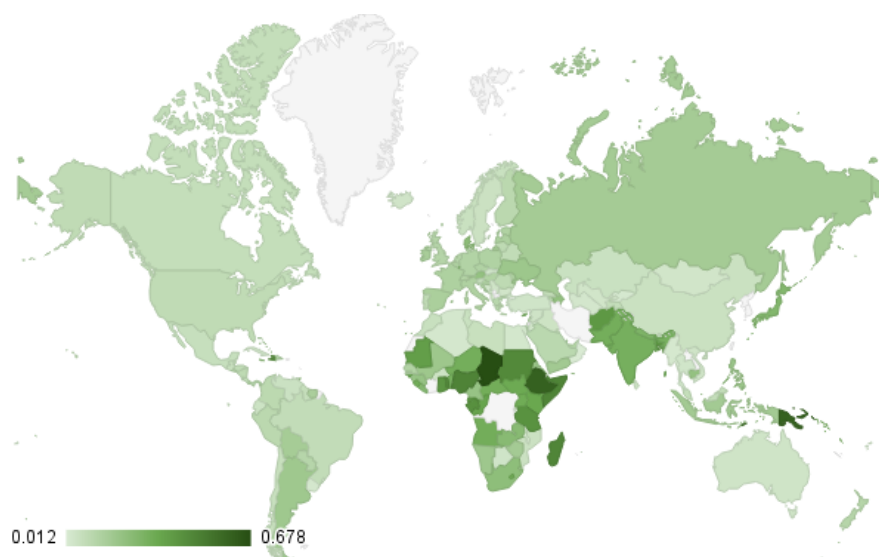
Table 5.3: Rankings for the top 10 and bottom 10 states with respect to compliance

FE	State	HRE	HRE	State	FE
1	Bhutan	15	1	Burundi	6
2	Gambia	3	2	Oman	4
3	Burkina Faso	38	3	Gambia	2
4	Oman	2	4	Kyrgyzstan	47
5	Cabo Verde	44	5	Myanmar	10
6	Burundi	1	6	Rwanda	8
7	Kuwait	57	7	Malawi	18
8	Rwanda	6	8	Algeria	45
9	Guatemala	54	9	Uruguay	42
10	Myanmar	5	10	Macedonia	32
177	Russia	119	177	Haiti	165
178	Japan	151	178	Togo	174
179	Ghana	173	179	Sudan	147
180	Bahrain	172	180	Madagascar	182
181	Papua New Guinea	184	181	Somalia	186
182	Madagascar	180	182	Nigeria	176
183	Ethiopia	185	183	Timor-Leste	151
184	Chad	186	184	Papua New Guinea	181
185	Gabon	176	185	Ethiopia	183
186	Somalia	181	186	Chad	184
76	UK	90			
41	Brazil	64			

As a matter of interpretation, it is worth remembering that the measure of non-compliance is proportional to the actual value of health basket attainment; it represents proportional potential for improvement. The rankings do not, therefore, reflect the *actual* level of enjoyment of the right to health in each state. It is in fact the case that some of the top performing states with respect to compliance still have relatively low actual health basket attainment levels. For example, using the heterogeneous random effects estimates, out of all 186 states Burundi is the best performing and is almost fully compliant with its obligation to fulfil the right to health, (98.8%). The level of the health basket being provided is as much as Burundi is able to provide given its maximum available resources. However, the actual level of

health basket attainment in Burundi is 0.753, which suggests there is still vast room for improvement with respect to overall population health.⁴⁵

Figure 5.5: Geographic distribution of non-compliance estimates (HRE)



Lower (higher) values represent better (worse) right to health compliance

This point is particularly important with respect to making cross-country comparisons. For example, at the bottom end of the rankings, the degree of non-compliance in Somalia and Nigeria is roughly the same: 52%. However, actual health basket attainment in Somalia is just 0.351 whereas it is 0.549 in Nigeria. This means that if both states were fully compliant with their obligation to fulfil the right to health, actual attainment of the health basket would increase to a still modest 0.519 in Somalia but would increase considerably to 0.812 in Nigeria: a level that is on par with current health basket enjoyment in Malta. Comparing Somalia with Nigeria on the u_i scores alone may therefore be misleading. Nigeria is perhaps performing qualitatively worse than Somalia, despite almost equivalence in the u_i scores.

⁴⁵ The maximum accepted value of the HBAI being 1.

Likewise, the same interpretation must be borne in mind at the top end of the rankings. Indeed the \mathbf{u}_i scores become less meaningful when actual health basket attainment is already close to 1.

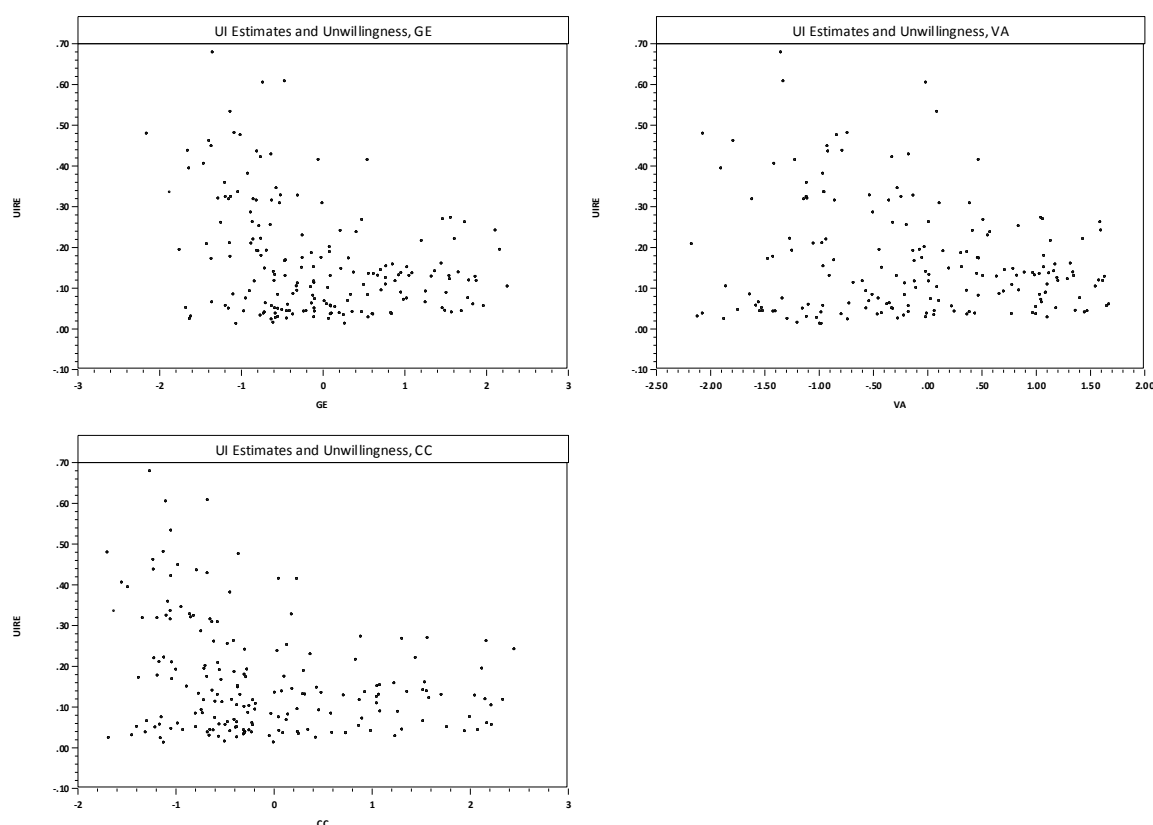
Non-compliance reflects the failure of some states to provide as much of the health basket as possible, given their available resources. Its measurement is crucial to gauging the degree of poor performance in fulfilling the right to health. But, with respect to the goals of this chapter, the measure of state-specific non-compliance is not enough. In order to test the hypothesis that non-compliance is essentially unwillingness on behalf of the state to mobilise its maximum available resources to fulfil the right to health, the sources of non-compliance must be investigated.

Table 5.4: Correspondence of compliance with willingness

	GE	VA	CC
Correlation with \mathbf{u}_i	-0.3275	-0.1867	-0.2796

Simple correlations between the non-compliance estimates and willingness variables reveal that the relationship is as expected: negative. That is, states with higher willingness values do report lower non-compliance values and, equivalently, non-compliance is associated with unwillingness. This is the case for all three willingness variables as reported in Table 5.4. Although the relationship is as expected in sign, the correspondence between the estimates is relatively weak, particularly for the indicator of voice and accountability. Figure 5.6 shows the correspondence graphically for all three willingness indicators.

Figure 5.6: Correspondence of compliance with willingness



This lack of strength in the correlation estimates suggests that either a) non-compliance is unwillingness but there may be more to unwillingness than these three indicators are able to capture; b) that non-compliance is made up of more than just unwillingness; or c) the estimate of non-compliance is not a good measure of real non-compliance. In order to shed light on this uncertainty, a number of further questions need to be investigated. In the first and second instances, more factors that may influence non-compliance need to be introduced into the analysis. For example, it may be the case that there are factors outside of the civil and political realm that account for unwillingness; disproportionate military spending could be one such factor. However, the paucity of available data on these indicators excludes them as viable inputs for a cross-country analysis such as the one presented here. As well, it may be the case that the State *is* willing to mobilise its maximum available resources

to fulfil the right to health but there may be demand factors that inhibit its fulfilment; cultural preferences towards traditional rather than clinical evidence-based health technologies, for instance. The uncertainty as to whether the indicators of non-compliance are good ones is more difficult to test; some of the limitations are known whilst others are not.

One admitted limitation of the indicators produced is that they do not capture or expose anything with regards to how health basket attainment is distributed. This is particularly problematic when the actual value of health basket attainment is below full attainment since there is no way of assessing whether the process for prioritising those in the community for whom the basket has been attained, over those for whom it has not, is non-discriminatory. Returning to the example of Burundi. Although the indicator has signalled almost full compliance, because the actual value of health basket attainment is below full attainment, hypothetically, it could be the case that the remaining 0.247, $(1 - 0.753)$ for whom the health basket has not been attained, have been excluded on the basis of race, ethnicity and/or gender. That being so, Burundi would not be compliant at all. Clearly, the indicator needs further in-country analysis to assess whether it is in fact a good measure of compliance.

VII. Conclusions

The study presented in this chapter is an innovative attempt to assess the extent to which each state is complying with its obligation to fulfil the right to health using stochastic frontier analysis. It builds upon previous residual-type methodologies, particularly the SERF Index, and in so doing adds methodological value by presenting a model that allows for the entry of multiple ability factors (other than

income) and for distinguishing real non-compliance from random statistical noise. It shows that by setting obligations to the production frontier, maximum expected health attainment at different levels of ability can be predicted and that compliance can be measured as the difference between the observed level of health attainment and that set by the obligation frontier. By virtue of its compliance-revealing property, the methodology gives strength to the notion that conditionality need not preclude obligations from being immediate.

The study used a panel data set, covering almost all of the world's countries, to estimate the production function using both a fixed effects and a random effects model. The results confirm what earlier researchers have found with respect to stochastic frontier analysis in a global context: that the fixed effects model, which does not allow the inclusion of time invariant heterogeneity indicators, captures heterogeneity in the non-compliance estimate and hence overestimates it. The study found that by comparing the basic fixed effects model with no heterogeneity to one with heterogeneity in the production function, the sample mean of estimated non-compliance falls from 0.47 to 0.16. Preferring the heterogeneous random effects model as its platform, the analysis has shown that in addition to financial and human resources, both mortality and population density have a significant impact on a state's ability to fulfil the right to health.

Several indicators of willingness were correlated with the estimates of non-compliance in an attempt to test the hypothesis that if compliance with the obligation to fulfil the right to health is a function of a state's ability and willingness to do so, then non-compliance is unwillingness. The results show that the general relationship between willingness and compliance is as expected (the more willing the state is, the lower is its non-compliance.) However, the correlation coefficients

suggest that the relationship is weaker than might have been anticipated, which throws into question either the indicators of willingness, the indicators of non-compliance, or both.

There are several limitations to the study and as a result the indicators of non-compliance that flow from it need to be handled with due care. The quality and availability of the data is the first and most obvious limitation. To take the indicators on successful treatment of TB as an example, despite these data being collected from the most reliable source, some of the indicators appear intuitively dubious. This is most likely due to the low detection rates of TB in some states, for instance detection was estimated in 2013 to be 82% in Brazil but just 57% in Burundi,⁴⁶ which may for some states be hiding the scale of the problem and overstating the estimate of success. Poor quality data and the complete lack of data for several elements of the fully formed HBAI are likely to have implications as to the fitness of the resultant estimates of non-compliance. This limitation is here mitigated, in part, because revealing the quantum of the estimates in and of themselves is not the main objective of the project. Rather, it is the methodology through which these indicators *can* be generated that matters. Another crucial weakness to the indicators is that they in no way reveal how health basket attainment is distributed within each state, which could potentially affect the substantive interpretation as to whether the state is compliant or non-compliant to a significant extent.

At this point, however, with data limitations with respect to alternative indicators of willingness and without a general measure of discrimination that can be applied systematically across countries, it is difficult to investigate these uncovered

⁴⁶ WHO. Global Health Observatory Data Repository, Case detection rate for all forms of Tuberculosis, 2013 estimates

uncertainties much further using quantitative analysis. They will instead be taken up in the qualitative case study that follows in Chapter 6.

6

Reviewing the signal

Introduction

Non-compliance reflects the failure by states to fulfil as much of the health basket as possible given their ability to do so. The measurement of non-compliance offered in the preceding chapter is crucial to gauging the degree of poor performance in fulfilling the right to health. The analysis has revealed that mean non-compliance across all countries in the sample is 0.1625. This means that, on average, performance in fulfilling the right to health as defined by the minimum health basket defended in Chapter 3 could potentially be improved by around 16 percent. However, this average is misleading. With a standard deviation of 0.1349, the variance in non-compliance across countries is significant. Indeed the room for improvement is almost 68 percent at its worst and just over 1 percent at its best. The sample average, then, does not provide a very meaningful idea of cross-country non-compliance. The meaning is instead at the country level. In order to really understand the existence and degree of non-compliance the analysis must therefore move forward on a per country basis.

Brazil is one of the 164 countries that recognises the right to health under international law,¹ and is one of the 56 countries that also recognises the right either

¹ UN International Covenant on Economic, Social and Cultural Rights, Status of Treaties as at 17/05/2015

constitutionally, in a bill of rights, or in another domestic statute.² Brazil has promoted access to health by establishing a unified health system, guided by a principle of universality. Brazil has also been an innovator in the enforcement of the right to health through recognising the right's justiciability; the "judicialisation of health"³ has spread throughout the country at every administrative level (federal, state and municipal). Whilst these claims suggest that the right to health is playing a prominent role in shaping the development of health policy and delivery in Brazil, at the same time, the country's health system in some corners remains 'in crisis.'⁴ Out of this disparity there arises an interesting case to be investigated: in Brazil, to what extent are commitments to the right to health in principle being matched by commitments to the right to health in practice? This is essentially the question being posed in this chapter.

The chapter has two main aims. The first is to investigate the degree to which the right to health is being fulfilled in Brazil and, specifically, to investigate whether the quantitative measure of non-compliance generated by this thesis's methodology does in fact make qualitative sense. The second is to investigate the implications of the measure with respect to how right to health claims have been dealt with in Brazil, and what light, if any, can the measure shed on the way in which the right has hitherto been interpreted by the Brazilian judiciary.

² Backman, G., et al. "Health Systems and the Right to Health: An Assessment of 194 countries." (2008)

³ Ferraz, O.L.M. "Brazil: Health Inequalities, Rights and Courts." In *Litigating Health Rights: Can Courts Bring More Justice to Health?* Yamin, A.E. and S. Gloppen (eds.) 2011a

⁴ The most discernible evidence of this being in the hundreds of thousands of Brazilians who took to the streets throughout the country in 2013 and 2014, demanding better public services and better standards of health care. Open Democracy "Brazil, protest and the World Cup." 13 June 2014

The rest of the chapter unfolds as follows: as a means of giving an account of the broader context within which the question of compliance is to be framed, Section I provides a brief sketch of the current health status of the Brazilian population and traces the way in which important health indicators have evolved over recent years. An account of how the right to health is protected under Brazilian law is then provided and a discussion on the interaction of the right to health with claims to health needs follows. It is revealed that the “judicialisation of health” in Brazil has been equivalent to granting individual entitlements to the satisfaction of all kinds of health needs, which on the surface may look like a right to health success. But the measure of non-compliance offered in the preceding chapter indicates that Brazil could be doing more with the resources it has available to the tune of 8 percent. So to test whether this indicator is in fact a good indication of non-compliance, three further questions need to be investigated: has the Brazilian government been unwilling to use its available resources to fulfil the right to health; has health failed due to factors outside of the state’s control; and/or has the right to health been fulfilled fairly, according to human rights principles? These three questions form the basis of Section II, which argues that the signal of 8 percent non-compliance in Brazil is reasonably accurate, if not underestimated. In light of Brazil’s non-compliance, Section III discusses what is the court’s responsibility in enforcing the right to health. It discusses the limitations of the courts individualised approach that it has up to this point adopted and suggests that structural-type remedies may be more successful in addressing health needs where they are most acute. This, however, requires considerable political buy-in, which may be outside the bounds of possibility given the current Brazilian political context.

I. The case of Brazil

Brazil is the largest country in South America and has the seventh largest economy in the world. It has a multiethnic population of over 200 million; yet around 32 million people still live below the national poverty line.⁵ The country's poorest 20 percent earn around 3.4 percent of Brazil's income, whilst the richest 10 percent earn 41.7 percent, making Brazil one of the most unequal countries in the world with respect to income inequality.⁶ Over the past two decades Brazil has seen rapid improvements in population health with, for example, an increase in life expectancy at birth from 63 years in 1990 to 74 years in 2013, an almost halving of the maternal mortality rate from 120 per 1,000 in 1990 to 69 per 1,000 in 2013 and an even more impressive improvement in the child mortality rate, which has fallen by more than three quarters from 62 per 1,000 in 1990 to 14 per 1,000 in 2013. Changes in the nature of mortality are also suggestive of general improvements in population health, with deaths from acute infectious diseases giving way to those from chronic noncommunicable diseases as the main contributors to mortality.⁷

These statistics are indeed remarkable. However, they conceal important aspects of the Brazilian health picture. There remain vast disparities in access to health care and in health outcomes within Brazil; like income, health is not distributed equally. To take infant mortality as an example, whilst the average number of infant deaths for every 1,000 born was around 13 for Brazil in total in 2013, the number creeps up to 20 for every 1,000 in the state of Amapá in the Northern Region and is as low as 10 for every 1,000 in the state of Santa Catarina in the Southern Region; twice as

⁵ UN Statistics Division. Millennium Development Goals Database, 2012 estimates

⁶ World Bank. World Development Indicators, 2012 estimates

⁷ WHO. Global Health Observatory Data Repository

few. Within these averages, there are even greater disparities at the municipality level. The infant mortality rate is as low as 2 in every 1,000 in some Southern municipalities, such as Jaraguá do Sul in Santa Catarina and Birigüi in the state of São Paulo and climbs to more than 50 in every 1,000 in some Northern and Northeastern municipalities, such as Caracaraí in Roraima and Mulungu do Morro in Bahia.⁸ This same north-south disparity is revealed across numerous health indicators. Health inequity is therefore the backdrop against which the right to health in Brazil must be framed.

Health as a fundamental human right in Brazil is recognised in both international law, for example through Brazil's ratification without reservation of the International Covenant of Economic and Social Rights (ICESCR), and domestically in Article 6 and Articles 196 to 200 of the 1988 Brazilian Federal Constitution:

Education, health, nutrition, labor, housing, leisure, security, social security, protection of motherhood and childhood and assistance to the destitute, are social rights, as set forth in this Constitution.⁹

Health is the right of all and the duty of the state and shall be guaranteed by social and economic policies aimed at reducing the risk of illness and other maladies and by universal and equal access to all activities and services for its promotion, protection and recovery.¹⁰

The conception of health as it is constitutionalised is broad and the measures required for its protection and promotion go beyond the provision of health care. Nevertheless, for the first 10 years of its inception, the Constitution, and the

⁸ Brazil Ministry of Health Information System on Mortality (Ministério da Saúde Sistema de Informações sobre Mortalidade) 2014 estimates

⁹ Constitution of Brazil, Article 6 (Constituição da República Federativa do Brasil, 1988)

¹⁰ *Ibid*, Article 196

provisions therein, was seen as giving rise more to “programmatic norms”¹¹ than to individualised rights claims and the judiciary unfailingly interpreted it deferentially. It was widely perceived that giving content to its provisions was not the job of the judiciary but rather that of the political and technical branches of the state; a presupposition that resembles the approach taken by the Constitutional Court of South Africa and by the Costa Rican Sala Constitucional (in its early guise), already discussed in Chapter 3. The following passage from the court of appeals in Rio de Janeiro is an illustration of this deference with respect to the right to health:

Given scarcity of resources, the State cannot privilege one patient over hundreds of others, also needy, who accept the limitations of the state machinery. The Judiciary cannot, to protect the litigant, intrude in the public administration’s policy aimed at attending to the population.¹²

However, since the mid to late 1990s, the judiciary’s position of passivity in giving direct orders has changed. Radically. Since the enactment of a 1996 law, which imposed upon the state an obligation to provide state-funded access to medicines to all patients infected with HIV or suffering from AIDS, patients left with unfulfilled prescriptions turned to the courts for redress. It was in the decisions made with respect to these cases that the judiciary’s approach of deference changed to one of assertiveness.

Positive orders, which granted access to prescribed medicines, first began to permeate the lower courts of several southern states but soon became *de rigueur* throughout Brazil. And, the rationale for the positive order given by one judge in 1997 in a case that reached the Supremo Tribunal Federal (STF), the highest court in the Brazilian judicial system for dealing with constitutional rights, has since

¹¹ Trial No. 1998.004.00220, Relator: Des. Antonio Lindberg Montenegro, 17.12.1998. Quoted in Ferraz, O.L.M. “Harming the Poor Through Social Rights Litigation: Lessons from Brazil.” (2011b) p. 1654

¹² Ap. Civ. No. 1994.001.01749, Relator: Des. Carpena Amorim, 20.10.1994. Quoted in *Ibid*

become according to Ferraz “a kind of de facto binding precedent ... upon which most of the subsequent successful cases have been based.”¹³ He quotes the decision as follows:

The right to health — as well as a fundamental right of all individuals — represents an inextricable constitutional consequence of the right to life. ... The interpretation of a programmatic norm cannot transform it into a toothless constitutional promise ... Between protecting the inviolability of the right to life, an inalienable fundamental right guaranteed by the Constitution itself (art. 5º, caput) or ensuring, against this fundamental prerogative, a financial and secondary interest of the state, I believe — once this dilemma is established — ethical and legal reasons impose on the judge one single and possible option: unswerving respect for life.¹⁴

From the jurisprudence that has followed, it is clear that this decision marked a significant turning point in the history of the right to health and its interpretation in Brazil. Since 1997, judges and courts have consistently followed suit, interpreting the right to health as an expansive individual entitlement to the satisfaction of all kinds of health needs, not only those related to HIV/AIDS.

The nature of right to health cases being presented in the Brazilian courts has overwhelmingly taken an access to medicines-type shape and the number of such cases being brought has grown exponentially. Between 2003 and 2011, the volume of health litigation at the Federal level in Brazil grew from 387 to 12,811 cases.¹⁵ Importantly, these figures are likely to reveal only the tip of the iceberg. Given that the Brazilian constitution somewhat blurs the lines of accountability between the different units responsible for delivering health services, (that is federal, state, and municipal) it is possible for an individual who believes that their right to health has

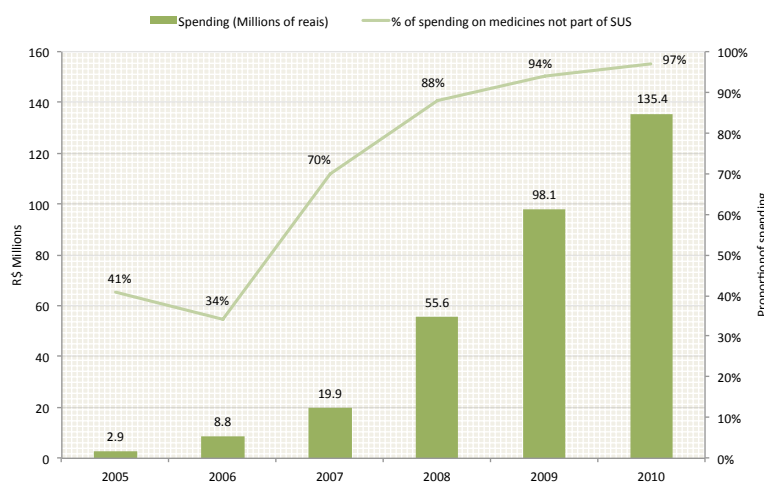
¹³ Ferraz, O.L.M. “The Right to Health in the Courts of Brazil: Worsening Health Inequities?” (2009b)

¹⁴ *Ibid.* Quoting Justice Celso Mello, RE 271.286 AgR- RS (2000), Relator Min. Celso de Mello. (translation)

¹⁵ Ferraz, O.L.M. *Supra* n. 3

been violated to bring a claim against any of these three units, or indeed all of them at once. Spending on pharmaceuticals by Brazil's Unified Health System (the Sistema Único de Saúde, SUS) has been increasing every year since 1998; expenditure on medicines between 2003 and 2007 “for exceptional use,” increased by 252%.¹⁶ As reported in figure 6.1, considering only spending by the Ministry of Health to meet legal demands, costs have increased from R\$2.9 million to R\$135.4 million during the five-year period from 2005 to 2010 and approximately 97% of these expenditures are accounted for by medicines that do not form part of the SUS list of official medicines. The fact that there are 26 States and more than 5,500 Municipalities in Brazil means that the current total number of right to health cases across all three delivery units is likely to stretch into the hundreds of thousands with the associated costs in Reais spiralling into the hundreds of millions.

Figure 6.1: Ministry of Health spending on medicines to meet legal demands, Brazil 2005-2010



Source: Políticas Sociais - acompanhamento e análise nº 20, 2012, p. 102

¹⁶ Carias, C., F. Vieira, C. Giordano, and P. Zucchi. “Medicamentos de Dispensação Excepcional: Histórico e Gastos do Ministério da Saúde do Brasil.” (2011)

So what does this ‘judicialisation of health’ suggest with respect to Brazil’s compliance with its obligation to fulfil the right to health? It may appear that the Brazilian model is a right to health success story. The many successful cases have required that the government expand the provision of health goods and services, delivering them to many more people, which moves Brazil further towards the ideal of universal access. But to make a judgement on the question of compliance we need to look at the profile of claims with respect to the right to health as it has so far been defined in this thesis. Because individuals are claiming their right to health in courts and are more often than not having successful outcomes does not necessarily mean that Brazil is compliant with its obligation to fulfil the right to health. To shed more light on this question the measurement and discussion provided in the previous chapter should first be revisited.

II. Compliance or non-compliance?

The measure of compliance calculated in the previous chapter signals that Brazil is not compliant with its obligation to fulfil the right to health. It is falling short of the expected level of health, given its maximum available resources, to the tune of an estimated 8 percent. However, Brazil’s lack of success in fulfilling the right to health is not consistent across its different dimensions. For instance, Brazil has had more success meeting maternal health needs and in immunising children against vaccine-preventable diseases than it has had meeting access to sanitation needs and in successfully treating TB.

Sanitation remains a challenging issue in Brazil. Despite the fact that the law requires the government to provide universal access to sanitation services,¹⁷ almost half of municipalities do not have sewage collection services (44.85%) and there is no sewage treatment system in almost three-quarters of municipalities (71.48%). Moreover, even in those municipalities that have access to sanitation services, the services are generally less accessible to the poorest communities.¹⁸ Brazil also has one of the world's highest rates of TB incidence. Although deaths from the disease have been declining over the past twenty years, the average TB mortality rate in 2013 remains comparatively high and the average treatment success rate is just 72 percent.¹⁹ But, again, treatment failure and subsequent deaths from TB are not evenly distributed throughout Brazil. Vulnerable groups such as indigenous people, prisoners, and the homeless face an increased risk of 4 times, 25 times and 67 times, respectively.²⁰

Still, as has previously been discussed, the non-compliance indicator is just that: it is a signal that Brazil could be doing more. To be confident in drawing firmer conclusions that Brazil is falling short of its obligations, the three tests specified in the previous chapter need also to be investigated. The first of these tests is

¹⁷ Article 23(IX) of the Brazilian Constitution provides that all levels of government have the responsibility to improve sanitation conditions, and Article 30(V) provides that municipalities are responsible for delivering sanitation services on a universal basis.

¹⁸ Brazil Atlas of Sanitation (Instituto Brasileiro de Geografia e Estatística, IBGE, “Atlas do Saneamento.”) See also, Pan American Health Organisation. *Water and Sanitation: Evidence for Public Policies focussed on Human Rights and Human Results*. 2011. which claims that the largest factor contributing to inequity in access to water and sanitation is poverty, with the poorest sector of the population reporting to spend twice as much on these services, as a proportion of household income, as the richest sector, p. 16. (As an aside, this figure is likely to be even greater still in real terms, particularly for rural communities, since the estimates do not account for the opportunity costs of time spent collecting water from sources and disposing of waste to outlets that are both often of poor quality and distant from the home.)

¹⁹ WHO. Tuberculosis Country Profiles, Brazil

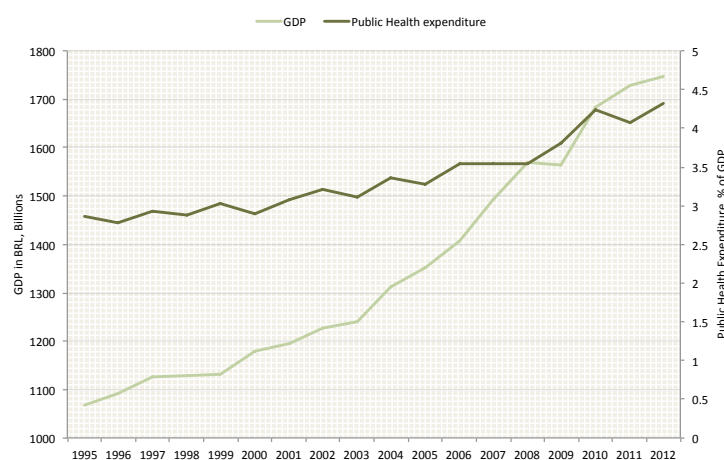
²⁰ Brazil Ministry of Health Notifiable Diseases Information System (Ministério da Saúde Sistema de Informação de Agravos de Notificação, SINAN)

concerned with investigating the association between the non-compliance score and the degree to which the Brazilian government appears unwilling to use its available resources for fulfilling the right to health. The second test is concerned with an assessment as to whether the government has in fact been willing to fulfil the right to health but, due to factors outside of its control, health has failed nonetheless. The third and final test is concerned with an assessment as to whether the indicator is in fact a good measure of compliance, specifically, with an assessment of how attainment of the health basket is distributed. The remainder of this section will be focussed on a discussion of these three tests with respect to the dimensions of health that leave most room for improvement: access to sanitation and treatment for TB.

A. Sources of unwillingness

Whilst GDP in Brazil has grown dramatically over the past 20 years, in both absolute and per capita terms, the share of government health spending in gross domestic product (GDP) has grown much more slowly (figure 6.2). From a level of around 2.8 percent in the mid-1990s, it oscillated at the lower levels for more than a decade, only making any notable increase in 2009, to around 4 percent. With respect to the indicators of willingness identified in the previous chapter, (government effectiveness, voice and accountability, and control of corruption) Brazil performs comparatively poorly: ranking 98th, 129th and 126th across all countries, respectively. From these results alone, the hypothesis that Brazil has been unwilling to use its available resources to fulfil the right to health appears rather plausible.

Figure 6.2: Growth in GDP and growth in public health expenditure as a proportion of GDP, Brazil 1995-2012



Source: World Bank (2014) *World Development Indicators*

Government spending on health in Brazil is low by international standards.²¹ So what does the Brazilian government spend its budget on? In 2014, the Brazilian Federal health budget was R\$94.1 billion, the education budget R\$79.7 billion, the defence budget R\$70.9 billion, and the social security budget R\$ 392.2 billion.²² Meanwhile, according to the Ministry of Sports, the total cost to host the FIFA World Cup in the same year in Brazil was an estimated R\$25.6 billion:²³ more than a quarter of the health budget and almost a third of the education budget. These figures underpin the plight of the millions of protesters that took to the streets throughout Brazil in 2014, all asking, “Copa pra quem?” (“Who is this Cup for?”) Demonstrators demanded that public services be a priority, not spending on expensive stadiums, which has gone hand in hand with corruption, police brutality

²¹ Compared to Argentina, Columbia, Cuba, Paraguay, Uruguay, and the US, for example. World Bank. *World Development Indicators*

²² Brazil Federal Budget Senado Federal Execução Orçamentária para o Setor

²³ Forbes. “Bringing FIFA To Brazil.” 06 November 2014. This cost includes the costs of building new stadiums and the direct costs involved in hosting the event as well as infrastructure costs for public transportation.

and evictions. This suggests that the government hasn't implemented those policies that are most socially desired.

But it is not only the shortfall in the quantity of public financial resources needed for the fulfilment of the right to health that may be the problem; it may also be the quality of how those resources are spent. In a bid to increase accountability, coordinate health services with other public services, and tailor the health system to local needs, the delivery of most primary health services and at least half of hospital care in Brazil is the responsibility of municipalities. However, it is precisely this decentralisation that raises questions about firstly, how capable municipal governments are in performing their designated functions and secondly, whether some of them are in fact too small to make use of the economies of scale and scope that are potentially available in managing the health system. Measuring performance on a scale of 0 to 1, a study undertaken by the National Council of State Secretaries of Health (Conselho Nacional de Secretários de Saúde, CONASS) to assess the government's infrastructure, institutional capacity, processes, and outcomes in performing its essential functions found that, at the state level, mean overall performance was just 0.55, and varied from 0.43 to 0.63.²⁴ Though the study only covered five states, and may not therefore represent the Brazilian picture fully, the results are at least indicative of a lack of government effectiveness in the delivery of health services.

Government effectiveness may be weak for the delivery of health services generally but for specific functions it may be even weaker. If government effectiveness captures the quality of public services, the quality of policy formulation and

²⁴ Brasil. Conselho Nacional de Secretários de Saúde. "A Gestão da Saúde Nos Estados: Avaliação e Fortalecimento das Funções Essenciais." (2007)

implementation, and the credibility of the government's commitment to such policies, the provision of sanitation services in Brazil provides an exemplar of government ineffectiveness. With so many claims to sanitation services persistently going unmet, it is inevitable that some will have made their way to the Brazilian courts. So, by tracing these claims from start to finish it is possible to gauge the degree of such ineffectiveness. One recent study has attempted to do precisely that.

The study reviewed sanitation-related cases across 32 Brazilian courts between January 2003 and March 2013. The review identified 258 cases that had resulted in decisions that had adjudicated requests for the provision of sanitation services made against the government, public agencies, or publicly-controlled companies responsible for providing them. As an aside, it is worth mentioning that the number of claims arriving in the courts must represent only a tiny proportion of the unmet need given the scale of the problem. Nevertheless, in 76 percent of these cases, the court favoured the plaintiffs' requests, granting sanitation services. Crucially, however, the records show that just 4 percent of the courts' decisions, which granted the requests for sanitation services, were fully implemented.²⁵

It appears, then, in spite of the Brazilian courts' commitment to ordering the state to provide sanitation services, a court order does not necessarily result in sanitation services being provided. And, it seems that the most plausible explanation as to why this is the case boils down to a political unwillingness to mobilise resources for health generally and for sanitation services specifically. In 2010, just R\$1.12 billion was spent on sanitation, which accounts for a mere 1.66 percent of the health

²⁵ Paula de Barcellos, A. "Sanitation Rights, Public Law Litigation, and Inequality: A Case Study from Brazil." (2014)

budget.²⁶ But exacerbating this problem of scarcity is the backdrop political economy of budgeting for health in Brazil. Generating more resources for sanitation through the tax base is likely to be problematic since those that are most affected are also generally the most politically marginalised.²⁷ A comment made by the Chief Justice of the Brazilian Superior Court of Justice in 2011 captures the essence of this point: “In a country where there are no sewage systems because it is an invisible service that, therefore, does not pay with votes, we cannot lose the opportunity of avoiding damage to public health and environment.”²⁸ Sanitation services do not pay with votes. There is very little immediate political incentive to provide them.

B. Factors outside of the state's control

Expanding access to health services obviously requires good quality financial resources. But, even in the case that financial resources are of sufficient quantity and quality, expanding access may also require the removal of various other constraints. Amongst these will be constraints on demand, i.e. factors that dissuade or prevent people from taking up the services that have been provided by the state, and constraints on delivery, i.e. factors that limit the capacity of the health system to supply the appropriate level of service. An unravelling of these factors is an important aspect of any assessment of compliance because if these demand and delivery factors are large, the measure of non-compliance could be significantly overestimated. The state may be doing all it can but, for factors outside of its control, health fails anyway.

²⁶ IPEA. “Políticas Sociais: Acompanhamento e Análise, N. 20.” (2012) p. 105

²⁷ Even amongst the access-to-sanitation cases that did reach the courts, the majority affected areas within cities with the same or higher Human Development Index than the regional average. Paula de Barcellos, A. *Supra* n. 25

²⁸ SETEP construções S.A. v. Companhia Catarinense de Águas e Saneamento – CASAN (Brazilian Superior Court of Justice, AgReg na SS 2418, March 16, 2011). Quoted in *Ibid*

The first constraints to be considered are those at the individual and community level. The uptake of effective services offered through the public health system can be constrained by a number of factors on the demand side. This could be a particular problem with respect to the treatment for TB in Brazil. Although TB has had an effective treatment for decades, it remains as one of the world's deadliest communicable diseases and one of its major health problems. In 2014, Brazil has once again been categorised as one of the 22 countries with high burden of the disease worldwide.²⁹ The high incidence of the disease in Brazil could be due, at least in part, to the obstacles to eradication posed by low awareness, stigma, and the demographic profile of TB patients.

Many Brazilians, including those most vulnerable to TB infection, are unaware the disease is still a problem in Brazil. This lack of awareness also stretches to such basic issues as how TB is spread and the fact that the disease is curable.³⁰ Even many public health workers, despite their greater knowledge about TB, have been shown to make basic conceptual mistakes when asked about vulnerability when sharing objects.³¹ Stigmatisation, including self-stigmatisation, is also common. People who have been infected with TB often feel ashamed of their TB status and actively seek to avoid being identified as a TB patient.³² They often choose to receive treatment outside of their own neighbourhoods, which increases the

²⁹ WHO. *Global Tuberculosis Report*. 2013c

³⁰ In one study on the knowledge of the Brazilian population about TB, only 34% of the respondents reported that they had knowledge of the disease, were acquainted with someone who had or had previously had the disease. Boaretto, M.C. et al. "The Knowledge of the Brazilian Population on Tuberculosis." (2010)

³¹ Maciel, E.L.N., et al. "O Agente Comunitário de Saúde no Controle da Tuberculose: Conhecimentos e Percepções." (2008); Souza, N.J., and M.R. Bertolozzi. "A Vulnerabilidade à Tuberculose em Trabalhadores de Enfermagem em um Hospital Universitário." (2007)

³² Dias, A.A.L. et al. "Life Experiences of Patients Who Have Completed Tuberculosis Treatment: A Qualitative Investigation in Southeast Brazil." (2013)

likelihood of treatment dropout.³³ Treatment dropout is also a major challenge amongst those groups most vulnerable to TB in Brazil. For example, young males, drug and alcohol users, patients co-infected with TB and HIV/AIDS, prisoners, and homeless people.³⁴ Low awareness and stigmatisation, particularly within these vulnerable groups, may therefore be a barrier to the uptake of services even when they are being provided. Although it could reasonably be argued that in acknowledging this fact the government should be doing more to address the social foundations of these barriers, prioritising the mitigation of factors that contribute to increased vulnerability, and promoting actions that facilitate treatment adherence, these issues are less tractable, at least in the short-term.

The second level constraint is at the health service delivery level. The most important of which being staff. Health workers have to be based where they are needed in the quantities they are needed. They also have to be trained appropriately. Brazil is faced with two specific challenges in this regard: the first involves the appropriate training of health workers, particularly for some specialities, and the second involves the attraction and retention of health workers in remote areas.

Though Brazil, on average, has 1.8 doctors for every 1,000 inhabitants, the regional variation in the doctor-to-inhabitant ratio is wide. For instance, there are more than 3 doctors for every 1,000 inhabitants in the state of Rio de Janeiro whilst there are less than one or very close to one doctor per 1,000 inhabitants in most of the Northern and Northeastern states.³⁵ One index on doctor shortages in Brazil estimated that there were 1,304 municipalities experiencing such a shortage in

³³ Santos-Filho, E.T. "TB Policy in Brazil: A Civil Society Perspective." (2006) p. 45

³⁴ Pinto de Oliveira, G. et al. "Tuberculosis in Brazil: Last Ten Years Analysis, 2001-2010." (2013)

³⁵ Organização Pan-Americana da Saúde. *Indicadores Básicos para a Saúde no Brasil: Conceitos e Aplicações*. 2008

2010.³⁶ The scarcity problem not only exists in the number of health workers available but also in the type of skills available. There has traditionally been an over-focus on the scale-up of one professional group (doctors), at the expense of family health and primary care, which are the areas where shortages tend more often to exist. The Ministry of Health has put measures into effect in an attempt to deal with these acute regional and skill shortages. Programmes such as the Programme for Valorisation of Basic Healthcare Professionals (Programa de Valorização do Profissional da Atenção Básica, PROVAB), the “More Doctors” programme, and the Family Health Strategy have had some initial success in attracting health workers to underserved areas. However, these measures have proven unsustainable for the retention of workers in the longer term. Increasing the supply of appropriately trained workers to areas where they are needed is vital to relaxing the delivery constraint. The Brazilian government is more than aware of this. But it appears there is an inherent mismatch between health service need and health workers’ preferences and expectations. Again, this is an issue that has proven less amenable to control and therefore very difficult to overcome.

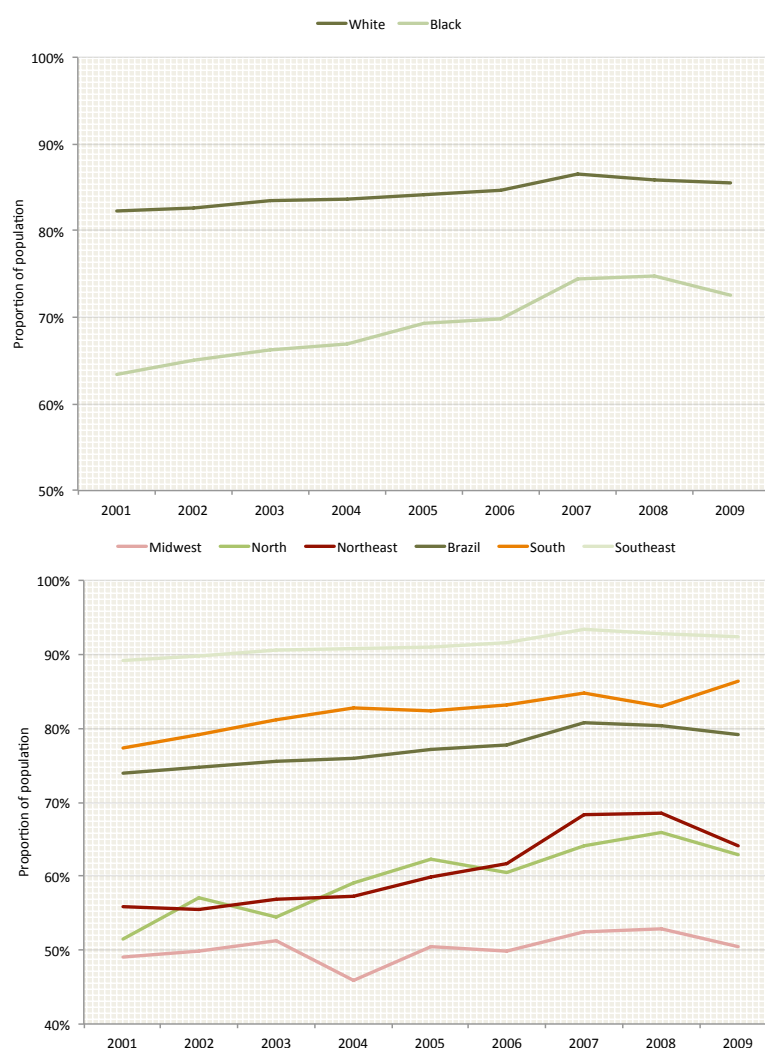
C. Distribution in health basket attainment

Non-discrimination is a fundamental human rights principle and one that should form part of any assessment of the the degree to which the right to health has been fulfilled. In terms of assessing the extent to which the non-compliance indicator is a good measure of actual non-compliance, it is necessary to go beneath the aggregate and investigate firstly, for whom the health basket has not been attained, and secondly, whether there is any systematic discrimination in this non-attainment. Because economic, social and political inequalities tend to manifest along racial and

³⁶ Dal Poz, M.R. “The Health Workforce Crisis.” (2013)

social status lines in Brazil, the assessment of who attains the health basket will be framed with respect to racial and class discrimination.

Figure 6.3: Proportion of the Brazilian population served by an adequate sanitation system by race and region, 2001-2009



Source: IBGE (2010) The National Survey of Households (Pnad)

Brazil's long historical experience with slavery has doubtlessly shaped the current geographical distribution of populations of different races across the country. And, the pervasiveness of slavery, the lateness of its abolition, and the following lack of a slave-to-citizen transformation in Brazil are together likely to have contributed to

the inequalities that persist. In the 2010 census, around 50 percent of Brazilians identified themselves as either black or brown and 48 percent identified themselves as white.³⁷ But, despite being in the majority, evidence of racism's pervasive character is still found in the exclusion of non-white groups from accessing services, including health services, on equal terms with whites. This can be seen in the data on access to sanitation disaggregated by race and by region in figure 6.3.

Although figure 6.3 reveals a general picture of discrimination in attainment of the health basket (or at least part of it) across Brazil, the aggregate national estimates are likely masking even greater disparities in attainment across regions, municipalities and districts. As a means of bringing these disparities to light, the following discussion will analyse differences in attainment of the health basket at the most granular level, using disaggregated data from the administrative districts of the city of São Paulo as an example.³⁸

The proportion of the population with access to sanitation services varies widely across districts. Almost all people have access in some districts, such as República, Consolação, and Bela Vista, whilst in Parelheiros, as few as 37.3 percent have access. It is worth mentioning, however, that this low figure is an outlier. The next lowest figures are 72.7 percent and 78.1 percent in Grajaú, and São Rafael, respectively. The results are similar for the treatment of TB with a variance in the treatment success rate of 48.8 percentage points, with a minimum of 41.2 percent in Barra Funda and a maximum of 90 percent in Alto de Pinheiros. But are these inequalities

³⁷ Brazil Census, (Instituto Brasileiro de Geografia e Estatística Census, IBGE) População residente, por cor ou raça, segundo o sexo e os grupos de idade, 2010 estimates

³⁸ With thanks to Marcos Drummond of the Municipal Health Department for the Government of São Paulo for proving this data and for his kind assistance and patience. A description of the data is provided in Appendix C.1.

to be considered automatically unfair? Specifically, are they confirmation of a violation of the right to health?

Table 6.1: Descriptive statistics, health basket attainment by class and race, São Paulo

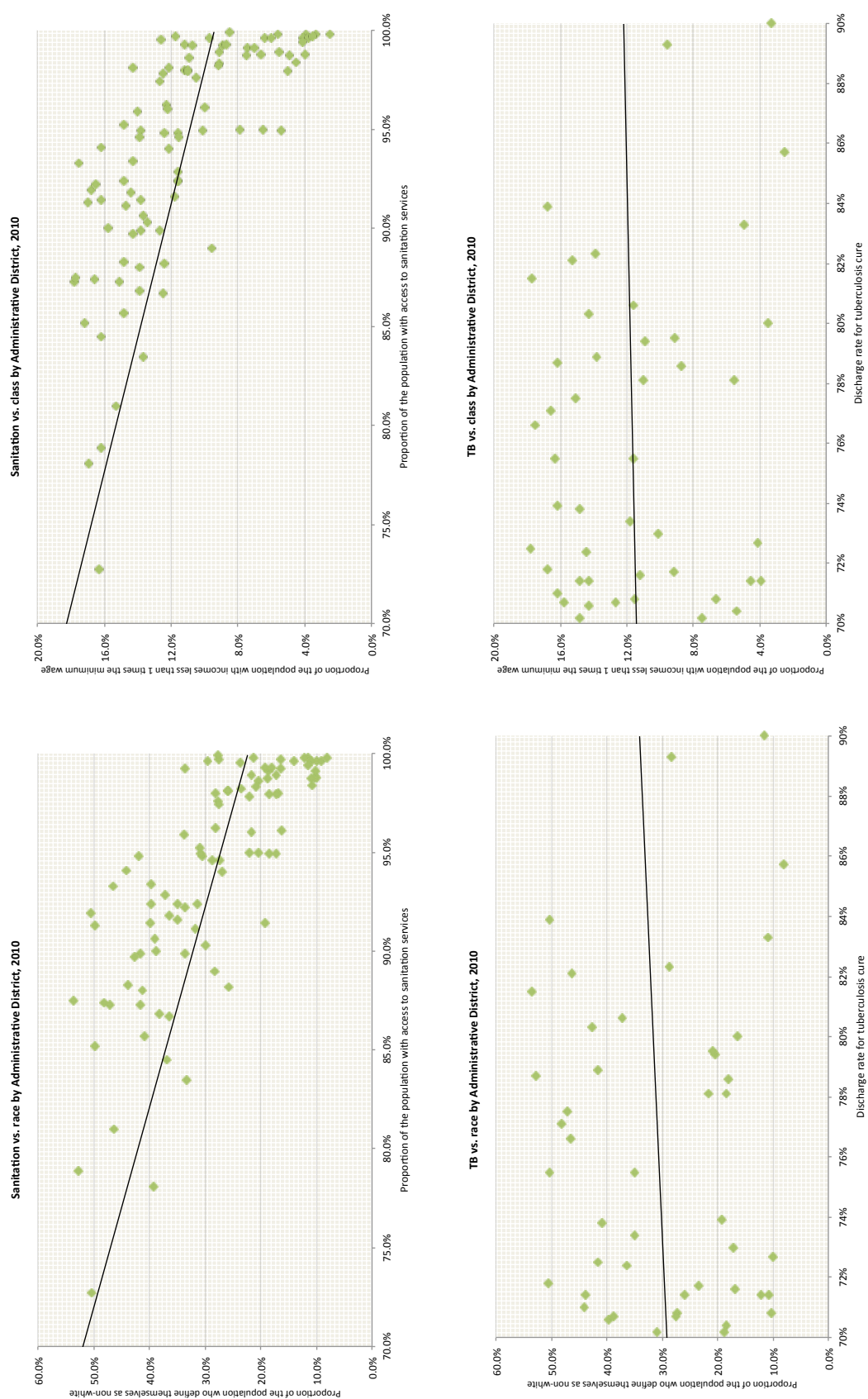
	Min	Max	Mean	SD
SANITATION	0.373	0.999	0.933	0.081
TB	0.412	0.900	0.690	0.091
CLASS	0.025	0.178	0.114	0.041
RACE	0.081	0.536	0.289	0.123

Figure 6.4 shows that attainment of part of the health basket is strongly related to racial and socioeconomic makeup. With regards to sanitation services, the whiter the district the more likely it is that this part of the health basket is attained. Likewise it is attained more frequently in districts of a higher social class. The Pearson correlation coefficients of -0.58 and -0.66, shown in Table 6.2, indicate that class and race may explain 58 percent and 66 percent of the variation in access to sanitation services, respectively. This suggests that the part of the health basket occupied by sanitation is systematically being attained more for richer white Paulistanos than it is for poorer black Paulistanos.

Table 6.2: Pearson correlation coefficients of health basket attainment and class and race, São Paulo

	Class	Race
SANITATION	-0.58	-0.66
TB	0.08	0.18

Figure 6.4: Relationship between health basket attainment and class and race, São Paulo



With regards to successful treatment for TB, however, the data do not support the same hypothesis. There is no discernible relationship between TB health outcomes and class or race. This result may not be surprising given the issues discussed in the previous section concerning the countrywide demand and delivery constraints faced in the treatment of TB. These data only add to the existing evidence that low awareness and stigma may be the biggest barriers to successful treatment and eventual cure, issues that appear in this case to have transcended class and race. Nevertheless, there is still a precarious gap in attainment of the health basket as a whole between the two groups.

How then should the picture engendered by results from these three tests be evaluated in terms of the fulfilment of the right to health in Brazil? Firstly, the revealed deficiencies in government effectiveness in the domain of health generally and sanitation specifically, alongside the lack of political responsiveness to the voice of the majority of Brazilians, give credence to the hypothesis that the Brazilian state has been unwilling to use its maximum available resources for the fulfilment of the right to health. As far as willingness is concerned, the conclusion of non-compliance appears to hold. Secondly, however, there may be factors that are contributing to the shortfall in attainment of the health basket that are not necessarily under the state's direct control. Social and cultural issues, which result in a lack of take-up of effective treatments, alongside ingrained geographical preferences, which make universal service delivery difficult, may be biasing the non-compliance estimator upwards. But thirdly, and above all, attainment of the health basket is not distributed equally. The third test has indicated that there is systematic discrimination in the enjoyment of the right to health and as such any overestimation generated by the second test is likely to be more than wiped out by an underestimation generated by the third. Accordingly, it appears that the overall

signal of non-compliance is correct and that the degree to which Brazil is non-compliant may even be qualitatively worse than estimated with respect to the preceding three tests. With this information in hand, what then are the next steps? Is there still a role for the courts in assessing and ultimately enforcing compliance?

III. The role of courts in assessing compliance

A. Individualised enforcement

The concluding signal that Brazil is not compliant with its obligation to fulfil the right to health now seems rather solid. To be precise, the state could be doing at least 8 percent better with the resources it has available. It follows, therefore, that there is indeed a role for the court in enforcing Brazil's obligations, specifically wherever this shortfall in enjoyment of the right rears its head. As far as the reigning jurisprudence of the Brazilian courts goes, the right to health is seen as an absolute individualised entitlement to the satisfaction of any health need that an individual can prove he or she has, regardless of the high costs that could be incurred by the state. Ferraz calls this a right to "maximum health attention."³⁹ On this account, if the court finds in favour of the individual, then it will grant an order that requires the state to provide whatever health good, service or facility is being claimed to that individual. But even if maximum health attention is constrained by the interpretation of the right to health offered throughout this thesis: namely, a right to a basket of minimal health goods, such an individualised model of enforcement still could pose a number of significant problems.

³⁹ Ferraz, O.L.M. *Supra* n. 11, p. 1658

Firstly, orders that require the state to provide goods and services to individuals effectively prioritise those individuals who are the most able and willing to bring their claims to the courts: the “litigating minority.” This is problematic at both the principle and practical level. Successful individual litigants would be provided, through the court order, with state-funded access to whatever health goods or services they were claiming. Regardless of who these individual litigants are such court orders would result in litigating individuals being better off than other non-litigating individuals thus leading to greater inequalities between these two groups. Inequality is always seen as a human rights bad, but to add to this, there is now sufficient evidence on the demographic make-up of both the litigating and non-litigating groups in Brazil to conclude that the beneficiaries of litigation are overwhelmingly those who are already comparatively advantaged, socially and economically.⁴⁰ Admittedly, if courts were implementing the interpretation of the right to health being defended in this thesis, the problem most likely would produce a better health situation than the one that operates currently. But the problem could nevertheless still be problematic.

Accessing the courts in Brazil is, unsurprisingly, more difficult for individuals who lack financial resources, technical expertise, access to legal assistance, and awareness of human rights. But such individuals are much more likely to predominate in the lower socioeconomic groups. Although cases claiming access to constituent parts of the health basket are likely to relate very differently to the inequality issue than claims to medicines, which have so far been the main focus of litigation in Brazil —

⁴⁰ See e.g. Ferraz, O.L.M. *Supra* n. 3, p. 88 (The study found that despite making up only 56.8% of Brazil’s total population, the most developed states of the south and southeast accounted for 85% of the 4,343 cases filed against the federal government between 2005 and 2009. Meanwhile, just 7.5% cases originated in the least developed states of the north and northeast despite these states making up 36% of the total population.) See also, Silva, V., and F. Terrazas. “Claiming the Right to Health in Brazilian Courts: The Exclusion of the Already Excluded?” (2011); and Chieffi, A., and R. Barata. “Judicialização da Política Pública de Assistência Farmacêutica e Equidade.” (2009)

the benefits from orders that grant access to medicines to treat chronic illnesses will be limited to the individual, whereas the benefits from orders that grant access to sanitation services and treatment for infectious diseases, for example, will be more widespread — the benefits from individualised orders that require the government to provide the health basket may still be realised disproportionately. For instance, resolving a sanitation problem in one house or street, although solving a problem for more than one individual, will not directly solve sanitation deficiencies in other houses or other streets that are geographically distant from the first. Though there is not yet a rigorous empirical base upon which to assess the socioeconomic status of the individuals, houses, streets and/or communities that have already seen benefits from litigation with respect to claiming elements of the health basket, it is not unreasonable to assume that the pattern that has so far manifested with respect to medicines, and the inequalities that have been produced as a consequence, would prevail.

Secondly, with orders that require the state to provide access to health goods and services to particular individuals come significant inefficiencies. To take sanitation as an example, it could be the case that a number of individuals living in one district of a city each file a claim against the state petitioning for improved access to sanitation facilities. All individuals are successful in making their claims and the court grants separate orders requiring that these individuals are each provided with state-funded access to the services that have been claimed. It is easy to envision a map where small pockets of the community within the district are served with sanitation facilities and where other parts of the community within the district are not, necessarily without any kind of coherence. If not already obvious, as soon as the map is scaled up to the city, state and ultimately country level, the perversity of these ad hoc orders is undisguisable. The lack of implementation coherence limits

any effort to develop policy coherence so that services can be provided for all. This is due not only to the increased direct costs associated with providing services on a piecemeal basis but to the opportunity costs of doing so also. In this sense, the Brazilian courts only partially replace the bureaucratic branches of the state in the delivery of health services rather than help to improve bureaucratic action overall.

Thirdly, and finally, even in an individualised model that is limited to enforcing provision of the minimal health basket, the resources problem, which has been at the centre of discussion throughout this thesis, cannot be forgotten. Although the measurement of compliance has signalled that Brazil could be doing more to fulfil the right to health given its available resources, the room for improvement is not infinite. The estimate indicates that Brazil could be doing more to the tune of 8 percent. Indeed it is possible that an improvement of 8 percent represents total provision of the health basket for all in which case any claim to the health basket could be fulfilled within the existing resource set. In this case, 100 percent compliance with the health basket is affordable. There would be no resource dilemma. But it is also possible that a degree of prioritisation in health basket allocation will remain necessary. Indeed this is in fact the case in the Brazilian context where Brazil has the ability to provide almost, but not quite, all of the health basket.⁴¹ Orders, which require the state to provide full access to the health basket to individuals on an individual basis, may therefore eventually result in some form of resource diversion and/or distortion, non-compliance notwithstanding.

So, if there is still a role for the courts in assessing and enforcing compliance but enforcement on an individualised benefit basis is problematic, what is the courts'

⁴¹ Actual health basket attainment in Brazil is 0.879. Therefore, with the 8% room for improvement that is possible with the resources Brazil has available, the total expected level of health basket fulfilment is 0.95. Total fulfilment of the health basket for all is not within Brazil's ability.

role, particularly given the fact that human rights owe their very existence to the way in which they protect the minimal interests of individuals?

B. Holistic consideration

Despite the problems associated with the individualised model discussed above, because human rights are fundamentally concerned with individuals and their otherwise unfortunate situations, litigation based on human rights should likewise be concerned with remedying injustices with respect to those unfortunate situations, faced by individuals. So perhaps what can be gleaned from the discussion is that the model of enforcement, although still serving individuals, should not be overly rigid when it comes to granting orders that benefit particular individuals but instead should allow for a degree of flexibility.

There may well be instances when it is still appropriate for the court to grant individualised claims when there is a failure to fulfil an individual's right to health: a failure to provide access to treatment for TB, for example. All Brazilians are entitled to free diagnosis and treatment for TB within the National Health System. Since 1998, TB control has been the responsibility of Brazil's primary healthcare, the aim of decentralisation being to deliver health services related to TB diagnosis and to institute DOTS (Directly Observed Treatment, Short-Course) for all TB patients. However, for many Brazilians, diagnoses and treatments remain centralised in TB reference centres (TRC), which has resulted in non-uniformity in access to, and performance of, health services between and within regions.⁴² If the state has

⁴² In a study of 514 patients, amongst the Southeastern settings, 100% of treatments in Ribeirão Preto were carried out at TRC with DOTS coverage of 81%; 75% of treatments in São José do Rio Preto were carried out at TRC with DOTS coverage of 83%; and 56% of treatments in Itaboraí were carried out at TRC with DOTS coverage of 81%. Amongst the Northeastern sites, 70% of treatments in Campina Grande were carried out at TRC with DOTS coverage of 16%; and 100% of treatments in the state of Feira de Santana were carried out at TRC with zero coverage of DOTS. Villa, T.C.S., et al. "Health Services Performance for TB Treatment in Brazil: A Cross-Sectional Study." (2011)

unjustly excluded particular individuals from the TB treatment programme, then it may still be appropriate for the court to grant separate orders so that the programme covers these particular individuals. It is more likely in this case, however, that individuals have been excluded from treatment due to a lack of strategy for service delivery at the primary health care level. The court then, rather than granting orders to benefit particular individual litigants, should order the state to develop a scheme for ensuring treatment is provided for all individuals who are similarly situated. All individuals can then claim access to treatment under such a scheme. Both means of redress ultimately benefit individuals: the former directly, the latter indirectly. But importantly, in either case, orders must not be made in a vacuum. Courts must instead consider claims holistically, taking account of all individuals who are likely to have similar needs so that it can be determined whether the state can indeed bear to satisfy them.

In assessing and enforcing compliance the Brazilian courts must therefore consider what the potential 8 percent of improvement amounts to. Whether the claim being brought, and the programme it will give rise to, is affordable within the 8 percent leeway or whether granting the order is likely to lead to some kind of resource diversion and/or distortion. In some cases the court will be able to make this assessment by looking at the existing health budget allocation: has the existing health budget been allocated according to human rights priorities? In Brazil, where a significant proportion of the population do not have access to the health basket, either in total or in part, the existing budget supporting the public health system should prioritise these minimal needs since human rights take priority. Because a large proportion of the health budget in Brazil is currently directed towards the procurement of expensive medicines for the treatment of chronic diseases, the argument that the budget should be organised according to different, more urgent,

priorities is a persuasive one. At this level, the court's holistic consideration will be limited to considering only competing micro and meso health needs. Both of which can be more easily informed by the weight given to human rights. In other cases, however, holistic consideration will require the court to look beyond this level; specifically, to consider whether the total government budget adheres sufficiently to human rights priorities. Obviously, this involves consideration of competing macro needs, which extend far beyond health.

It may appear that this argument is just a restatement of the approach taken by the South African Constitutional Court in its decision in the *Grootboom* case, which is by now famous for its finding and remedy. In *Grootboom*, the Court found the South African government in violation of its constitutional obligation to develop and implement a housing programme that would meet the needs of those most in need of assistance, like Grootboom.⁴³ But the real reason for this case's celebrity lies in its decision not to order an individualised remedy; that Grootboom be provided with housing, for instance. Instead it merely stated that the government must “devise and implement a coherent, coordinated programme’ and that a ‘reasonable’ part of the total housing budget had to be reserved for those in desperate, immediate need of housing.”⁴⁴ The decision was the point of some excitement in the academic Constitutionalist world. For Cass Sunstein, the decision established “a novel and promising approach to judicial protection of socio-economic rights ... without mandating protection for each person whose socio-economic needs are at risk,” and it “suggests that such rights can serve, not to preempt democratic deliberation, but to ensure democratic attention to important interests that might

⁴³ Government of the Republic of South Africa v. Grootboom 2000 (11) BCLR 1169

⁴⁴ *Ibid*, at 66, 92, 95. Quoted in Landau, D. “The Reality of Social Rights Enforcement.” (2012) p. 409

otherwise be neglected in ordinary debate.”⁴⁵ It is what Mark Tushnet describes as “weak-form review.”⁴⁶ In the more measured *Grootboom* approach, the Court pointed out failures by the political branches of the state to fulfil economic and social rights, but left the detailing of the remedies to those same political branches. Supporters of the approach saw this as a way of balancing the avoidance of usurpation of executive power over budgets and policy priorities on the one hand whilst still enforcing these rights on the other.

But, unfortunately, the *Grootboom* approach did not work for the actual fulfilment of economic and social rights in South Africa. As noted by Theunis Roux, the approach fell short because the Court failed to oversee compliance, even with respect to the very general terms of its order, and as a consequence no housing plan was ever developed, never mind executed.⁴⁷ Likewise, David Bilchitz concluded that the order made in *Grootboom* was “disappointing”⁴⁸ since the Court imposed “no time limit on the state’s actions in regard to the development of a programme to meet short-term needs,”⁴⁹ nor did it introduce “supervisory mechanisms for the enforcement of socio-economic rights.”⁵⁰ These are the reasons why a transplant of *Grootboom* is not what is being advocated here with respect to the Brazilian case.

⁴⁵ Sunstein, C.R. “Social and Economic Rights? Lessons from South Africa.” (2001) p. 123

⁴⁶ Whereby the judiciary shares interpretive and enforcement authority over constitutional matters with other branches of the state but the judges’ rulings are open to short run legislative revision. Tushnet, M. *Weak Courts, Strong Rights: Judicial Review and Social Welfare Rights in Comparative Constitutional Law*. 2008

⁴⁷ Roux, T. “Principle and Pragmatism on the Constitutional Court of South Africa.” (2009)

⁴⁸ Bilchitz, D. “Giving Socio-Economic Rights Teeth: The Minimum Core and its Importance.” (2002) p. 484

⁴⁹ *Ibid*, p. 500

⁵⁰ *Ibid*.

In considering claims holistically, whilst still ensuring that the right to health be enforced, the court will be required to do more than merely point to where failures by the political branches of the state have manifested and order the state to develop a plan. To fulfil its responsibilities, in its orders the court will need to place specific requirements on the state with respect to *how* it is to develop its plan to remedy the failure, *when* the benefits from the plan are to be realised, and *what* will be the processes for monitoring and scrutiny by the court. This approach is what Landau refers to as “structural injunctions.”⁵¹ Structural injunctions issued by the court order the political branches of the state to make specific structural policy changes in the area where they have been found to fall short. Importantly, these injunctions are long-term. The court maintains supervisory authority throughout the case until its resolution. Though it has been used relatively sparingly in practice, according to Landau, the structural approach holds at least some promise. He draws upon a case study of Colombia, and how the court intervened in the government’s policy regarding internally displaced persons, to substantiate this claim.

Despite displaced persons accounting for around ten percent of the Colombian population, public policy up to the point of the court’s intervention had paid very little attention to their plight.⁵² Needs relating to a number of economic and social rights (particularly housing and health) were increasingly being brought to the attention of the court and, in response, the court ordered the state to institute a displaced persons policy, which would include the creation of subsidy programmes to meet these needs alongside programmes to help solve more “particularised

⁵¹ Landau, D. *Supra* n. 44

⁵² Rodriguez Garavito, C., and D. Rodriguez Franco. “Cortes y Cambio Social: Como la Corte Constitucional Transformo el Desplazamiento Forzado en Colombia.” (2010) pp. 40-44. (Providing evidence that no public policy existed on the displaced persons issue before the order) Quoted in Landau, D. *Supra* n. 44, p. 435

problems,”⁵³ through holding public hearings on particularly affected groups, for example. The result? Many more resources have been directed towards income support and subsidies for displaced persons throughout Colombia as well as towards funding an office of public administrators working solely on this issue. And, a Compliance Commission, made up of domestic NGOs, international organisations, and organised groups of displaced persons themselves, has been set up to strictly monitor the actions of those public administrators. Accordingly, considerable headway has been made in the enjoyment of economic and social rights for these people.⁵⁴

The Colombian structural injunction approach in the internally displaced persons case appears to have been a success with respect to orienting remedies more in line with the minimalist idea of human rights. In the case of the right to health, the court’s orders have been targeted to address the basic health needs of the most needy. But it cannot be concluded from this case, and even others similar to it,⁵⁵ that a structural injunction approach will always yield these same positive results. As Tushnet notes in his reply to Landau, the matter of successfulness in fulfilling economic and social rights is most probably less due to whether the approach taken by the court is of the weak-form review or structural injunction variety, but rather boils down to the political context within which the courts’ orders are situated.⁵⁶ It

⁵³ *Ibid.*, p. 436

⁵⁴ *Ibid.*

⁵⁵ Structural injunctions have also been successful in India where, for example, litigants in Delhi claimed that their right to life and health was being threatened by the pollution emitted by the city’s buses and were granted relief in the form of an accelerated programme to replace gasoline-powered buses with ones powered by natural gas. Rajamani, L. “Public Interest Environmental Litigation in India: Exploring Issues of Access, Participation, Equity, Effectiveness and Sustainability.” (2007) Another example involves the right to food in India where the government’s grain distribution policy was challenged, and as a result the government was ordered to create specific pro-poor food programmes. (People’s Union for Civil Liberties v. Union of India & Others.)

⁵⁶ Tushnet, M. “A Response to David Landau.” (2012) p. 163

is quite likely that the main reason as to why the displaced persons case was a success was in fact due to there being near consensus between all of the stakeholders involved — the displaced people themselves, the court, and the bureaucracy — on both what was wrong in the first place and what needed to be done. Admittedly, Landau isn't ignorant to this fact either.⁵⁷

So to anticipate the successfulness of either approach in the Brazilian case the question that really needs to be asked is whether the Brazilian political context is likely to tolerate an order by the court, which requires the political branches of the state to reshuffle its existing budget to prioritise health needs differently and/or reshuffle its overall budget to ensure that the health basket is being universally provided and fundamental interests are being universally protected. At least from the evidence already discussed regarding the Brazilian courts' efforts in ordering the state to provide access to sanitation services, the answer may appear to be no.⁵⁸

In spite of the proliferating number of individualised right to health claims the Brazilian court has granted over the past ten years or so, by contrast, collective claims are few and far between. According to Hoffmann and Bentes, Brazilian judges decide upon individualised claims from a “purely individual civil rights perspective,”⁵⁹ which pays very little regard to the wider economic and social impact granting these claims is likely to have. However, it is precisely for reasons of the anticipated economic and social impact that judges are unwilling to make concessions with respect to collective right to health claims. This, according to

⁵⁷ Landau, D. *Supra* n. 44, p. 448

⁵⁸ To recall the results from Paula de Barcellos, A. *Supra* n. 25, just 4% of the Court's orders to provide sanitation services were implemented.

⁵⁹ Hoffmann, F.F., and F.R.N.M. Bentes. “Accountability for Social and Economic Rights in Brazil.” In *Courting Social Justice*, Gauri, V., and D.M. Brinks (eds.) 2008, p. 126

Ferraz, is because “enforcement of such rights would demand a radical redistribution of wealth for which there is no current normative or political consensus in Brazilian society. Neither judges, legislators, public administrators, nor probably even the poor would support such radical measures.”⁶⁰

So where does this leave redress for violations of the right to health that have been identified? At least with respect to the legal route, it seems the answer must lie in “remedial innovation.”⁶¹ If, like in the sanitation cases, the Brazilian courts’ more general orders that require the state to develop plans to deliver health basket goods and services are not being adhered to, perhaps what is required is more substantive guidance as to what the obligations impose. For example, orders that direct the government more specifically on how its policies should be changed, what resources will be required, and how the new policies will be monitored to ensure that the orders are complied with. Yes, this approach may seem to constrain democratic discussion, but as Landau concludes, “courts may need to intrude more on democratic institutions in order to improve them.”⁶²

IV. Conclusions

Brazil has fostered access to health by establishing a unified health system, guided by a principle of universality. Average health in Brazil has improved rapidly over the past two decades. Yet, whatever achievements have been made in the health system, they have not been sufficient to guarantee equal access to health for all. There

⁶⁰ Ferraz, O.L.M. *Supra* n. 11, p 1667

⁶¹ Landau, D. *Supra* n. 44, p. 459

⁶² *Ibid.*

remain vast disparities in health outcomes across and within regions and between socioeconomic groups. With respect to the fulfilment of the health basket, Brazil could be doing much more with the resources it has available, particularly in the realms of TB treatment and control and the provision of sanitation services. The state appears unwilling to mobilise sufficient resources towards these basic interventions and, most importantly, denial of these services appears to systematically manifest on discriminatory grounds. The white and wealthy generally have access whilst the non-white poor do not. Brazil, it seems, is not compliant with its obligation to fulfil the right to health.

In what has become known as the judicialisation of health in Brazil, hundreds upon thousands of individuals have turned to the courts to claim health goods and services they believe should have been provided to them by the state. However, this judicialisation has essentially interpreted the right as an individual entitlement to whatever health need the individual can prove he or she has, with little regard for the costs satisfying the need may generate. These costs are potentially colossal.

In light of the fact that Brazil is not compliant, one claim this chapter makes is that enforcement on an individualised basis is not a good way to enforce right to health claims; it has perverse distributive effects and does not appear to do much if anything to improve the performance of the governmental branches responsible for delivering health. More holistic remedies appear to be what is required to get the right fulfilled for all. But how likely is it that these remedies will work in the Brazilian political context? After all, there is no evidence to suggest that a structural order given by the court would result in the health basket being provided any sooner than it would otherwise have been without the order. Giving up on the idea at this point, however, I think would be a mistake. Though we shouldn't expect the

structural approach to right to health enforcement to immediately revolutionise the Brazilian judicial system and secure the health basket for all, it could provide the initial clearing of a path for political change. The court could help promote health basket-oriented policies by having a say in the political process in which health priorities are set, and then ensure that the rights of the most vulnerable are met first. Indeed, this is what a rights-based approach to health might look like in practice.

Drawing conclusions

Introduction

This thesis set out with the following challenge: to stick a stake in the ground for how one might go about measuring compliance with the obligation to fulfil the right to health. The challenge involves an unravelling of the complexities that come with both determining the content of the right and developing an approach for determining accountability that has teeth. What kind of health does the right to health guarantee? What level of this kind of health do duty-bearers owe to individuals? And, how well are duty-bearers doing with respect to what they owe? In meeting this challenge, it is with these three questions that the thesis must grapple. How did the thesis do?

This thesis has produced an analytical framework through which compliance with the obligation to fulfil the right to health can be measured. Section I of this concluding Chapter recaps how the thesis got there and reiterates the central hypothesis: compliance with the obligation to fulfil the right to health is a function of the duty-bearer's ability and willingness to provide for a minimal basket of health goods, services and facilities. The implications for both the study and practice of human rights are several. The latter two Sections of this conclusion

seek, therefore, to provide a brief analysis of the various questions upon which the thesis can shed light, as well as discuss those, which remain in its shadow.

I. Recapping the main arguments and proposals

A. What kind of health does the right to health guarantee?

I have proposed an account of the right to health as a right that protects against significant threats to having and leading a life that is minimally decent. The right sets a minimal standard. By means of its minimalism I have shown that doubts over whether health is amenable to being an object of duty may be misplaced because the relevant, socially controllable factors that affect population health and its distribution can be provided for and those with the obligation to provide them can be identified: currently, this is the state. I have also shown that doubts over whether the obligations given rise to by the right to health won't bear excessively on the bearer may be misplaced because the notion of minimalism sets limits. The right to health does not demand full realisability and is conditional on the duty-bearer's ability to fulfil it so that obligations are determined both by reference to the fundamental values that underpin the right and by consideration of the economic and social circumstances in which the duty-bearer finds itself. The state therefore has an unconditional, or immediate, obligation to use the maximum resources it has available with a view to satisfying the minimal interests of individuals first. In defining how these minimal interests might be satisfied, I have adopted a minimum core-type approach; namely, through the construction of a basket of health goods, services, and facilities that are each deemed to meet subsistence-type needs, are important, and can feasibly be scaled-up for delivery at the population level. Putting

these pieces together, this is the kind of health I have argued the right to health guarantees.

B. What level of health do duty-bearers owe to individuals?

The theoretical account of the right to health I have offered lays the groundwork upon which the thesis' central argument sits: if the right to health is a right to a minimal basket of health goods, services and facilities, but its attainment is conditional on the state's ability to provide it, assessing compliance with the obligation to fulfil the right to health must be concerned with determining how able each state is and to what level of health basket delivery it should be held accountable. In the latter part of the thesis I have provided a methodology for doing just that. I have argued that, in the pursuit of fulfilling the right to health, states are facilitated and limited by four measurable factors: their available financial resources, their available human resources, how densely their populations are dispersed, and the state of their existing health environment. Once these factors have been accounted for, I have shown that it is possible to predict the level of health basket provision that is to be expected of each state. This is what each state owes to individuals.

C. How well are duty-bearers doing with respect to what they owe?

The rhetoric that rings within the social rights community, that violations of the right to health are widespread, gave part of the impetus to embark on the project of measuring compliance in the first place. Many, too many, individuals throughout the world are afflicted with life-threatening diseases, which on the face of it, could easily be avoided through the most basic of health interventions. Yet, in spite of this empirical observation, I argued early on that rarely is the evidence sufficiently sensitive to social rights-type complexities to identify such apparent unmet need as a

violation of the right to health. However, now that this thesis has offered an evidential contribution in this regard, it is possible to give some materiality to this kind of claim.

Overall, the general global picture of compliance has been shown to be one of remarkable underperformance. On average, the world should be able to improve the fulfilment of the right to health to the tune of 16 percent. However, the variation in compliance across states is, perhaps unsurprisingly, sizeable with several states almost meeting their obligation to fulfil the right to health whilst the worst performing state, for example, falls short by 68 percent. This is how well states are doing with respect to what they owe.

These results go some way to substantiating the ‘violation’ claim. But returning to the central hypothesis, when ability is already taken care of, the signal of non-compliance should correspond to unwillingness on behalf of the state to mobilise its maximum available resources to fulfil the right to health. In a bid to test the robustness of this hypothesis, I have presented results of the associations between the estimates of non-compliance and several indicators of willingness. Although the relationships were shown to be of the expected sign, (higher non-compliance is associated with lower willingness) they were weaker than might have been anticipated, which throws into question either the indicators of willingness, the indicators of non-compliance, or both. I have argued, however, that quantitative analysis is an inappropriate tool for investigating this further. In response, I have provided a more in-depth qualitative case study, set in Brazil. In the Brazilian case, I have shown that there are further qualitative dimensions of unwillingness that are certainly at play, but these cannot be captured quantitatively in any systematic form. Likewise, the inability to accommodate discrimination in the measure of non-

compliance could be showing Brazil's performance in a more favourable light. As a result, the strength of the willingness-side of the hypothesis may be otherwise biased downwards. I have argued, therefore, that the hypothesis of unwillingness is likely to hold.

II. What are the takeaways?

A. Strengthening accountability

Accountability mechanisms are an essential component of the human rights framework. They give effect to claims for redress; without them, human rights claims would be left dangling in the infinite rhetorical space. Accountability from a human rights perspective refers to the relationship between duty-bearers and right-holders, in that the former have an obligation to take responsibility for the way in which their decisions, actions, or inactions affect the latter. Accountability means that duty-bearers are answerable to right-holders and are subject to some form of enforceable sanction if and when their decisions or actions are deemed to have unjustifiably infringed on an individual's human rights.¹

The principal accountability mechanism for monitoring the right to health at the international level is the Committee on Economic, Social and Cultural Rights (CESCR). All parties to the ICESCR are required to submit reports to the Committee, which are narrative in kind, on how the rights covered by the ICESCR are being implemented. These government reports are supplemented with shadow

¹ UN OHCHR. "Who Will be Accountable? Human Rights and the Post-2015 Development Agenda." (2013a) ("From a human rights perspective, accountability can be constructed around three clusters of human rights standards: [responsibility, answerability and enforceability.] Together, they create conditions in which officials and institutions can be held responsible for their actions, answerable to those they serve and subject to enforceable sanction where appropriate.") pp. 10-11

reports submitted to the Committee by local civil society. The Committee examines each report when the State party appears in session, and its concerns and recommendations to the State party are addressed in the Committee's 'concluding observations.' The state is then offered an opportunity to reply to each of these concerns and recommendations.

In the majority (if not all) of the country reports, the way in which implementation of the rights under scrutiny is presented seldom strays from the enjoyment-only perspective. For example, on the implementation of the right to health, the most recent report submitted by the Brazilian government to the Committee waxes lyrical:

Progress in primary health care in Brazil has been due to the *Family Health Strategy* and to the *Community Health Agents Program*, which bring integral, constant health practices and initiatives closer to the families, thereby improving life quality in rural communities and in city outskirts. In 2000, a total 1,753 municipalities were covered by the Family Health Strategy; in 2005, their number rose to 4,986. This increase expanded coverage from 17.4% of the population (28,581,244 people) to 44.4% (78,617,562 people). Between 2000 and 2005, the number of municipalities that had Community Health Agents-ACS rose from 4,345 to 5,242, while the total number of ACS climbed from 134,273 to 208,104, which made possible the expansion of coverage from 70,099,999 (42.8%) to 103,520,586 (58.4%). The implementation of this strategy has reduced regional disparities with respect to access to health ... as well as the disparities associated with the physical difficulty in gaining access to health establishments, goods, and services.²

But whilst this potentially shows progress in the implementation of the right to health, it reveals very little about whether the expansion of the programmes identified has in fact had any positive impact on the health of marginalised communities or, if indeed there has been a positive impact, whether it is equal to,

² UN Economic and Social Council. "Implementation of the International Covenant on Economic, Social and Cultural Rights: Second Periodic Reports Submitted by States Parties Under Articles 16 and 17 of the Covenant, Brazil." (2008) para 436

less than, or more than should be expected, given the respective changes in Brazil's ability to fulfil the right for all. In its consideration of Brazil's periodic report, the Committee had similar concerns. For example, on the issue of health and marginalised communities, the Committee posed the following follow-up question:

Please provide updated information on the State party's National Health Service, including disaggregated statistical data on those covered by such system. Please also indicate the measures taken to guarantee effective access to health-care facilities, goods and services of the most disadvantaged and marginalised individuals and groups, including members of indigenous communities and persons of African descent.³

And, in its response to the Committee's question, the Brazilian government replied:

To eliminate racial discrimination in the access to health, the Brazilian Government established a National Policy on the Black Population's Health. This policy encompasses actions aimed at expanding the black population's access to SUS; improving basic sanitation infrastructure; strengthening assistance to *Quilombola* communities; promoting health in worship premises of religious communities of African roots; and at the adoption of the National Program on Sickle Cell Anemia by the states with larger black populations.⁴

Again, all that Brazil has provided is a list of policy efforts that in theory should help to alleviate the concerns raised by the Committee. But how is the Committee to judge whether these efforts have been effective for the fulfilment of the right to health? Without a systematic framework for assessing effectiveness and sufficiency with respect to actual health delivery, the Committee's concerns remain just that: concerns. However, if this thesis's measure of non-compliance was available to the Committee, it could provide the systematic framework the Committee desperately needs for the turning of its concerns into a firm assertion of inadequacy. The non-compliance score of 0.0808 for Brazil, presented in Table 3 of Appendix B, shows

³ UN Economic and Social Council. "Replies by the Government of Brazil to the list of issues to be taken up in connection with the consideration of the second periodic report of Brazil." (2009) Question 30, p. 83.

⁴ *Ibid*, para. 310

that Brazil is only fulfilling 92 percent of the level of right to health enjoyment that could potentially be achieved with the resources Brazil has available. On the simplest interpretation, Brazil is in violation and could be doing 8 percent better.

In responding to the claims that violations of the right to health are widespread, clearly, assessment through the self-reporting by states is insufficient. In their reports, states are always going to attempt to paint a more favourable picture of their human rights landscape than may otherwise be the case. Even allowing civil society and other stakeholders to contribute to the evidence stream, although tempering the state's account, is unlikely to offer the Committee a sufficient basis upon which to judge the *overall* status of right to health fulfilment. There remains an information gap; what level of right to health enjoyment do states owe to individuals and how well are they doing with respect to what they owe? The measure offered in this thesis helps to plug that gap. It is an approach for determining accountability that has teeth. It speaks to the claim of violations by systematically identifying that some unmet health needs are violations of the right to health. But it also gives specificity to the types of claims that qualify as violations. In the case of Brazil, these violations are more likely to manifest as denied access to water and sanitation services and facilities, than denied access to medicines: a conclusion that is likely to call for a reexamination of the way in which these issues are dealt with both in the Brazilian courts and in Brazilian policymaking.

B. Directing action appropriately

The indicator of non-compliance provides evidence of instances where the state has failed to use its maximum available resources to fulfil the right to health. It also indicates the extent of the problem and indicates where the potential scope for

improvement lies. It can, therefore, be used to help set health policy-related priorities with respect to making that improvement happen.

Women dying during pregnancy or childbirth, children suffering with diarrhoeal diseases, and young adults afflicted by infectious disease, in many countries are often not isolated events. They are instead widespread health deprivations that come about as a result of policy failures, engrained inequalities, and the mismanagement of resources. In Brazil, for example, 40,225 deaths from causes related to water and sanitation were recorded in 2004,⁵ which in large part, can be attributed to avoidable child mortality. The indicator of non-compliance in Brazil provides evidence as to the government's lack of attention to its obligations in this regard and also signals the size of the problem. Indeed the indicator signals Brazil has 8 percent more room in which to improve. This opens up questions on the existence, quality and efficacy of the government's existing policies with respect to water and sanitation service delivery and could help orient the direction towards which its policies must now head.

However, before pinpointing where public policies may have been lacking and suggesting how they should as a result be made better, a human rights-based approach to policy reform first requires an investigation of the root causes of the problem. Who in the population has been most affected and why? If there is discrimination in the way in which the adverse health outcomes have been produced, then there will be a need to address it, more specifically, in any policy recommendation that results. Has the problem been caused by the way in which

⁵ Pan American Health Organisation. *Water and Sanitation: Evidence for Public Policies focussed on Human Rights and Human Results*. 2011, p. 17

these services are delivered; privately or publicly, for instance? A policy that advocates more of the same could perhaps be less likely to prove fruitful.

Returning to the example of water and sanitation in Brazil, the case study in Chapter 6 has already shown that the Brazilian population does not share shortfalls in access to these services equally. On average, non-white, poor Brazilians bear the bulk of the burden. Indeed, it appears the exclusion of certain population groups is non-compliance at its root; it is in eradicating these deprivations that the room for improvement lies. With a view to making this improvement happen, the poor, in both rural and urban areas, who have neither the means to access water and sanitation services in the first place nor the resources available to deal with the wider socioeconomic problems a lack of access is likely to give rise to, should therefore be given priority attention in any policy reform.

In Brazil, the issues of access inequity do not seem to necessarily manifest according to who provides the services.⁶ Regardless of which type of provider provides water and sanitation services, the state has an obligation to ensure that all individuals enjoy the right to health. In the case of public service delivery, basic sanitation infrastructure should be prioritised by the public administration. In the case of private and public-private service delivery, the private sector should be subject to stricter or better enforced state regulation overseeing the cost and quality of services, whilst the government should be required to reinvest any profit

⁶ In many instances, municipalities are the unit responsible for delivering water and sanitation services. But more recently, a growing amount of private capital is being invested to buy shares in publicly owned water and sanitation companies in the form of Private Sector Participation (PSP). However, a summing of the available evidence suggests that neither system has been particularly successful at reducing the types of inequalities already discussed. See, e.g. Heller, L., S.C. Rezende, and S. Cairncross. "Water and Sanitation in Brazil: The Public–Private Pendulum." (2014); and Clarke G., K. Kosec, and S. Wallsten. "Has Private Participation in Water and Sewerage Improved Coverage? Empirical Evidence for Latin America." (2004) (shows that privatisation is not associated with an increase in service coverage in Brazil.)

obtained back into the water and sanitation sector (as opposed to funding other state expenditures) for the universalisation of these services. By association, if and when these basic services have not been prioritised by the public administration, or if and when the fees charged by private suppliers go unchecked, claims of individuals or groups, which call to rectify the situation should be those that form the substance of right to health claims that then guide action and policy reform appropriately.

Hopefully, I have shown how the results generated by this thesis can be used in context. Water and sanitation in Brazil is just one example. The indicator of non-compliance is the first step in identifying systematic failures that require priority attention and provides the basis for a right to health-based approach to health policy reform. But beware; the fact that the measure is just a first step is crucial to its use and interpretation. There are ways to make the measure itself and its interpretation more elaborate. These are discussed in the Section that follows.

III. What remains to be investigated?

A. Adjusting for specific issues affecting the ability to provide for health

One criticism of the approach I have presented could be that it might seem odd to say that ability to satisfy a right is a necessary condition of the duty to do so because this might depend on why the inability came about. This is what might be called the ‘tracing problem.’ For example, at some point in history a state may have owned a valuable asset (call this α) that was appropriated by another state. The appropriating state then went on to transform α into an even more valuable asset (call this β). The appropriator is now much more ‘able’ than the appropriatee. By association, the

appropriate's ability to fulfil the right to health (and other human rights) is now limited and the level of health to which the state has an obligation to fulfil, on the basis of the argument presented in this thesis, is relatively low. But should the state be held accountable to providing this low level of health, or should it in fact be held to the level that owning α or β would allow? This depends on whether the appropriatee has any claim on α or β . If it does, then the state would be more able to fulfil the right to health and the level of health to which individuals can expect to have guaranteed ought to be higher.

In a similar way, third parties may affect both the basket of health goods, services, and facilities the right to health guarantees as well as the state's ability to provide for health, particularly in the arena of access to medicines. Expenditure on medicines accounts for a significant proportion of the health costs faced in developing countries. This means that access to treatment and fulfilment of the right to health in these countries is heavily dependent on the availability of affordable medicines. In the construction of the health basket, only those interventions that are deemed feasible in the sense that they are economically amenable to population level scale-up are to be included. This is not too problematic with respect to the interventions considered for inclusion at present, since they are the most basic of interventions, which tend to be covered by, for example, the Global Fund to control such basic health issues as HIV/AIDS, tuberculosis and malaria.⁷ As a result the associated costs are maintained at an affordable level. But this hasn't always been the case and may not be the case in the future.

⁷ The Global Fund to fight AIDS, tuberculosis and malaria is a partnership between governments, civil society, the private sector and people affected by the diseases, which mobilises and invests nearly US\$4 billion a year to support programs run by local experts in more than 140 countries.

The WHO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which entered into force in 1995, required WHO member states to provide 20 years worth of protection for valid patent claims.⁸ This protection, once granted, gave patent holders exclusive rights to the production and distribution of, for example, a patented medicine. It essentially gave medicine suppliers monopoly power. What this means in practice is that the costs of medicines could be higher than they likely would otherwise be since the patent holder is not subject to market competition and is free to set their own price. This obviously affects the level of the medicine the state has the ability to buy and provide — and therefore the level of health the right to health guarantees — and could even affect whether the medicine meets the health basket criteria in the first place; it could fail the feasibility threshold. If medicines were not subject to the TRIPS Agreement, (or any other mechanism that provides space for some form of price setting by the supplier) the state would be able to provide for more health within its existing available resource set and, again, the level of health to which individuals could expect to have guaranteed ought to be higher than this thesis's framework would otherwise predict.

Whilst the argument that setting the level of health each state is expected to achieve requires consideration of issues such as those discussed above is potentially valid, determining whether an appropriator has any claim on α or β , or untangling the degree to which laws that govern intellectual property produce unjustifiable differences in access to medicines, is a complex job that is highly controversial. It would require a normative account of what appropriators owe to appropriatees, which is essentially an account of what a globally just distribution of resources might look like. It would also require careful normative consideration of the

⁸ Agreement on Trade-Related Aspects of Intellectual Property Rights, Agreement Establishing the World Trade Organisation, Marrakesh, 15 April 1994, Annex 1C, Articles 27 and 33

morality of markets, specifically, whether there is a valid principled argument as to why particular public goods (e.g. medicines) should not be subject to market mechanisms. Both of these questions are ambitious theses in their own right and as such cannot be tackled, at least with any integrity, here, (in a discussion of whose resources count as being available, I have already argued in Chapter 3 why ability is determined with reference to those currently available to domestic states.) Instead the analysis is restricted here to less controversial ideals, specifically, the right to a minimum health basket whose main duty-bearer is the state. But what are the implications of excluding these questions with respect to this thesis? If indeed there are any.

There might be various steps in measuring compliance with the obligation to fulfil the right to health. One of those steps might be to measure compliance against an abstract ‘ideal,’ which conceptualises the right to health in a world where resources are distributed in a way that enables the minimal health basket to be fulfilled for all and where the market for medicines is perfectly adjusted for social desirability. This step most certainly has value as a normative benchmark towards which most social rights supporters would like to see right to health fulfilment heading. But, I would argue, even in seeking to measure compliance against such an abstract ideal, we must first understand compliance with respect to the empirical reality. Just as Uskali Mäki would suggest, surely the aim of theorising is to understand the realm being theorised. Theories must be relevant and reliable. Therefore, adding ‘the way the world works’ constraint on theorising makes better the choice and assessment of the theory.⁹ This essentially speaks to the current thinking in economics and ethics

⁹ Mäki, U. *The Economic World View: Studies in the Ontology of Economics*. 2001

on the positive-normative dichotomy, which has at least lost substantial ground if not by now been already quashed.¹⁰

The foregoing point notwithstanding, presenting an account of what compliance with the obligation to fulfil the right to health ought to look like under ideal conditions is not what this thesis has sought to achieve. Rather, in facing the empirical reality that the right to health is increasingly being claimed in courts, and used as a policy tool to address the health needs of groups and individuals around the world today, what has been sought is an understanding of the ‘what is’ so that action in these arena can be directed appropriately. What is characterised as ‘ideal’ is likely to be some way away from ‘what is.’ Moreover, my version of what is ideal will most probably be some way away from what the state of Brazil or Botswana considers to be ideal, which in turn will differ from what is. That being so, any prescribed action resulting from the ideal is likely to differ significantly from what can actually be done now. Measuring compliance with respect to the status quo therefore produces a pragmatic signal with which immediate action can be guided and indeed as a by-product provides a base starting point upon which alternative, more ‘idealistic,’ long run scenarios could possibly be developed.

B. Placing right to health compliance within the wider compliance context

Another criticism of the approach I have presented may be that ultimately, the appropriate level of resources for a state to provide to its citizens with respect to health will depend on other projects that it seeks to advance, such as security, the arts, other human rights, and so on. In the absence of some method to determine

¹⁰ See, e.g. Hands, D.W. “The Positive-Normative Dichotomy and Economics,” In *Handbook of the Philosophy of Science*, Gabbay, D.M., P. Thagard, and J. Woods (eds.) 2012; Hausman, D.M., and M.S. McPherson. *Economic Analysis, Moral Philosophy and Public Policy*. 2006; Putnam, H. “For Ethics and Economics Without Dichotomies” (2003); and Putnam, H. *The Collapse of the Fact/Value Dichotomy, and other Essays*. 2002

how many resources should be directed towards health given these other objectives, how meaningful is it then to talk of measuring compliance with the obligation to fulfil the right to health?

In the real world where resources are scarce, it could be the case that duty-bearers face trade-offs in the fulfilment of different human rights and human needs in that allocating resources for the fulfilment of one right or need is done so at the expense of fulfilling another. If this is indeed the case, a country that performs reasonably well with respect to fulfilling the right to health may only be able to maintain this position precisely because its performance with respect to other human rights is poor. For example, the non-compliance estimates produced in Chapter 5 reveal that Rwanda is the 6th best performing state with respect to fulfilling the right to health whilst Bangladesh ranks 174 out of a possible 186. Although from this it may seem that Rwanda is much more successful than Bangladesh in mobilising the resources it has available for fulfilling human rights, what this doesn't reveal is whether Rwanda's health success has come at the expense of zero investment in security, the arts and other human rights, for instance. Likewise, Bangladesh may have prioritised education, fair wages and the environment at the expense of fulfilling the right to health. Therefore, if we were to look at the two country's total performance, the difference may not be as vast as it initially appears. This is a valid criticism. However, its sustenance depends on there being no way of gleaming such an overall picture or a way of testing for such trade-offs. I would argue that neither is necessarily the case.

Because in Chapter 3 I argued that human rights as minimal standards have priority status and as such require that resources are directed towards fulfilling them first, the discussion of trade-offs and how to deal with them can be limited to those

which operate between and amongst human rights rather than those which stretch to include other things. What I have presented throughout this thesis is a methodology for measuring compliance with the obligation to fulfil *human rights*.

Although I have focussed on the right to health, this is not to say that the methodology's use is limited to that right. Quite the contrary. By following the same analytical steps, it could quite easily be replicated for measuring a state's performance in fulfilling other human rights. Returning to the information pyramid outlined in Chapter 1, so long as it is possible to qualitatively describe what is to be quantified, and quantitative indicators, which reflect that description can be identified, then the same type of frontier analysis can be undertaken to produce estimates of compliance for any human right. Aggregating all of these right-specific estimates can then produce an overall human rights compliance estimate, which would give much greater precision to the health compliance versus wider compliance context question. For example, it would reveal whether the performance gap between Rwanda and Bangladesh seen in health is either maintained or diminished when other human rights are accounted for. Ultimately, measuring compliance with the obligation to fulfil human rights will involve an assessment of the duty-bearer's ability and willingness to provide for them as a whole. The central hypothesis remains.

However, it could still be argued that by implicitly assuming that states can fulfil each right to a potential maximum without compromising the fulfilment of another, the trade-off problem has not been sufficiently dealt with. But the availability of the additional compliance estimates, which cover all human rights, would allow the opportunity for testing both the existence and degree of trade-offs between and

amongst rights through correlating and regressing each of the estimates against one another.

Obviously, replicating the analysis for every other human right is a task that far surpasses the limits of this thesis, both objective-wise and resource-wise. So, whether or not trade-offs between rights exist is one empirical question that remains to be explored. However, since there is a long-standing traditional relationship in the development data that favourable outcomes in one dimension of development tend to be associated with favourable outcomes in others, (and vice versa)¹¹ it might not be unreasonable to speculate that if there is a relationship between a state's performance in fulfilling one right versus its performance in fulfilling another, the relationship would be positive, rather than negative.

IV. To end

The human right to health and the legal obligations it gives rise to are important. When every day there are approximately 800 women who die from preventable causes related to pregnancy and childbirth,¹² and more than six million children each year who don't live to see their fifth birthdays,¹³ 'oh-dearism' surely is not enough. By means of the fact that almost all of the world's states have voluntarily subscribed to some form of formal legal mechanism, which protects the right to

¹¹ See, e.g. the numerous papers produced by Sabine Alkire and others on multidimensional poverty. The Multidimensional Poverty Index (MPI) also featured in the UNDP's Human Development Report 2010, UNDP. *Human Development Report 2010: The Real Wealth of Nations: Pathways to Human Development*. 2010

¹² WHO. Maternal Mortality Factsheet 348, May 2014 (2014a)

¹³ WHO. Children: Reducing Mortality Factsheet 178, September 2014 (2014b)

health, an assessment as to whether those states have lived up to their obligations with respect to averting such tragedies must instead be a guide to their reversal.

But determining precisely when and under what conditions these obligations have not been lived up to is a tricky business. Given that each state bears the obligation to take steps, with a view to progressively realising the right to health subject to the maximum resources that are available, how many maternal and child deaths should states be expected to avert? They may not be able to avert all of them.

This means that vague appeals to the right to health will be insufficient for giving claims of violation credibility. In order for the right to health to be transformed from a mere “rhetorical weapon”¹⁴ into something capable of “constraining, guiding, and mobilising governments, individuals and other actors,”¹⁵ an understanding of how the notions of progressive realisation and maximum available resources are to be operationalised in relation to a sufficiently grounded formulation of the right to health must be developed. This thesis has offered a proposal in meeting that challenge.

From laying out the moral foundations for right to health claims to providing the basis for developing an approach to determining accountability that has teeth, this thesis has offered an analytical framework through which compliance with the obligation to fulfil the right to health can be measured. Through an understanding of the normative and empirical relationships between health and the ability and willingness to provide for it, the concepts of progressive realisation and maximum

¹⁴ Tobin, J. *The Right to Health in International Law*. 2012, p. 375

¹⁵ *Ibid.*

available resources have hopefully been treated with the care they call for. The right to health has been taken seriously.

Appendix A

1. Deaths by cause categories

Long List (GBD, 2011)		
Tuberculosis	<i>Malignant neoplasms</i>	<i>Cardiovascular diseases</i>
<i>STDs excluding HIV</i>	Mouth and oropharynx cancers	Rheumatic heart disease
Syphilis	Oesophagus cancer	Hypertensive heart disease
Chlamydia	Stomach cancer	Ischaemic heart disease
Gonorrhoea	Colon and rectum cancers	Stroke
Trichomoniasis	Liver cancer	Cardiomyopathy, myocarditis
Other STDs	Pancreas cancer	Other circulatory diseases
HIV/AIDS	Trachea, bronchus, lung cancers	<i>Respiratory diseases</i>
Diarrhoeal diseases	Melanoma and other skin cancers	COPD
<i>Childhood-cluster diseases</i>	Breast cancer	Asthma
Whooping cough	Cervix uteri cancer	Other respiratory diseases
Diphtheria	Corpus uteri cancer	<i>Digestive diseases</i>
Measles	Ovary cancer	Peptic ulcer disease
Tetanus	Prostate cancer	Cirrhosis of the liver
Meningitis	Bladder cancer	Appendicitis
Encephalitis	Lymphomas, multiple myeloma	Other digestive diseases
Acute hepatitis B	Leukaemia	<i>Other noncommunicable diseases</i>
Acute hepatitis C	Other malignant neoplasms	Kidney diseases
<i>Parasitic and vector diseases</i>	Other neoplasms	Hyperplasia of prostate
Malaria	Diabetes mellitus	Urolithiasis
Trypanosomiasis	Endocrine, blood, immune disorders	Other genitourinary diseases
Chagas disease	<i>Mental and behavioral disorders</i>	Infertility
Schistosomiasis	Unipolar depressive disorders	Gynecological diseases
Leishmaniasis	Bipolar disorder	Skin diseases
Lymphatic filariasis	Schizophrenia	Rheumatoid arthritis
Onchocerciasis	Alcohol use disorders	Osteoarthritis
Leprosy	Drug use disorders	Gout
Dengue	Anxiety disorders	Back and neck pain
Trachoma	Eating disorders	Other musculoskeletal disorders
Rabies	Pervasive developmental disorders	Congenital anomalies
<i>Intestinal nematode infections</i>	Childhood behavioural disorders	Neural tube defects
Ascariasis	Idiopathic intellectual disability	Cleft lip and cleft palate
Trichuriasis	Other mental and behavioural disorders	Down's syndrome
Hookworm disease	<i>Neurological conditions</i>	Congenital heart anomalies
Other infectious diseases	Alzheimer's disease and dementias	Other chromosomal anomalies
<i>Respiratory infections</i>	Parkinson's disease	Other congenital anomalies

Lower respiratory infections	Epilepsy	Dental caries
Upper respiratory infections	Multiple sclerosis	Periodontal disease
Otitis media	Migraine	Edentulism
Maternal conditions	Non-migraine headache	<i>Unintentional injuries</i>
<i>Neonatal conditions</i>	Other neurological conditions	Road injury
Preterm birth complications	<i>Sense organ diseases</i>	Poisonings
Birth asphyxia and trauma	Glaucoma	Falls
Neonatal infections	Cataracts	Fire, heat, hot substances
Other neonatal conditions	Refractive errors	Drowning
<i>Nutritional deficiencies</i>	Macular degeneration	Exposure to forces of nature
Protein-energy malnutrition	Other vision loss	Other unintentional injuries
Iodine deficiency	Other hearing loss	<i>Intentional injuries</i>
Vitamin A deficiency	Other sense organ disorders	Self-harm
Iron-deficiency anaemia		Interpersonal violence
Other nutritional deficiencies		Collective violence

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Avoidable Mortality List	
Tuberculosis	Malignant neoplasms
STDs excluding HIV	Other neoplasms
HIV/AIDS	Diabetes mellitus
Diarrhoeal diseases	Endocrine, blood, immune disorders
Childhood-cluster diseases	Mental and behavioral disorders
Meningitis	Neurological conditions
Encephalitis	Sense organ diseases
Acute hepatitis B	Cardiovascular diseases
Acute hepatitis C	Respiratory diseases
Parasitic and vector diseases	Digestive diseases
Intestinal nematode infections	Other noncommunicable diseases
Other infectious diseases	Unintentional injuries
Respiratory infections	Intentional injuries
Maternal conditions	
Neonatal conditions	
Nutritional deficiencies	

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2. GDB level-specific avoidable mortality

	Females 0 to 4		Males 0 to 4	
	Avoidable mortality	GBD level-specific contribution	Avoidable mortality	GBD level-specific contribution
All Causes	0.0756	100.0%	0.0828	100.0%
I. Communicable, maternal, perinatal and nutritional conditions	0.0686	90.7%	0.0755	91.2%
II. Noncommunicable diseases	0.0046	6.1%	0.0048	5.8%
III. Injuries	0.0024	3.1%	0.0025	3.0%

	Females 5 to 14		Males 5 to 14	
	Avoidable mortality	GBD level-specific contribution	Avoidable mortality	GBD level-specific contribution
All Causes	0.0224	100.0%	0.0236	100.0%
I. Communicable, maternal, perinatal and nutritional conditions	0.0156	69.8%	0.0156	66.1%
II. Noncommunicable diseases	0.0038	16.8%	0.0039	16.5%
III. Injuries	0.0030	13.3%	0.0041	17.4%

	Females 30 to 49		Males 30 to 49	
	Avoidable mortality	GBD level-specific contribution	Avoidable mortality	GBD level-specific contribution
All Causes	0.0224	100.0%	0.0236	100.0%
I. Communicable, maternal, perinatal and nutritional conditions	0.0156	73.5%	0.0156	68.7%
II. Noncommunicable diseases	0.0038	21.1%	0.0039	18.1%
III. Injuries	0.0030	5.4%	0.0041	13.2%

	Females 50 to 69		Males 50 to 69	
	Avoidable mortality	GBD level-specific contribution	Avoidable mortality	GBD level-specific contribution
All Causes	0.0224	100.0%	0.0236	100.0%
I. Communicable, maternal, perinatal and nutritional conditions	0.0156	39.4%	0.0156	56.0%
II. Noncommunicable diseases	0.0038	55.4%	0.0039	35.6%
III. Injuries	0.0030	5.2%	0.0041	8.4%

Appendix B

1. Data Descriptions

Variable	Description
BIRTHSKILL	Numerator: The number of births attended by skilled health personnel (doctors, nurses or midwives) trained in providing life saving obstetric care, including giving the necessary supervision, care and advice to women during pregnancy, childbirth and the post-partum period; to conduct deliveries on their own; and to care for newborns. Denominator: The total number of live births in the same period.
MSLS	The percentage of children under one year of age who have received at least one dose of measles-containing vaccine in a given year. For countries recommending the first dose of measles vaccine in children over 12 months of age, the indicator is calculated as the proportion of children less than 12-23 months of age receiving one dose of measles-containing vaccine.
SAN	Improved sanitation facilities include: Flush or pour-flush to piped sewer system, septic tank or pit latrine, Ventilated improved pit latrine, Pit latrine with slab and Composting toilet.
TB	The proportion of new smear-positive TB cases registered under a national TB control programme in a given year that successfully completed treatment, whether with or without bacteriological evidence of success ("cured" or "treatment completed" respectively). At the end of treatment, each patient is assigned one of the following six mutually exclusive treatment outcomes: cured; completed; died; failed; defaulted; and transferred out with outcome unknown. The proportions of cases assigned to these outcomes, plus any additional cases registered for treatment but not assigned to an outcome, add up to 100% of cases registered.
GNIC	GNI per capita based on purchasing power parity (PPP). PPP GNI is gross national income (GNI) converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GNI as a U.S. dollar has in the United States. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.
HK	Average number of years of education received by people ages 25 and older, converted from education attainment levels using official durations of each level. Source: HDRO updates of Barro and Lee (2011) estimates based on UNESCO Institute for Statistics data on education attainment (2012) and Barro and Lee (2010) methodology. Data in the tables are those available to the Human Development Report Office as of 15 October 2012, unless otherwise specified.
MORTDEN	191 Member States of WHO have been divided into five mortality strata on the basis of their levels of child mortality under five years of age and 15-59-year-old male mortality: A/1 Very low child, very low adult; B/2 Low child, low adult; C/3 Low child, high adult; D/4 High child, high adult; E/5 High child, very high adult.
POPDEN	Population density is midyear population divided by land area in square kilometers. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship--except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. Land area is a country's total area, excluding area under inland water bodies, national claims to continental shelf, and exclusive economic zones. In most cases the definition of inland water bodies includes major rivers and lakes.
CC	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution.
GE	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution.
VA	Voice and Accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution.

2. Summary of missing values

Variable	2007	2008	2009	2010	2011
BIRTHSKILL	0.65	0.72	0.69	0.61	0.81
MSLS	0	0	0	0	0
SAN	0.04	0.07	0.09	0.10	0.11
TB	0.08	0.05	0.06	0.07	0.09
GNIC	0	0	0	0	0
HK	0.01	0.01	0.01	0.01	0.01
MORTDEN	0	0	0	0	0
POPDEN	0	0	0	0	0
CC	0	0	0	0	0
GE	0	0	0	0	0
VA	0	0	0	0	0

Values represent the rate of imputation per variable

3. Non-compliance estimates and rankings, all States

RANK HRE	State	UIRE	RANK FE	HBAI
1	Burundi	0.0120	6	0.7528
2	Oman	0.0122	4	0.9621
3	Gambia	0.0144	2	0.7731
4	Kyrgyzstan	0.0227	47	0.8831
5	Myanmar	0.0236	10	0.8105
6	Rwanda	0.0238	8	0.7564
7	Malawi	0.0246	18	0.7622
8	Algeria	0.0262	45	0.8837
9	Uruguay	0.0273	42	0.9342
10	Macedonia, FYR	0.0279	32	0.9624
11	Egypt	0.0291	21	0.8705
12	Turkmenistan	0.0298	74	0.9247
13	Bosnia and Herzegovina	0.0321	39	0.8430
14	Seychelles	0.0332	66	0.8609
15	Bhutan	0.0346	1	0.7347
16	Tonga	0.0347	60	0.9611
17	Jordan	0.0349	44	0.9497
18	Dominica	0.0354	26	0.9668
19	Mauritius	0.0358	24	0.9466
20	Mongolia	0.0368	61	0.8520
21	Bulgaria	0.0369	86	0.9424
22	Uzbekistan	0.0369	58	0.9011
23	Thailand	0.0379	19	0.9221
24	Slovakia	0.0380	108	0.9550
25	Iceland	0.0398	96	0.8962
26	Fiji	0.0398	81	0.9492
27	Botswana	0.0405	99	0.8443
28	Turkey	0.0408	17	0.9240
29	Vietnam	0.0419	13	0.8980
30	Serbia	0.0420	73	0.9327
31	Djibouti	0.0425	12	0.7984
32	Iran, Islamic Rep.	0.0425	33	0.9144
33	Australia	0.0428	142	0.8806
34	Cuba	0.0431	59	0.9433
35	Albania	0.0431	77	0.9467
36	Andorra	0.0438	69	0.9896
37	Syrian Arab Republic	0.0456	15	0.8299
38	Burkina Faso	0.0488	3	0.5875
39	Iraq	0.0493	23	0.8586
40	Sri Lanka	0.0497	53	0.9353
41	Ecuador	0.0498	51	0.8618
42	Barbados	0.0500	52	0.9732
43	Congo, Dem. Rep.	0.0506	37	0.6935
44	Cabo Verde	0.0530	5	0.8299
45	Montenegro	0.0545	97	0.9171
46	Mozambique	0.0553	11	0.5707
47	Sweden	0.0554	132	0.9350
48	Venezuela	0.0561	36	0.8860
49	China	0.0562	29	0.9081
50	Kazakhstan	0.0585	123	0.8410
51	Norway	0.0595	152	0.8737
52	Tunisia	0.0597	20	0.8968

53	Morocco	0.0618	14	0.7825
54	Guatemala	0.0623	9	0.8226
55	Libya	0.0644	43	0.8203
56	Chile	0.0644	92	0.8724
57	Kuwait	0.0671	7	0.9711
58	Mexico	0.0680	54	0.9107
59	Slovenia	0.0708	121	0.9256
60	Guyana	0.0723	75	0.8430
61	Malaysia	0.0740	80	0.9029
62	Tajikistan	0.0740	72	0.8615
63	Canada	0.0747	160	0.8407
64	Brazil	0.0808	41	0.8790
65	Georgia	0.0822	126	0.8865
66	Honduras	0.0829	28	0.8464
67	Costa Rica	0.0831	55	0.9162
68	Belarus	0.0838	136	0.8310
69	Belize	0.0850	63	0.8344
70	United States of America	0.0877	169	0.9054
71	Portugal	0.0883	30	0.8936
72	Korea, Rep.	0.0911	128	0.9219
73	Nicaragua	0.0917	40	0.7831
74	Romania	0.0928	109	0.8722
75	Lithuania	0.0937	139	0.8282
76	Colombia	0.0997	49	0.8588
77	Peru	0.1017	102	0.8048
78	Finland	0.1032	117	0.8665
79	Saudi Arabia	0.1038	57	0.8452
80	Greece	0.1070	98	0.8869
81	Saint Vincent and the Grenadines	0.1082	64	0.7805
82	Maldives	0.1110	22	0.9041
83	Armenia	0.1125	119	0.8291
84	El Salvador	0.1158	48	0.8550
85	Paraguay	0.1159	65	0.7941
86	Brunei Darussalam	0.1161	56	0.8554
87	Palau	0.1169	155	0.8044
88	New Zealand	0.1170	164	0.7921
89	Netherlands	0.1183	133	0.9242
90	United Kingdom	0.1211	76	0.9105
91	Saint Kitts and Nevis	0.1242	68	0.9759
92	Switzerland	0.1273	131	0.9100
93	Israel	0.1275	143	0.8871
94	Panama	0.1292	106	0.8423
95	Germany	0.1292	153	0.8812
96	Senegal	0.1293	35	0.7137
97	United Arab Emirates	0.1297	82	0.8836
98	Hungary	0.1298	158	0.8810
99	Czech Republic	0.1308	156	0.8790
100	Dominican Republic	0.1316	50	0.8370
101	Poland	0.1342	118	0.8237
102	Croatia	0.1346	104	0.9167
103	Estonia	0.1355	171	0.8279
104	Bahamas	0.1365	88	0.8126
105	Italy	0.1375	105	0.8830
106	Belgium	0.1377	125	0.9079
107	Moldova	0.1393	116	0.8165
108	France	0.1406	124	0.8968

109	Latvia	0.1436	163	0.8349
110	Grenada	0.1468	87	0.9771
111	Sao Tome and Principe	0.1476	38	0.6929
112	Lebanon	0.1492	62	0.8482
113	Spain	0.1506	129	0.8601
114	Suriname	0.1510	90	0.8126
115	Qatar	0.1529	31	0.7838
116	Saint Lucia	0.1574	85	0.7584
117	Ireland	0.1595	159	0.8464
118	Bolivia	0.1657	146	0.7460
119	Russian Federation	0.1676	177	0.7599
120	Zimbabwe	0.1709	103	0.6859
121	Trinidad and Tobago	0.1723	110	0.8443
122	Indonesia	0.1732	46	0.7503
123	Samoa	0.1736	138	0.8083
124	Yemen	0.1764	16	0.6317
125	Micronesia, Fed. Sts.	0.1787	120	0.8560
126	Argentina	0.1852	140	0.7923
127	Namibia	0.1877	115	0.7014
128	Mali	0.1898	34	0.5219
129	Ukraine	0.1909	167	0.6789
130	Swaziland	0.1911	114	0.7486
131	Comoros	0.1932	27	0.4230
132	Singapore	0.1936	93	0.9308
133	Philippines	0.1998	113	0.7923
134	Eritrea	0.2072	84	0.5685
135	Cameroon	0.2086	94	0.6744
136	Guinea	0.2094	25	0.4988
137	Malta	0.2152	130	0.8056
138	Cambodia	0.2187	70	0.7324
139	Austria	0.2200	161	0.8344
140	Azerbaijan	0.2206	168	0.8201
141	Vanuatu	0.2284	100	0.6971
142	South Africa	0.2364	162	0.7479
143	Jamaica	0.2401	148	0.7264
144	Denmark	0.2407	173	0.7523
145	Kiribati	0.2515	127	0.6992
146	Zambia	0.2542	149	0.5835
147	Liberia	0.2600	112	0.5572
148	Luxembourg	0.2610	157	0.7763
149	Solomon Islands	0.2613	71	0.6408
150	Antigua and Barbuda	0.2665	150	0.5349
151	Japan	0.2687	178	0.7748
152	Cyprus	0.2720	166	0.8362
153	Nepal	0.2849	67	0.5656
154	Benin	0.3074	78	0.5589
155	India	0.3075	79	0.6379
156	Niger	0.3143	91	0.3934
157	Pakistan	0.3144	101	0.6342
158	Angola	0.3173	107	0.5982
159	Lao PDR	0.3174	95	0.7208
160	Central African Republic	0.3193	144	0.4878
161	Sierra Leone	0.3232	111	0.5528
162	Côte d'Ivoire	0.3236	122	0.5439
163	Lesotho	0.3264	154	0.5870
164	Uganda	0.3268	135	0.6096

165	South Sudan	0.3345	89	0.5175
166	Guinea-Bissau	0.3349	83	0.5188
167	Kenya	0.3443	172	0.6299
168	Congo	0.3579	170	0.5799
169	Mauritania	0.3804	137	0.5360
170	Equatorial Guinea	0.3932	134	0.6355
171	Afghanistan	0.4044	141	0.5219
172	Bahrain	0.4136	180	0.6922
173	Ghana	0.4139	179	0.5905
174	Bangladesh	0.4206	145	0.5919
175	Tanzania	0.4273	175	0.4948
176	Gabon	0.4346	185	0.5687
177	Haiti	0.4367	165	0.5411
178	Togo	0.4475	174	0.5086
179	Sudan	0.4605	147	0.4182
180	Madagascar	0.4745	182	0.5032
181	Somalia	0.4786	186	0.3512
182	Nigeria	0.4802	176	0.5485
183	Timor-Leste	0.5321	151	0.5248
184	Papua New Guinea	0.6037	181	0.4621
185	Ethiopia	0.6070	183	0.3232
186	Chad	0.6777	184	0.3317

Appendix C

1. Data Descriptions

Variable	Description
SANITATION	The percentage of the population who are covered by flush or pour-flush to piped sewer system.
TB	The proportion of new smear-positive TB cases registered under a national TB control programme in a given year that successfully completed treatment (“cured”)
CLASS	The percentage of the population ten years or older that earns less than or equal to one times the minimum salary
RACE	The percentage of the population ten years or older that describe themselves as non-white (black, East Asian, brown, indigenous)

Source: Municipal Secretariat of Health, São Paulo (Secretaria Municipal da Saúde) Social Environmental and GIS information (Informações Socioambientais e Geoprocessamento)

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