CHATHAM HOUSE

Chatham House, 10 St James's Square, London SW1Y 4LE
T: +44 (0)20 7957 5700 E: contact@chathamhouse.org
F: +44 (0)20 7957 5710 www.chathamhouse.org
Charity Registration Number: 208223

CENTRE ON GLOBAL HEALTH SECURITY WORKING GROUP PAPERS

Fiscal Space for Domestic Funding of Health and Other Social Services

Di McIntyre and Filip Meheus

March 2014

WORKING GROUP ON FINANCING | PAPER 5

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ABOUT THE AUTHORS

Di McIntyre is a professor in the School of Public Health and Family Medicine, University of Cape Town, holds a South African Research Chair and was the founding director of the Health Economics Unit. She provides policy inputs within South Africa and other African countries, particularly on health care financing. Her current focus is on conceptual and empirical research on moving to universal health systems in low- and middle-income countries. She has also been centrally involved in developing health economics capacity within the African region.

Filip Meheus is a post-doctoral fellow in the Health Economics Unit, School of Public Health and Family Medicine at the University of Cape Town. His work focuses on the economics of health systems in low- and middle-income countries, in particular issues related to health care financing, equity and access to and utilization of health services. His second area of focus is the economic analysis of interventions for the control of neglected tropical diseases.

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EXECUTIVE SUMMARY

There is a need to increase government expenditure on health and other social services in many countries in order to achieve universal health coverage (UHC) and promote inclusive social and economic development.

Individual governments have an obligation to allocate the maximum available resources from domestic sources, and not simply rely on international assistance, in order to achieve the progressive realization of fundamental human rights. Ultimately, this requires adequate levels of government expenditure on a range of social services.

While government expenditure as a percentage of GDP is on average higher in 'advanced economies' than in other countries, there is no strong correlation between levels of government spending and economic development across individual countries (i.e., the size of a country's GDP does not 'predetermine' or dictate government spending levels).

Government revenue generation is the strongest determinant of government expenditure levels within individual countries; hence, emphasis should be on increasing government revenue.

While government revenue generation is influenced by a wide range of factors, there are mechanisms whereby each country can seek to increase revenue and push the envelope of maximum available resources for meeting fundamental human rights. The emphasis should be on increasing revenue through the most progressive means possible; the purpose of raising government spending on social services to meet human rights obligations would be defeated if that spending were funded by increasing the relative tax burden of those who are meant to benefit. Options for boosting government revenue include:

- In the case of countries that are rich in mineral and other natural resources, ensuring that government revenue from this source is maximized and not exploited by private or foreign groups (e.g., through extraction by state-owned entities or levying appropriate royalty payments if resources are extracted by private companies);
- Ensuring good tax compliance by taking steps to reduce tax avoidance and evasion, particularly by high net worth individuals, high-profit companies and transnationals (such steps require global cooperation and improved transparency); and
- Assessing whether tax rates on personal income and company profits can be raised (global cooperation is also required in relation to corporate tax, given international tax competition to attract investment).

Conducted from the perspective of providing both financial protection and access to needed health services, an analysis of the relationship between government spending on health and various indicators related to the goal of UHC supports a target of domestic government spending on health of at least 5% of GDP. Moving towards this target should not be at the expense of government spending on other social services – hence the emphasis on exploring ways of increasing government revenue in countries where total government expenditure as a percentage of GDP remains relatively low.

Achieving this target is an aspirational goal for many low-income countries and, even if achieved, would translate into insufficient resources to fund universal primary health care (PHC) services, which we estimate requires a minimum of $86 per capita (in 2012 terms). Therefore, the target of domestic public funding for health care of at least 5% of GDP should be supplemented with a target of $86 per capita in low-income countries. Considerable development assistance for health (DAH) is required to supplement domestic public spending in low-income countries to meet this minimum per capita spending target.

It would be unethical to argue for increased government funding of the health sector if those resources were used neither efficiently nor equitably. The pace of increasing funding allocations must align with absorptive capacity and strategic purchasing reforms.

1. INTRODUCTION

This paper addresses issues related to the fiscal space for increasing *domestic* government funding of health care and other social services. Fiscal space for health care has been defined as the ability of a government to allocate more resources to the health sector without prejudicing the sustainability of its financial position (Tandon and Cashin, 2010).

The context for devoting this paper to a critical assessment of fiscal space issues is twofold. First, universal health care (UHC) tops the global health policy agenda and calls for health systems in which everyone has access to the services they need (irrespective of whether such services are preventive, promotive, curative, rehabilitative or palliative), services of adequate quality to be effective and universal financial protection from the costs of using those services. *The World Health Report 2010* unambiguously states that in order to move towards UHC, *mandatory pre-payment* financing mechanisms must form the core of domestic health care financing (WHO, 2010b). Mandatory pre-payment funding includes tax and other government revenue (e.g., royalties on the exploitation of mineral resources), regardless of whether those funds are placed in a general government revenue pool or dedicated to the health sector, and mandatory health insurance contributions. In this paper, the various financing mechanisms are all regarded as government funds (even if they are managed by insurance schemes) as there is a very fine line between a 'dedicated tax' and 'mandatory health insurance contributions'. Indeed, ministries of finance generally regard mandatory social security contributions as part of the 'tax burden' on residents when addressing fiscal issues. Equally important from a UHC perspective, the focus is on minimizing fragmentation in funding pools, which, in turn, results in an emphasis on universal pooled mandatory pre-payment funds that can be used for the benefit of all, irrespective of whether the funds are considered to derive from taxes or mandatory insurance contributions.

The second contextual factor is the current debate about the post-2015 global development goals. Four dimensions of sustainable development identified by the UN System Task Team on the Post-2015 UN Development Agenda (2012) frame that debate: inclusive social development; environmental sustainability; inclusive economic development; and peace and security. As noted by the UN System Task Team: 'Ensuring people's rights to health and education, including through universal access to quality health and education services, is vital for inclusive social development' and requires investment to 'close the gaps in human capabilities that help perpetuate inequalities and poverty across generations' (ibid., p. 26). Inclusive economic development similarly requires investment in people's capabilities through public spending on social services, particularly health, education and nutrition, as noted in the most recent *Human Development Report* (UNDP, 2013). Public spending on social services is a means of income redistribution and contributes to sustained inclusive economic development.

Thus both the health policy focus on UHC and the broader post-2015 sustainable development goals discussions call for increased government funding of health and other social services. Although this paper sometimes refers only to funding of health services, its aim is to focus more broadly on the fiscal space for increased government spending on a range of social services that ultimately contribute to improved health status taking into account the social determinants of health.

This paper has an explicit value base in that it adopts a human rights and 'maximum available resources' approach (Balakrishnan et al., 2011). The basis for that approach is Article 2.1 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), which asserts that

> *Each State party to the present Covenant undertakes to take steps,* individually *and through international assistance and co-operation, especially economic and technical,* to the maximum of its available resources, *with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures [emphasis added].*

Thus the point of departure of this paper is the obligation of each government to make resources available (or to legislate to ensure that resources are made available) to the maximum extent possible in order to fulfil the right to health care, education and other basic human needs. As will

be discussed later, there should be an explicit equity focus to ensure that inequalities in fulfilling those rights across groups are reduced as rapidly as possible.

The ongoing need for external funding for health and other social services in many low- and middle-income countries (LMICs) is considered in other papers for the Chatham House Working Group on Financing.[1] As regards the focus of this paper, it is critical to examine the issue of domestic funding for health care (and other social services) in its own right as Article 2.1 of the ICESCR places an obligation on 'each State […] individually'. Hence the obligation to pursue the limits of 'maximum available resources' applies as much to domestic resources as to international assistance. While each government should have autonomy in deciding on the allocation of its domestic resources to individual sectors, such decisions must be taken within the context of the government's legal obligation to ensure health as a human right – i.e., governments must be held accountable for ensuring 'maximum available resources' for *each* of the ICESCR rights, one of which is the right to health.

Fiscal space concepts and the focus of this paper

Fiscal space refers to the budgetary room that allows a government to devote resources to specific services or activities without endangering the sustainability of its financial position (Tandon and Cashin, 2010).

There are two major factors that not only influence domestic government spending on health care (and other social services) but are the key policy levers for increasing such spending:

- The level of total government expenditure; this can be expressed as government expenditure as a percentage of GDP, which, in turn, is influenced by government revenue as a percentage of GDP and government debt levels; and
- The percentage of total government expenditure devoted to the health sector (and other social sectors) – i.e., the prioritization of spending on the health sector.

Obviously, GDP growth is itself an important variable influencing levels of government expenditure. However, it is beyond the scope of this paper to assess strategies for promoting GDP growth. Instead, the focus is on government revenue and expenditure relative to GDP.

To date, most of the literature on the fiscal space for health care has focused on budget reprioritization in favour of the health sector, increasing external funding for health care, generating sector-specific funding (e.g., possible dedicated taxes or mandatory health insurance) and improving efficiency in the use of health-sector funds, sometimes with a limited focus on the macro-economic context (Tandon and Cashin, 2010). This is understandable, given that the more fundamental fiscal policy issues (e.g., government revenue, expenditure and debt levels) are generally seen as beyond the domain of the health sector.

This paper does not consider in detail the issue of prioritization of spending on the health sector. As noted above, it also does not discuss external funding. Rather, it focuses on levels of domestic government expenditure and particularly domestic government revenue generation (be it through dedicated taxes or general revenue mechanisms).

It is true that these issues are not generally regarded as belonging to the domain of health system analysts and policy-makers. However, if countries are to deliver on the rights contained in the ICESCR, achieve UHC and make progress towards the post-2015 sustainable development goals, these issues must not be left to an elite group of macro-economists, ministries of finance and international financial organizations. Instead, there must be broader societal pressure for 'maximum available resources' to ensure fundamental human rights.

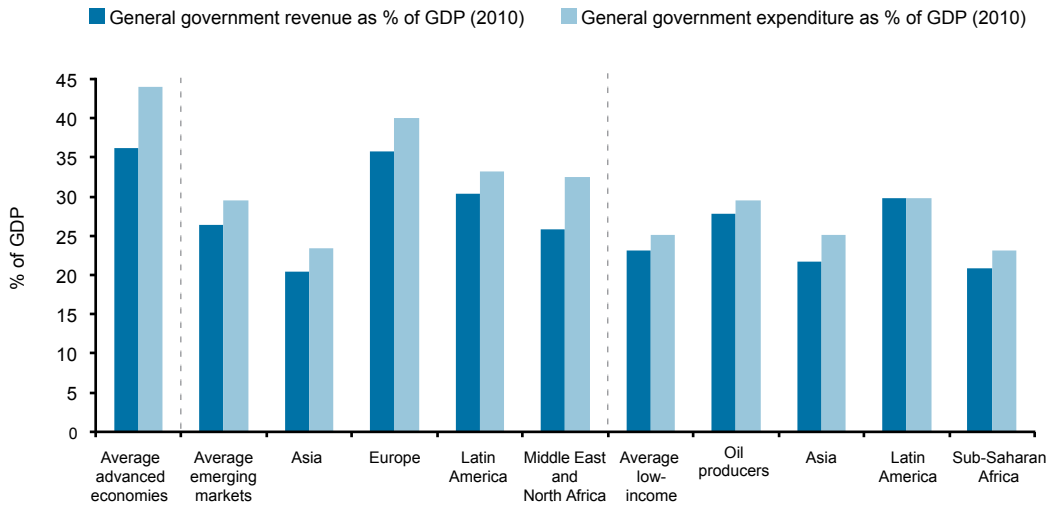
1 See Moon and Omole (2013), and Ooms and Hammonds (2014).

2. OVERVIEW OF GOVERNMENT REVENUE, EXPENDITURE AND DEBT LEVELS BY COUNTRY CATEGORY

Figure 1 provides an overview of government revenue and expenditure by country category (based on the IMF country categories). It should be noted that government revenue and expenditure include resources generated through tax and other government sources such as the exploitation of mineral or other natural resources and social security or mandatory insurance contributions. There is a relationship between the country categories and *average* government revenue and expenditure levels. Government revenue in 2010 ranged from an average of slightly more than 35% of GDP in advanced economies to just over 25% in emerging markets and less than 24% in low-income countries. Government expenditure was nearly 45% of GDP in advanced economies, just under 30% in emerging markets and 25% in low-income countries. Thus most countries in all categories were operating deficit budgets in 2010 – which is unsurprising, given the global economic crisis at that time. However, the size of the budget deficit was far lower in low-income countries (less than 2% of GDP) than in emerging markets (less than 4% of GDP) and particularly advanced economies (almost 8% of GDP). The lowest levels of government revenue and expenditure are found in sub-Saharan Africa and the emerging markets in Asia (which include China and India).

The next sections examine in more detail the levels of government expenditure, revenue and debt across countries.

Figure 1: Government revenue and expenditure as % of GDP by country category (2010)

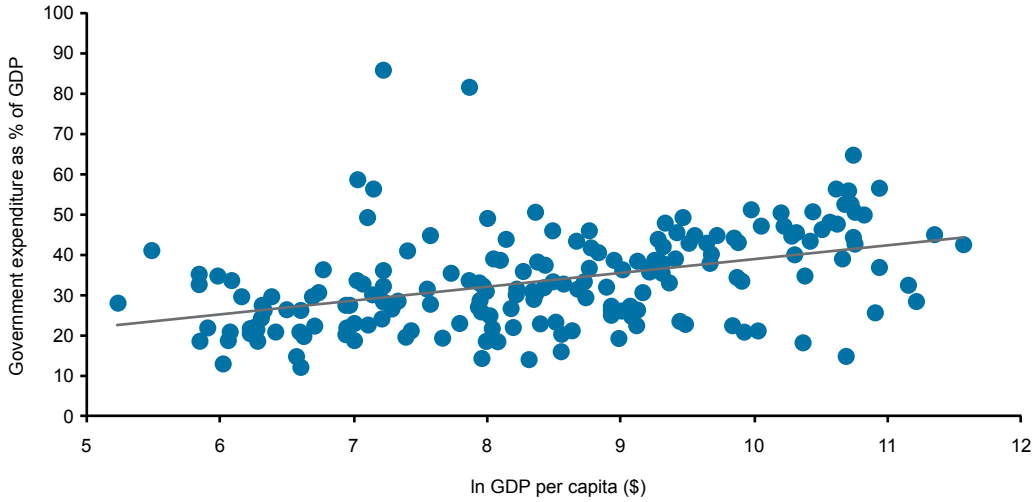


Source: IMF (2012a).

Government expenditure levels

There is considerable variation in government expenditure relative to GDP across countries. Figure 2 shows that across the 184 countries for which data are available in the IMF's database, government expenditure ranges from less than 13% of GDP (in countries such as Burma (Myanmar) and Madagascar) to more than 55% of GDP (in countries such as Finland, Denmark, France and Ireland), whereas in outliers such as Iraq, government spending exceeds 80% of GDP. While the relationship between per capita GDP and government expenditure relative to GDP is positive, it is a relatively weak correlation ($R^2 = 0.368$). Some high-income countries/jurisdictions have relatively low levels of government expenditure, such as Singapore (14.7% of GDP) and Hong Kong (18% of GDP). Conversely, some low-income countries have relatively high levels of government expenditure, such as Lesotho (58.8% of GDP) and the Solomon Islands (56.4% of GDP).

Figure 2: Relationship between log of per capita GDP and government expenditure (2010)



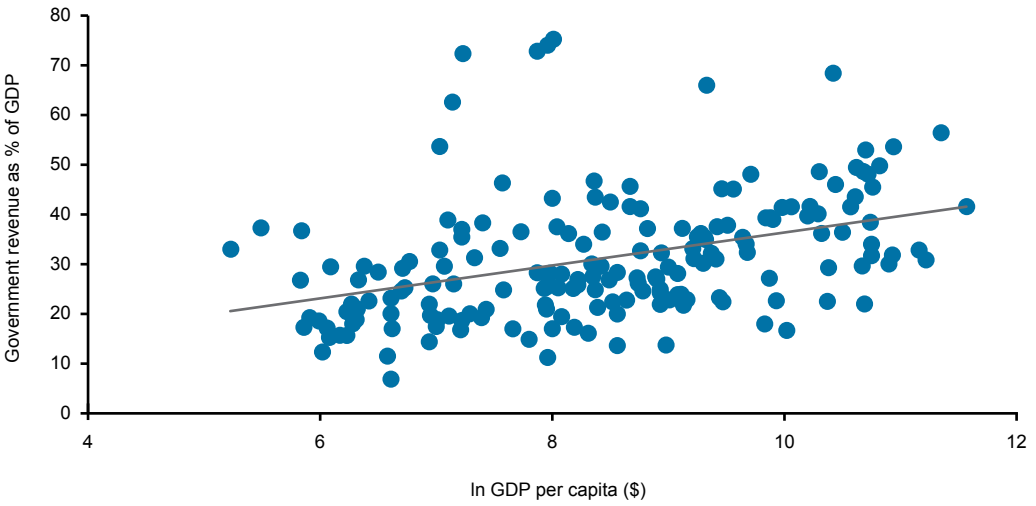
Source: IMF (2012b).

Thus, although Figure 1 shows that the level of government expenditure tends to be higher on average in advanced economies than in emerging markets and low-income countries, those averages obscure wide variations across countries, reflecting fiscal policy choices and the level of government revenue generated.

Government revenue levels

As with government expenditure, there are wide variations in government revenue levels across countries. Government revenue as a percentage of GDP ranges from 6.9% in Myanmar and less than 12% in Guatemala and Bangladesh to more than 50% in countries such as Finland, Denmark and Norway as well as other oil-producing countries such as Libya and Kuwait and some outlier low-income countries (particularly those emerging from long-standing conflict such as Iraq and Timor-Leste). As shown in Figure 3, there is a weak yet positive correlation ($R^2 = 0.349$) between per capita GDP and government revenue levels.

Figure 3: Relationship between log of per capita GDP and government revenue (2010)



Source: IMF (2012b).

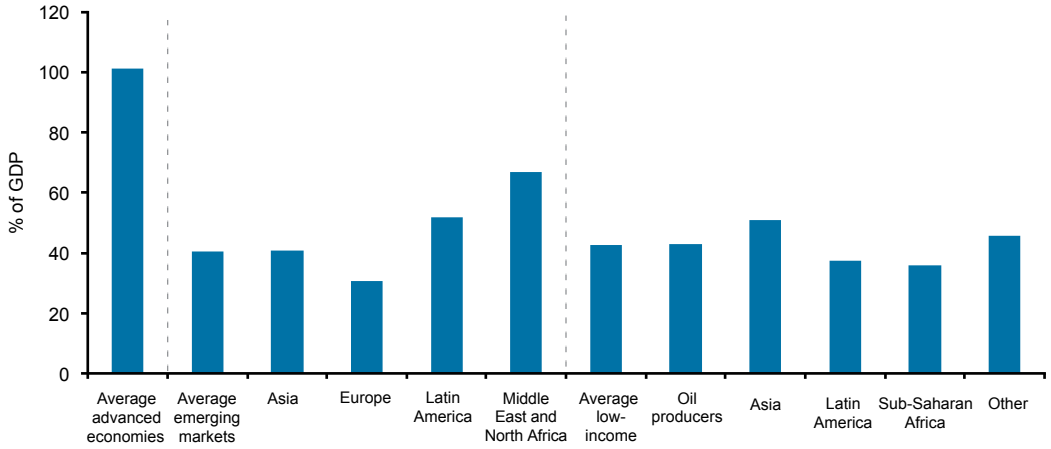
Government debt levels

As Figure 1 shows, all categories of country were operating on deficit budgets in 2010. Figure 4 provides an overview of the levels of government debt. The IMF has indicated that it regards 'a debt to GDP ratio of 60% for high-income countries and 40% for LMICs as "prudent" debt levels' (Chowdhury and Islam, 2010). However, there is no substantive basis for those recommendations: the 60% ratio is simply the median debt to GDP ratio in Europe at the time of moving towards monetary union. The IMF referred to the LMIC ratio as a 'useful benchmark' but added that

> *it bears emphasizing that a debt ratio above 40 percent of GDP by no means necessarily implies a crisis – indeed […] there is an 80 percent probability of not having a crisis (even when the debt ratio exceeds 40 percent of GDP) (quoted in Chowdhury and Islam, 2010).*

What is interesting to note from Figure 4 is that while most of the so-called emerging markets and low-income countries have complied with the IMF's 'prudent' debt levels (the exceptions being the Middle East and North Africa region, where many oil-producing countries are located), the advanced economies have not. Countries belonging to this last category registered gross debt levels exceeding 100% of GDP in 2010.

Figure 4: Government gross debt as % of GDP by country category (2010)



Source: IMF (2012a).

3. CAN LMICs CREATE FISCAL SPACE FOR DOMESTIC FUNDING OF HEALTH AND OTHER SOCIAL SERVICES?

The above overview highlights that although levels of government revenue and expenditure are generally lower in LMICs than in high-income countries, there is considerable variation across countries. This raises the question of whether LMICs that currently have relatively low levels of government expenditure are able to create budgetary room to allow them to devote an increasing amount of resources to social services over time without jeopardizing financial sustainability.

From this perspective, there are clearly concerns about constantly running a deficit budget and developing an unsustainable level of government debt. If domestic public expenditure on social services is to be increased, it will be necessary to explore ways of increasing government revenue. Deficit financing, which could be used to increase such spending in the short term, is an important mechanism for avoiding spending cuts on social services during periods of economic crisis. While operating a deficit budget is not a favourable option in any context, it is more appropriate to incur debt to develop assets, such as investing in human capital development, than to increase spending on military activities (Balakrishnan et al., 2011).

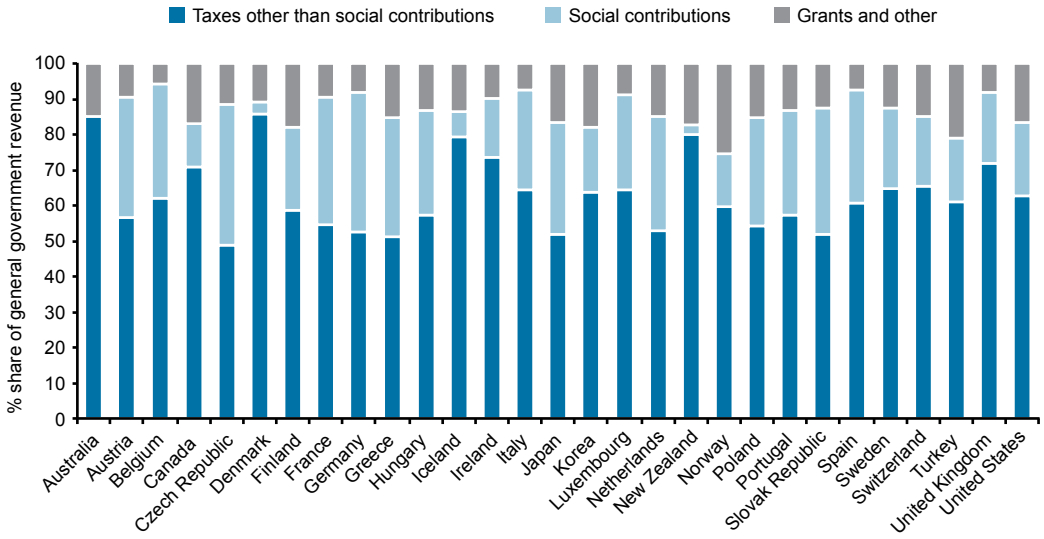
The following sections of this paper consider ways in which LMICs could potentially increase government revenue. First, various sources of government revenue are examined, and then issues involving tax rates and related taxation policy issues are discussed. Finally, other government revenue sources are considered.

Overview of government revenue sources

A range of factors influences government revenue levels, including the types of revenue that can feasibly be generated within a specific country. On average in OECD countries, 63% of government revenue is generated from taxes, 24% from social contributions and 13% from grants and other revenue (OECD, 2013). The generation of revenue through social contributions is partly related to the level of formal-sector employment; generating much revenue from this source is difficult if formal-sector employment is low. However, it is also related to country preferences as regards levying social contributions. For example, as shown in Figure 5, while social contributions are widely used as a revenue source in many European countries, their use is very limited in countries such as Australia and New Zealand, despite those countries having high levels of formal-sector employment.

Grants from foreign governments or international organizations are quite rare in OECD countries, but other revenues (e.g., proceeds from the sale of state assets or natural resources and income from state-owned property) can be significant in some member countries. For example, as shown in Figure 5, Norway raises more than 25% of revenues from other sources – above all, the sale of oil and oil products.

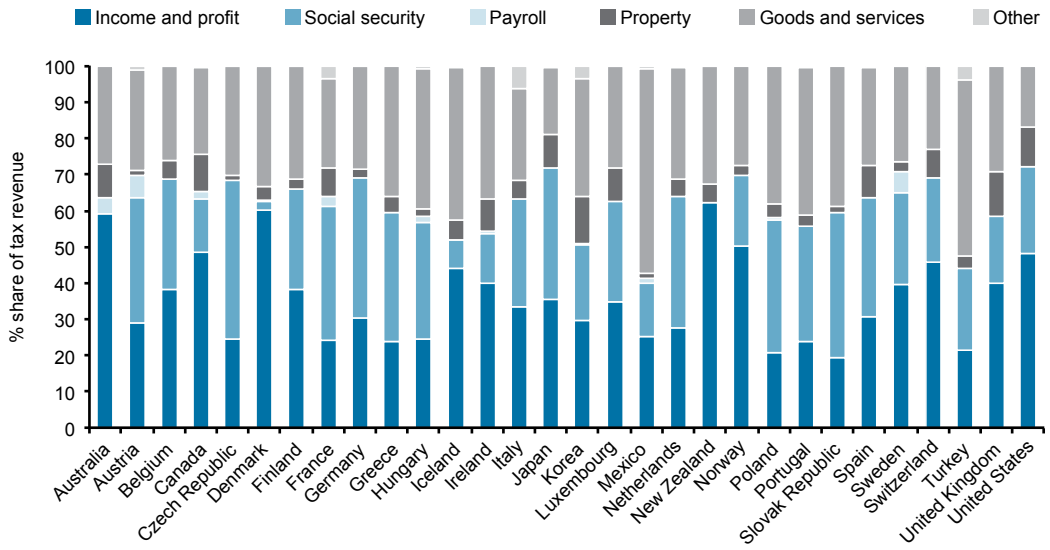
Figure 5: Distribution of government revenue in OECD countries by type of revenue (2009)



Source: OECD (2013).

The level of government revenue is also influenced by the types of tax that a government chooses to levy and the rate of each tax levied (the latter issue is considered in the next section). On average in OECD countries, income and profit taxes account for 36% of tax revenue, mandatory social contributions (which, as noted above, are a form of dedicated tax) 25%, payroll taxes 1%, property taxes 6%, taxes on goods and services (e.g., VAT or general sales tax [GST]) 32% and other taxes less than 1%. Figure 6 shows that income and profit taxes and social contributions (which are also levied on income) account for the bulk of tax revenue in most OECD countries.

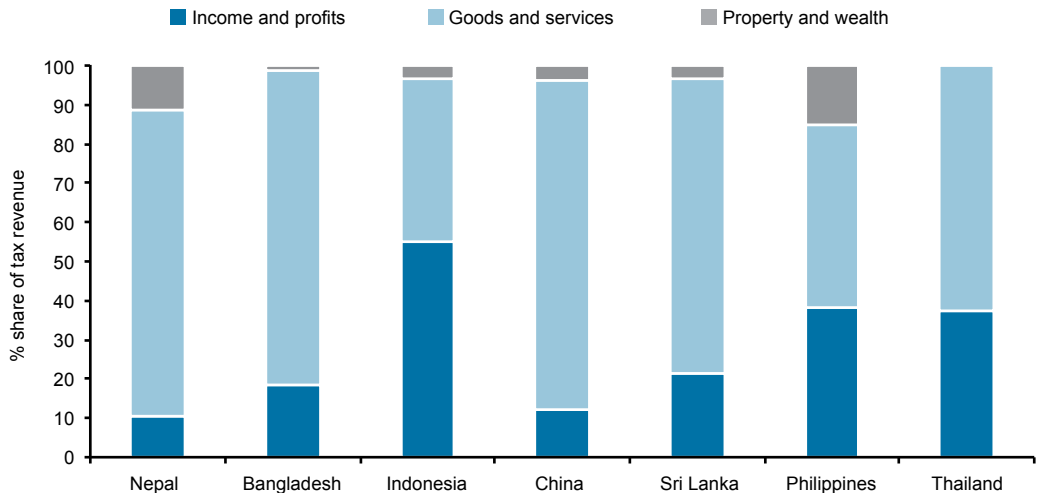
Figure 6: Distribution of tax revenue in OECD countries by type of tax (2009)



Source: OECD (2013).

Figure 6 also shows that taxes on goods and services account for a much higher share of total tax revenue in OECD countries that do not fall into the high-income category (such as Mexico and Turkey) than in other OECD countries. Though based on data that are not directly comparable (as they are taken from a different source and may not include all taxes incorporated in the OECD dataset), Figure 7 shows the distribution of tax revenue by type of tax for LMICs in Asia for which data were available at the time. It, too, highlights the relatively heavy reliance on indirect taxes on goods and services (e.g., VAT or GST and excise and import duties); however, there is variation across countries.

Figure 7: Distribution of tax revenue selected Asian countries* by type of tax (1999–2000)



*Arranged in order according to per capita GNI.
Source: O'Donnell et al. (2005).

In general, there is greater reliance on indirect (as opposed to direct) taxes in LMICs than in high-income countries; this is related to the far lower levels of formal-sector employment in the former. However, across countries with comparable GDP and formal-sector employment levels, there are differences in the level of total tax revenue and the distribution of that revenue by type of tax. Tax rates are a key factor contributing to those differences.

Tax rates

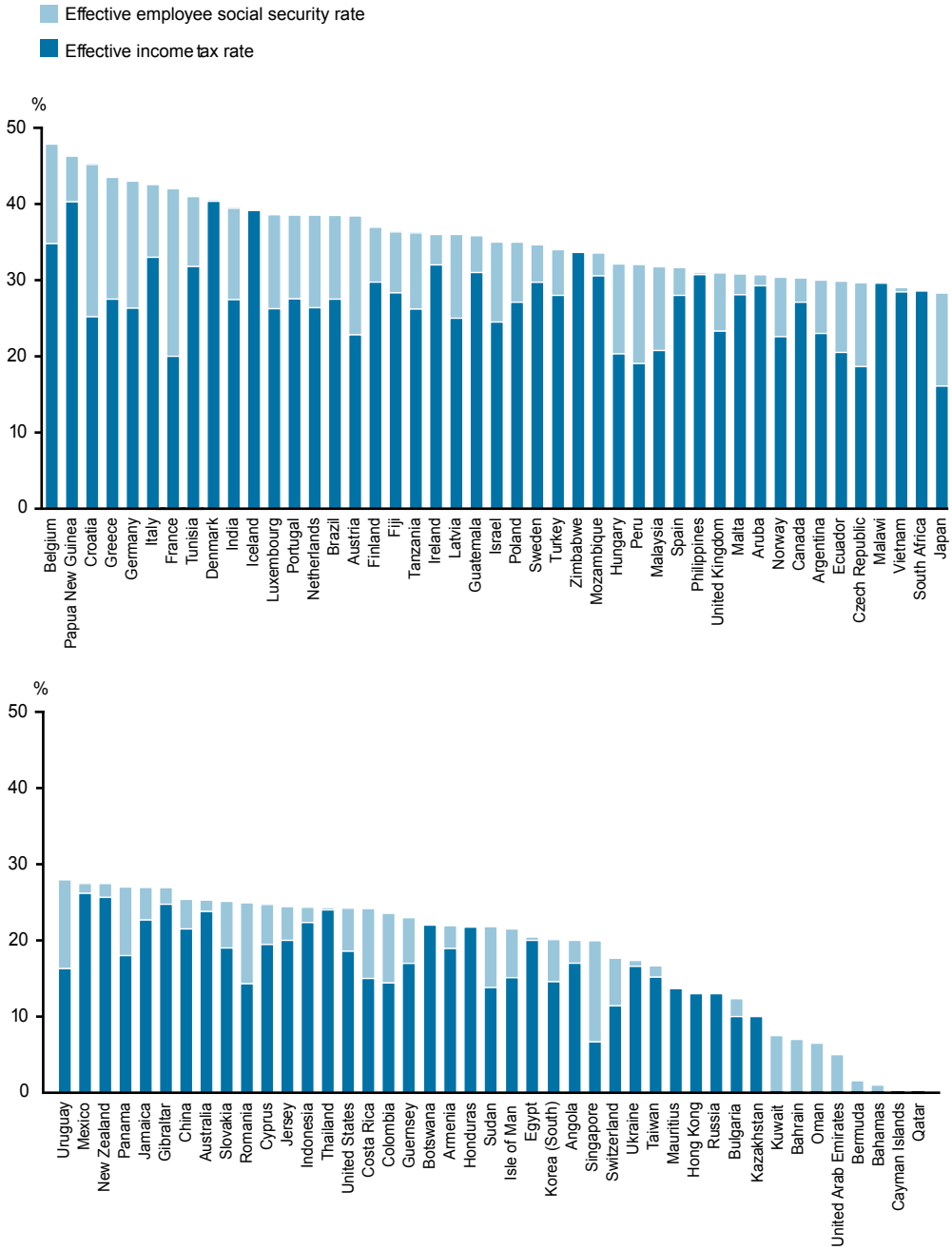
There is considerable variation in the rates of the different types of tax – direct (e.g., income tax) or indirect (e.g., VAT or other taxes on goods and services) – across countries. For example, within the EU, VAT rates range from 15% in Luxembourg and 18% in Cyprus and Malta to 25% in Croatia, Denmark and Sweden and 27% in Hungary (European Commission, 2013). Outside the EU, lower VAT rates can be found: 5% in Taiwan, 7% in Thailand and 10% in Botswana, Lebanon and South Korea (USCIB, 2013). Some jurisdictions, such as the Canary Islands, Guernsey and Hong Kong, levy no VAT or GST.

Figure 8 illustrates that rates of personal income tax and mandatory social security contributions (which are a form of taxation on personal income) vary considerably across countries too. Those variations do not follow a set pattern according to the level of economic development. For example, while Papua New Guinea and India have per capita GDP levels of less than $2,000, they levy some of the highest taxes on personal income and mandatory social security contributions, alongside highest-income countries such as Luxembourg (per capita GDP of $105,509), Denmark ($56,369) and Belgium ($43,593).

Some countries/jurisdictions, such as Denmark, impose high direct income taxes and social security contributions as well as high indirect taxes such as VAT. Others, such as Luxembourg, have high direct taxes but low VAT relative to other EU countries. Still others, such as Taiwan and Hong Kong, have both low direct income taxes and low VAT, although taxes on goods to which VAT does not apply may be high in those jurisdictions – e.g., Hong Kong levies taxes of 35–100% on motor vehicles (USCIB, 2013).

The rates set for the various categories of direct and indirect tax are ultimately a matter of fiscal policy choice. The next section explores some issues that may influence that choice.

Figure 8: Effective income tax and social security rates on $100,000 of gross income



Source: KPMG (2011).

Some factors influencing domestic taxation policy choices

A key factor that can, or at least should, influence the relative emphasis placed on different forms of taxation, including the rate of each type of tax, is that of equity. From an equity perspective, there is a relative preference for progressive rather than regressive forms of taxation. In general, direct taxes tend to be progressive and indirect taxes regressive (Van Doorslaer and Wagstaff, 1993; Wagstaff et al., 1999). However, some recent studies have found that in some LMICs, VAT and other indirect taxes can be mildly progressive (Mills et al., 2012; O'Donnell et al., 2008). While taxes on goods and services may not be regressive in many low-income countries, they are unquestionably less progressive than taxes on personal income and corporate profits and are strongly regressive in most middle- and high-income countries (Mills et al., 2012; O'Donnell et al., 2008; Wagstaff et al., 1999).

It defeats the purpose of investing in expenditure on social services if the revenue used for such expenditure is generated from regressive sources. For example, the UN special rapporteur on the right to food noted with reference to Brazil:

> *The tax structure in Brazil remains highly regressive. Tax rates are high for goods and services and low for income and property, bringing about very inequitable outcomes. … [W]hile the social programmes developed under the 'Zero Hunger' strategy are impressive in scope, they are essentially funded by the very persons whom they seek to benefit, as the regressive system of taxation seriously limits the redistributive aspect of the programmes. (Quoted in Balakrishnan et al., 2011)*

Progressive tax revenue sources should be prioritized in seeking to secure 'maximum available resources' to deliver on fundamental human rights, particularly in countries with high levels of income inequality. While in the past, international financial organizations such as the IMF have argued that taxes on personal income and corporate profits should be kept to a minimum to encourage savings and investment, respectively, there is scope for raising such taxes in some countries. Figure 8 illustrates that there are many countries that have relatively low personal income taxes and social security contributions.

However, a key problem is 'tax competition' whereby some countries lower corporate taxes or offer other tax benefits in order to attract investment. While some analysts argue that such competition is healthy, there are growing international concerns about its harmful aspects – namely, that it encourages a 'race to the bottom', which ultimately leads to tax revenue losses in all countries involved in that race. The average corporate tax rate in OECD countries declined from 37.6% in 1996 to 28.3% in 2006 (Tax Justice Network, 2012). Unsurprisingly, tax competition is particularly harmful for lower-income countries and weaker states, which are less capable of dealing with such competition and ultimately suffer because of their lower revenue bases (Keen and Simone, 2004). There have been some efforts to address the issue, such as those outlined in the 1998 OECD report *Harmful Tax Competition*; but they have been largely unsuccessful (Tax Justice Network, 2006). The OECD is now focusing on promoting transparency in company earnings and tax payments and the sharing of information across countries' tax authorities.

Other factors affecting tax revenue

Another practice closely associated with tax competition involves transnational companies avoiding corporate tax by 'transferring' earnings from activities in countries with higher tax rates to countries with low or zero taxes. For example, an ActionAid report documented how SABMiller, which owns most of the breweries in Africa and makes profits of more than £2 billion a year, pays no tax at all in countries such as Ghana (ActionAid, 2010). It is able to avoid doing so because the brands of beer sold in African countries, though invented locally, are owned by SABMiller in the Netherlands. The African breweries pay the Dutch company massive royalties, on which the latter pays very little tax owing to the tax regulations in the Netherlands. Moreover, profits are gained through substantial management service fees that the African breweries have to pay to SABMiller's sister companies based in Switzerland, where taxes on such earnings are minimal too.

Transfer pricing – whereby inputs are sold at highly inflated prices to a sister company so that very little profit is reflected in countries with high tax rates – is also frequently used for tax avoidance purposes. Although tax avoidance is not illegal insofar as companies comply with tax laws but simply ensure that profits are reflected to the greatest extent possible in countries with the lowest tax rates, many would nonetheless regard it as immoral, particularly when governments of LMICs are being deprived of desperately needed tax revenue to meet the social service needs of their population. The South African minister of finance has described 'aggressive tax avoidance' as a 'serious cancer eating into the fiscal base of many countries' (quoted in ActionAid, 2010).

Multinational corporations are not alone in practising tax avoidance. Domestic companies and high net worth individuals are frequently engaged in tax avoidance practices, too, not least because they have the resources to employ skilful tax consultants who ensure that the minimum tax is paid. For example, a recent investigation by the South African Revenue Service (SARS) determined that there are approximately 9,300 high net worth individuals (defined as those with a gross income of more than R7 million per year and/or assets in excess of R75 million) but only 360 of them are registered as taxpayers. SARS estimated that it was losing R48 billion in tax revenue annually from those individuals, which is equivalent to about 7% of total government revenue (Vanek, 2012).

Countries such as South Africa and Kenya have demonstrated how tax revenue can be increased significantly through improving tax compliance and without increasing tax rates (Hausman, 2010). This was achieved in South Africa by increasing the management capacity of the revenue authority, changing the authority's organizational culture to one of delivering a service and zero tolerance for corruption, offering amnesties for tax evaders (i.e., those who had previously evaded tax are able to begin declaring taxable income without being penalized for previous evasion) and taking legal steps against those who remained non-compliant.

To increase the fiscal space for government spending on health and other social services, it is crucial that tax revenue authorities introduce measures to improve tax compliance if it remains weak. However, this may require overall improvements in state governance (particularly addressing corruption) as compliance may be weak owing to lack of trust that the government will use tax revenue appropriately. In addition, steps need to be taken to reduce the potential for tax avoidance. This is likely to be easier to achieve in the case of domestic companies and individuals.

As regards both tax avoidance by transnational corporations and less legal but equally immoral activities such as capital flight, it is necessary to increase global cooperation and improve transparency, although those tasks have proved difficult to achieve to date. Nevertheless, it is important not only to exert moral suasion but also to highlight the potential for high-income countries to reduce their international aid responsibilities through creating an environment in which LMICs can increase their domestic government revenue. For example, it is estimated that the amount of annual tax revenue lost to developing countries as a result of trade mispricing (i.e., a multinational sells inputs or products to a 'sister' company in an LMIC at highly inflated prices so that the 'sister' company does not make profits in that country – rather, most profits are made by the 'parent' company located in a country with low corporate profit tax) is $98–106 billion, compared with total overseas development assistance of $83.5 billion in 2009 from the member countries of the OECD's Development Assistance Committee (Balakrishnan et al., 2011). Suggested approaches to addressing this challenge include ensuring greater transparency in reporting on business activities and tax payments across the globe and the automatic exchange of information across tax authorities worldwide (ActionAid, 2010; Tax Justice Network, 2006; Tax Justice Network, 2012). More ambitious proposals, including unitary taxation systems and taxing transnational companies on a consolidated basis and apportioning the revenue to states according to the geographical distribution of economic activities, are less likely to be enforceable.

Non-tax options for increasing government revenue

As noted above, some oil-producing countries are able to generate substantial government revenue relative to GDP. Figure 8 above highlights that oil-producing countries (such as Qatar, the United Arab Emirates, Oman, Bahrain and Kuwait) can avoid imposing any income taxes but are still able to generate substantial government revenue through oil extraction (e.g., government revenue accounts for 31% of GDP in Qatar, 30% in the United Arab Emirates, 39% in Oman, 27% in Bahrain and 68% in Kuwait).

However, some countries with extensive oil or other natural resource reserves could potentially generate more government revenue from this source. Thus key factors influencing total revenue are whether a country has mineral and/or other natural resources and whether the government has instituted appropriate policies to ensure that the country as a whole benefits from the exploitation of those resources (e.g., through extraction by a state-owned company or through securing appropriate royalties from private companies that extract the natural resources). Good governance is also critical: according to a recent report, in the first half of 2013 Nigeria lost about 5% of its oil output through theft (Katsouris and Sayne, 2013). Maximizing domestic government revenue from natural resources is becoming an increasingly important issue in Africa, not least following the discovery of oil in Ghana and gas resources in Tanzania. To underscore the importance of this potential source of government revenue: oil revenues account for an estimated 70% of government revenue in Nigeria (Revenue Watch Institute).

Once again, global action is required to support improved governance in the exploitation of natural resources in LMICs. A positive initiative was the approval of legislation by the European Parliament in June 2013 that requires all extractive companies (in the oil, gas and mineral sectors as well as loggers of primary forests) to publicly disclose any payments to national or regional governments that exceed €100,000.

Summary of the potential for increasing government revenue in LMICs

A frequent response to calls for increasing government expenditure on health and other social services in LMICs is that those countries lack the fiscal space. The information presented above demonstrates that a country's level of economic development does not predetermine the level of government revenue as a percentage of GDP, nor does it dictate the tax rates that a country should levy. Rather, the level of taxation is a fiscal policy choice and a government's revenue-generating ability is influenced by factors such as natural resource reserves and policies on their exploitation, employment levels, the degree of tax compliance and the efficiency of revenue collection. For LMICs with relatively low levels of government expenditure, a range of options can be explored to increase government revenue in order to provide 'maximum available resources' for making progress in meeting obligations on human rights.

If a country has considerable mineral and other natural resources, a key starting point is to assess government policy on the exploitation of those resources and whether government revenue from that source could be increased. A principal concern, however, is that the natural resources will become depleted. But recent research has shown that if the state plays a strong role by adopting economic policies that provide incentives to invest in diversifying productive capacity and if it invests in social services (that build human capital), natural resource wealth can be harnessed for equitable and sustainable development (UNRISD, 2012).

For countries that are not rich in natural resources, a careful assessment of existing taxation policy and practice is necessary. Recent experience has demonstrated how government revenue can increase significantly through increased efficiency in tax collection and improved compliance. Only when such steps have been taken is it appropriate to consider raising taxes. From an equity perspective, priority should be given to generating revenue from direct taxes. However, in the context of low levels of formal-sector employment in low-income countries, it is unavoidable that indirect taxes comprise a large proportion of tax revenue. Some indirect taxes, such as those on luxury goods, are far more progressive than others, including VAT. In addition, the careful selection of goods and services to be VAT exempt or zero-rated can

reduce that tax's potential regressivity. There is a range of other 'innovative' financing options (such as financial transactions taxes) that are not explored in this paper as they are extensively documented elsewhere (see for example HLTF 2009a).

The ability of LMICs to successfully implement such strategies for increasing government revenue is in many ways dependent on supportive global action. That includes addressing tax competition and improving transparency in business activities, tax payments and payments to governments by extractive companies.

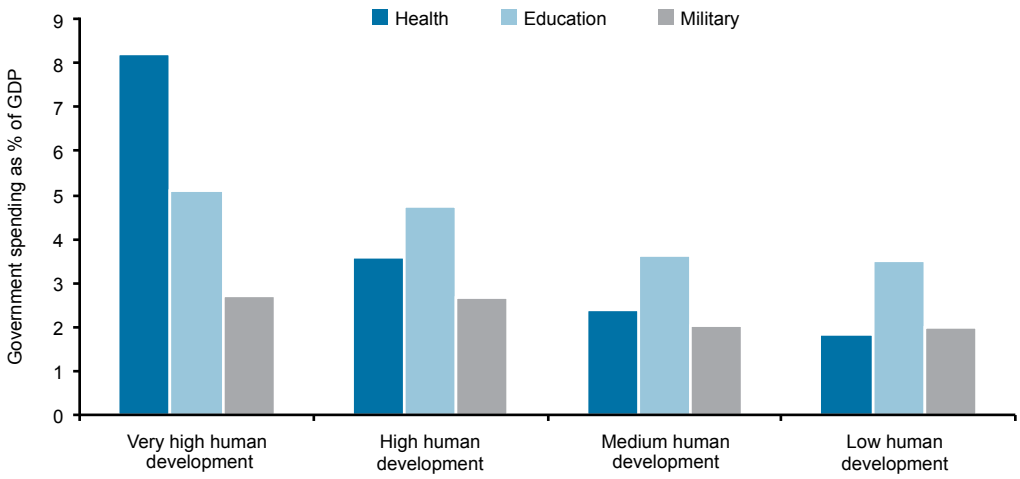
An important area for future research is the political economy of creating fiscal space. While this paper argues that there is considerable potential for increasing government revenue and expenditure in many LMICs, making this a reality depends on national political processes, which are often subject to external influence.

4. PRIORITIZING THE HEALTH SECTOR IN GOVERNMENT EXPENDITURE

The focus of the preceding sections has been the extent to which government expenditure on social services can be increased. The main means to this end is boosting domestic government revenue, but deficit financing and/or international funding aimed at realizing fundamental human rights can potentially play a role too. Once government revenue has been increased, there is no guarantee that additional funds will be allocated to the health sector. Ministries of finance hold considerable power in decision-making about the allocation of government revenue to individual sectors; thus the challenge is how to persuade them to invest more government resources in the health sector. Given the social determinants of health, increased public spending on the health system should not be at the expense of other social services that contribute to health status improvements. Hence this paper's main argument is that in countries where fundamental human rights are not being met, there should be efforts to increase government revenue and subsequently government expenditure on all social services, not just health care.

Nevertheless, ministries of health need to make better arguments for a fair share of government resources. Figure 9 shows that while government spending on education as a percentage of GDP ranges from an average of 3.5% of GDP in 'low human development' countries to an average of 5.1% of GDP in 'very high human development' countries, the range is much larger for government spending on health: from an average of 1.8% to an average of 8.2% of GDP across countries categorized according to the level of human development. It is interesting to note that military spending ranges from an average of just 2% to an average of 2.7% across those country categories.

Figure 9: Government spending on various sectors as % of GDP by country category (2010)



Source: UNDP (2013).

As the bulk of expenditure in both the health and the education sectors is related to human resource remuneration, such different distribution patterns between those two sectors across country categories would not necessarily be expected. Nevertheless, health technology advancements and the increasing demand for 'high tech' interventions, along with longer life expectancy and the higher cost of health care for the elderly, explain to some extent the substantially higher levels of government health care expenditure in 'very high human development' countries. However, a comparison across the three other country categories suggests that in some LMICs, the health sector is not as successful as the education sector in arguing for a fair share of resources.

Unfortunately, there is very little evidence of effective mechanisms for increasing health-sector prioritization in government expenditure (this issue is addressed in another paper for Working Group 2[2]). Some analysts propose arguing for the introduction of health-related dedicated taxes (e.g., excises on tobacco and alcohol products) or mandatory health insurance contributions on the assumption that funding for the health sector would be automatically increased, but this is not necessarily the case. Experience has shown that when certain taxes are dedicated to the health sector, ministries of finance offset those funds – partly or even completely – through reduced allocations to the health sector from general government revenues; i.e., the additional revenue from dedicated taxes or mandatory insurance contributions proves not to be forthcoming (Jones and Duncan, 1995). The one exception to this general pattern, observed from recent international experience, is when revenue from a dedicated health tax is earmarked for a new activity. An example is the Thai Health Promotion Fund, which was established through a dedicated 'sin tax' of an additional 2% surcharge on the sale of tobacco and alcohol products (Srithamrongsawat et al., 2010). However, this is a rare exception to the general trend of dedicated taxes displacing funding from general revenues.

Thus care must be taken to make strong arguments for an overall increase in government funding for health care in order to secure *additional* resources. In arguing for the allocation of a fair share of government resources to health services, a key question is: what level of government expenditure on health should countries be aiming for?

2 See Elovaino and Evans (2013).

5. POTENTIAL QUANTITATIVE TARGETS FOR GOVERNMENT FUNDING OF HEALTH CARE

At present, the only target related to government spending on health care that has been approved by a group of countries is the 'Abuja target'. In 2001, the heads of state of the African Union countries called for at least 15% of total government spending to be devoted to the health sector (OAU, 2001). Since then, very few African countries have reached that target or even made much progress towards reaching it (Govender et al., 2008). That is partly because ministries of finance have objected to a target that they regard as undermining their autonomy to make sectoral budget allocation decisions. Participants in the Third Joint Annual Meeting of the African Union and Economic Commission for the Africa Conference of Ministers of Finance, Planning and Economic Development in Malawi in March 2010 called for the Abuja target to be scrapped (Njora, 2010). Indeed, the reality is that finance ministries have been very dismissive of the target and have simply chosen to ignore it in their decision-making.

Another difficulty is that specifying a target for increasing the share of government expenditure on the health sector implies that spending on other sectors should decline, which could mean less expenditure on other social services; and this, in turn, could adversely affect other social determinants of health. Furthermore, given the large degree of variability in government revenue and expenditure (see Figures 2 and 3 above), it is problematic to set a target relative to the government budget since this, in itself, does not exert pressure on governments to ensure 'maximum available resources'.

Thus it is preferable to establish a target for government spending on health relative to the total economy – namely, GDP. In this way, advocacy for increasing government spending on the full range of human rights and social determinants of health can be applied in situations where 'maximum available resources' are not being achieved. Meanwhile, the main challenge remains: what percentage of GDP should a government spend on health services in order to meet the 'maximum available resource' objective?

Figure 9 suggests that the figure should be between 3.6% of GDP – the average for 'high human development' countries – and 8.2% of GDP – the average for 'very high human development' countries (note that the Human Development Index includes life expectancy as one aspect of human development). The basic argument is that this is the level of spending required to achieve the health component of human development. But the range noted above is very wide; hence it is necessary to establish what level is 'appropriate' within that range.

There are several possible bases from which to develop targets for government health spending as a percentage of GDP. In particular, they include exploring the correlation between government spending and variables relevant to the health sector across all countries for which data are available. Key variables that are appropriate in the context of UHC include indicators of health status, given that improving health status is a core goal of the health sector; indicators of the financial protection component of UHC; and indicators of access to and use of the necessary services component of UHC. All three indicators are considered below.

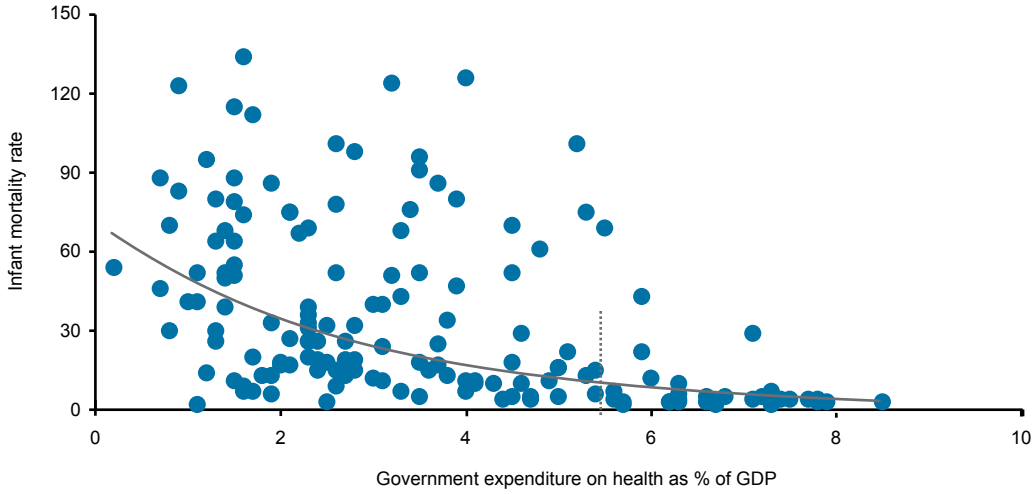
Another approach that has been used in the recent past is to set per capita targets for spending on health care that would provide minimum essential health services in low-income countries. Those targets are discussed below, as is the relationship between per capita targets and percentage of GDP targets.

Target based on relationship between government spending and health status

One approach is to assess government spending on health services relative to key health status indicators such as infant mortality rates (IMR). Although there is no strong correlation between IMRs and government health care spending levels (R^2 = -0.46), Figure 10 suggests that government spending on health care should be around 5.5% of GDP if the IMR is to be maintained at some 10 per 1,000 live births. At present, while IMRs vary significantly across

countries, the median IMR is 19 per 1,000 live births; and a growing number of countries have an IMR of 10 per 1,000 live births or fewer, including all high-income countries, most countries in transition (in Central and Eastern Europe) and LMICs such as Costa Rica, Cuba, Sri Lanka, Thailand and Uruguay. Thus while an IMR of 10 per 1,000 live births is an aspirational goal, it is certainly not an unrealistic one.

Figure 10: Relationship between IMR and government health spending (2009)

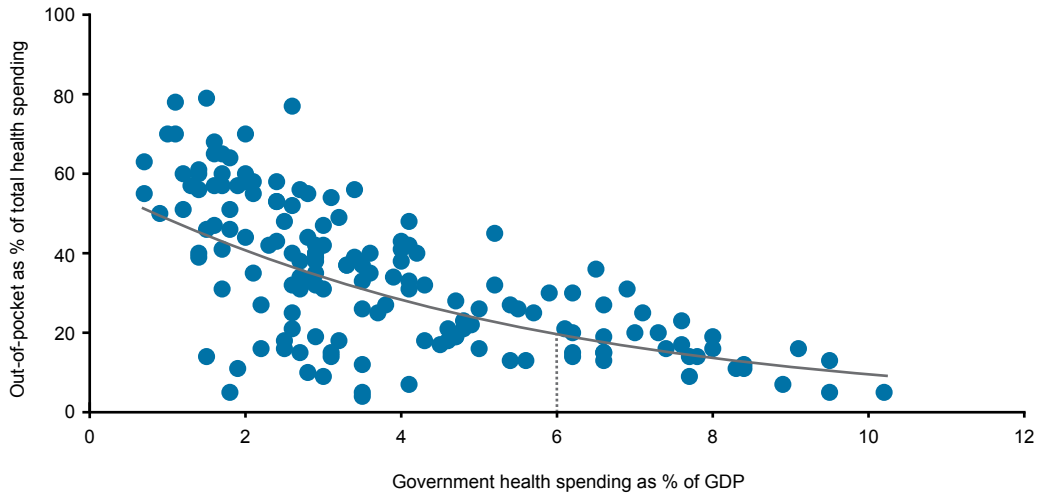


Source: *World Health Statistics*, 2011.

Target based on relationship between government spending and the financial risk protection goal of UHC

Another approach would be to take the policy goal of UHC and the related issue of financial protection from the cost of health care as a starting point. That policy could be achieved by promoting mandatory pre-payment financing (note that in this paper, mandatory health insurance contributions and tax funding are regarded as combined) and reducing reliance on out-of-pocket (OOP) payments for health care. From a financial protection perspective, the importance of minimizing OOP payments is demonstrated by Xu et al. in their 2003 study of 59 countries: 'A 1% increase in the proportion of total health expenditure provided by out-of-pocket payments is associated with an average increase in the proportion of households facing catastrophic payments of 2.2%.' Figure 11 shows that there is a strong correlation between government spending on health services as a percentage of GDP and the share of total health care expenditure funded from OOP payments (R^2 = -0.62). The *World Health Report 2010* stated that: 'It is only when direct payments fall to 15–20% of total health expenditures that the incidence of financial catastrophe and impoverishment falls to negligible levels' (WHO, 2010b: xiv). Thus this indicator suggests that a target of public spending of about 6% of GDP should be set if OOP payments are not to exceed 20% of the total amount spent on health care.

Figure 11: Relationship between government health spending and dependence on OOP payments (2011)



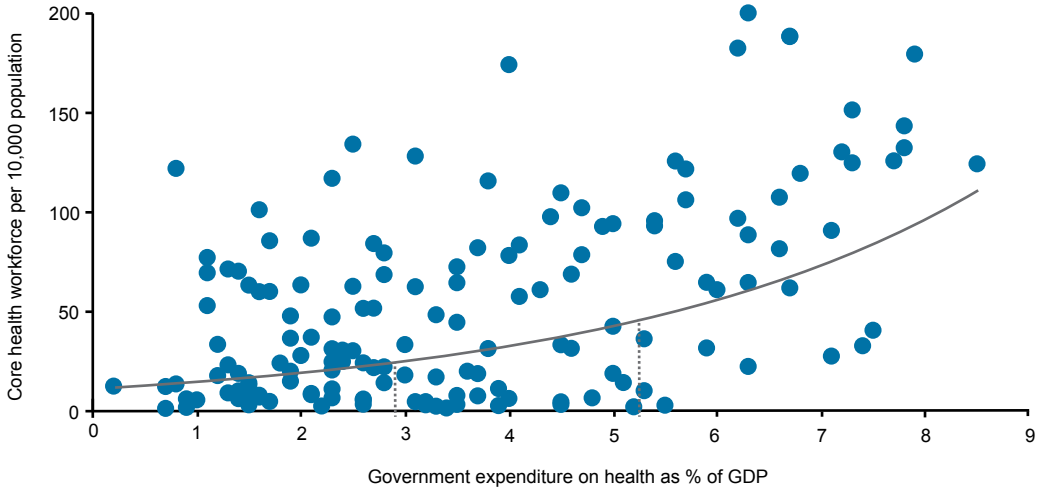
Source: Updated from McIntyre and Kutzin (2011).
Raw data from: http://apps.who.int/nha/database/DataExplorer.aspx?ws=1&d=1.

Target based on relationship between government spending and the UHC goal of access to health services

The other component of UHC is access to and use of health services for all citizens of a given country. The availability of data on this component relative to the need for health services is limited. Two indicators that are available – deliveries performed by a skilled birth attendant and child immunization coverage rates – do not provide a good indication of overall health service coverage as they refer only to two types of maternal and child health service, both of which have been singled out for significant improvement in the context of the Millennium Development Goals (MDGs). Nevertheless, analysis of both coverage indicators suggests that government spending on health of more than 5% of GDP will achieve a very conservative target of 90% coverage (data not shown). That target was adopted by the Commission on Macroeconomics and Health (CMH).

An indicator of the availability of health services that is widely used and for which the WHO has also set a target is that of health workers per 10,000 population. The WHO's Service Availability and Readiness Assessment project recommends a minimum of 23 core medical professionals per 10,000 population, which it defines as 'physicians, non-physician clinicians, registered nurses, and midwives' (WHO, 2012c). Figure 12 indicates that, based on the relationship between government expenditure on health and core health workforce indicators (R^2 = 0.53), government expenditure should be around 3% of GDP to reach the minimum target of 23 core medical professionals per 10,000 population and over 5% of GDP in order to achieve the current global average of 44 per 10,000 population. While the average for low-income and lower-middle-income countries is only 10 and 27 per 10,000 population, respectively, the average for upper-middle-income countries is 67 and for high-income countries 107.

Figure 12: Relationship between availability of core health workforce and government health spending (2009)



Source: Data from World Health Statistics, 2011.

Per capita government spending target for universal PHC services

Another way to establish a target for government spending on health care is through costing a set of key basic health services. At present, there are two main sources of estimates on the resource requirements that LMICs have to meet in order to provide such services:

- The CMH (2001), and
- The High-level Taskforce on Innovative International Financing for Health Systems (HLTF, 2009a).

Both have projected the per capita resource requirements for providing various basic services, especially those related to the health MDGs. The CMH focused on a very limited set of services dealing with AIDS, TB and malaria (ATM diseases) as well as immunizations, acute respiratory infections, diarrhoeal diseases, maternal and perinatal conditions and malnutrition; it predicted coverage levels of only 70–80% for most services and 90% for immunizations, antenatal care and skilled birth attendance by 2015 (CMH, 2001). Although the CMH estimates, like those of the HLTF, were relatively broad-based insofar as they included various costs of scaling up health services, including capital investments in new facilities and the recruitment and training of additional staff, the HLTF examined a wider range of services than did the CMH. Besides MDG-related services, it considered the cost of health promotion for MDGs Nos 4–6, two interventions that address chronic diseases (tobacco control and salt reduction in processed foods) and essential drugs for chronic diseases, some cancers, neglected tropical diseases, mental health and general care (HLTF, 2009a). Thus the HLTF estimates approximate a more comprehensive range of PHC services.

The CMH estimated that by 2015 the per capita resource requirements in low-income countries would total $38 (expressed in 2002 $ terms) while the HLTF put that figure at $54 (expressed in 2005 $ terms) for the more comprehensive services included in its estimates. Expressed in 2012 $ terms, the CMH estimate is equivalent to $71 and that of the HLTF $86 (see Appendix A for details of the methodology used for those estimates).

In our view, it would be appropriate to use $86 (expressed in 2012 terms) as the estimate of per capita resource requirements for providing a minimum level of key health services in low-income countries. The basis for this is that there is growing emphasis on all countries promoting universal access to at least primary-level services that not only tackle maternal and child health and the ATM diseases but also provide interventions for those suffering

from non-communicable diseases, mental health problems and other conditions beyond the current MDG focus. The HLTF estimate includes the cost of medicines for this broader range of diseases and services as well as the costs related to expanding facility and equipment infrastructure, increasing staffing levels and other means of strengthening health systems. Though stopping short of a fully comprehensive set of PHC services, it is unlikely to be far off the mark. However, this will only be the case if the $86 is devoted fully to PHC services (and not, for example, spent on high-cost tertiary services), and if these limited resources are used efficiently.

Targets for government spending

Countries should strive over time to achieve government health spending levels of at least 5% of GDP, supplemented by a minimum target of $86 per capita government and donor funding in low-income countries in order to ensure basic PHC services in cases where meeting the 5% target alone would be insufficient. All the above analyses suggest that the 5% target is an appropriate one. They can be summarized as follows:

- Significantly improving health status indicators (e.g., reducing the average IMR to 10 per 1,000 live births) requires government spending of more than 5% of GDP;
- Reducing financial catastrophe and impoverishment to negligible levels generally requires limiting OOP payments to 15–20% of total health expenditure, which, in turn, requires government spending of more than 5% of GDP; and
- Promoting access to needed health care (for which 90% coverage for immunizations and deliveries by skilled birth attendants and a global average of 44 core medical professionals per 10,000 population serve as proxies) requires government spending of at least 5% of GDP.

A target of around 5% of GDP is supported by global analyses of UHC financing that were undertaken for *The World Health Report 2010*. Two observations from that report are particularly pertinent:

- 'Those countries whose entire populations have access to a set of services usually have relatively high levels of [mandatory] pooled funds – in the order of 5–6% of gross domestic product' (WHO, 2010b: xv); and
- 'General government health spending as a percentage of gross domestic product indicates the capacity and will of government to shield the population from the costs of care. It is difficult to get close to universal coverage at less than 4–5% of GDP, although for many low- and middle-income countries, reaching this goal is aspirational in the short term and something to plan for in the longer run' (WHO, 2010b: 98).

Based on data provided by *World Health Statistics*, the global average of government health care expenditure is 5.1% of GDP. While the average level of spending in high-income countries is much higher (6.9% of GDP), it is far lower in other categories of country, ranging from 3.6% of GDP in upper-middle-income countries to 2.2% of GDP in low-income countries (see Appendix B). Thus while a target of at least 5% of GDP is higher than the average level of spending in many countries, it is in line with the global average. While there are a few countries that have achieved very high levels of population coverage with a comprehensive range of services at lower levels of domestic government spending (a notable example being Thailand at about 3.1% of GDP), this is the exception and requires extremely high levels of efficiency that are very difficult to achieve.

It is clear that low- and lower-middle-income countries would not be able to achieve the target of public health spending of at least 5% of GDP in the short term. Moreover, as shown in Appendix C, even if all low-income countries had public spending levels of 5% of GDP, there would still be no country belonging to that category that could meet the minimum resource requirement of $86

per capita to fund basic PHC services for the entire population. In low-income countries, 5% of GDP ranges from just $13 per capita in Burundi to $58 per capita in Kyrgyzstan. Similarly, some lower-middle-income countries would not be able to reach the target of $86 per capita even if they devoted 5% of GDP to public spending on health. Further, if public spending on health at a level of $86 per capita were to be funded entirely from domestic government sources, it would account for an average of nearly 15% of GDP in low-income countries; this is clearly unrealistic. Indeed, it is these countries that are in desperate need of DAH support. In general, there is a relationship between income status and the amount of DAH support received: low-income countries receive more DAH support than do lower-middle-income countries, while upper-middle-income countries receive very little (except for countries such as Botswana and Namibia, which are given DAH funding specifically to address the HIV epidemic).

It is evident from the data in Appendix C that considerable increases in DAH are required to meet the target of $86 per capita. For example, domestic government and donor funding of basic health care services in Burundi is the equivalent of $8 per capita. If domestic government funding for health increased to 5% of GDP in that country, this would result in $13 per capita, which still falls short of the target by $73. Another paper in this series considers how DAH can be equitably provided in the context of the targets presented in this paper.[3]

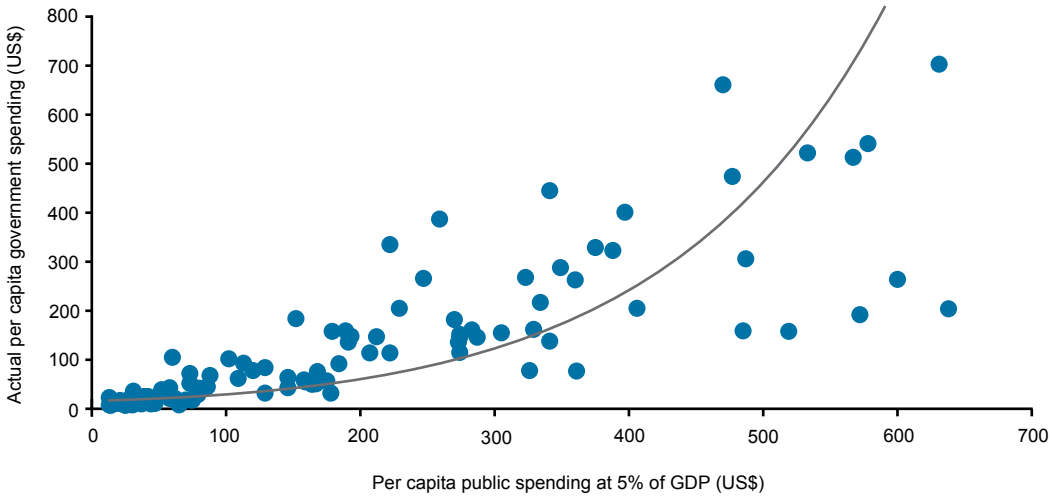
DAH could be focused on supporting those countries that would be unable to achieve minimum public spending levels of $86 per capita even if they were to devote 5% of GDP to that purpose. This is in line with the CMH and HLTF recommendations for increased international assistance to achieve the minimum targets.

If a country is witnessing GDP growth and maintains public health spending levels of 5% of GDP, it is obvious that per capita public health spending will increase. This means that over time low- and lower-middle-income countries should be able to fund a progressively larger share of their health care funding requirements from domestic government revenue. If meeting the target of domestic public spending on health of 5% of GDP translates into more than $86 per capita, countries will be able to increase gradually the range of health services provided to their populations, since the per capita target focuses on a basic minimum level of PHC services. Moreover, as the level of a country's economic development increases, so does the relative cost of providing basic services – owing to the higher salaries of health professionals, among other things (Commission on Macroeconomics and Health, 2001). Thus the target of public health spending totalling 5% of GDP should be seen as the overriding target – i.e., as GDP grows, that level of spending should be maintained even after the minimum of $86 per capita has been reached. This emphasis on the 5% of GDP target is in line with the ICESCR's obligation on governments to take measures to ensure the *progressive realization* of health and other human rights *in full*. The goal within the health sector is to achieve, over time, coverage of the entire population with comprehensive services, and not simply a minimum range of primary health care services.

Figure 13 shows that there is a strong correlation (R^2 = 0.823) between per capita GDP (and hence what per capita public expenditure would be if each country achieved a target of 5% of GDP [note the horizontal axis is GDP per capita multiplied by 5%]) and actual per capita government spending on health care (see Appendix C for country-specific data). Although in most low- and lower-middle-income countries actual per capita government expenditure is below the target per capita spending at the level of 5% of GDP, a number of upper-middle-income countries are spending in line with the target of 5% of GDP, as shown in Appendix C. Once again, this suggests that 5% of GDP is an appropriate target.

3 See Ottersen et al. (2014).

Figure 13: Relationship between required per capita government health spending at 5% of GDP target and actual per capita government spending (2011)



Sources: Data on $ per capita GDP derived from World Bank (multiplied by 5%); data on actual per capita government expenditure and external funding derived from the WHO NHA dataset.

To summarize, all countries should aim to increase domestic government spending on health to at least 5% of GDP, and for additional funding through DAH to be made available to fund health services in countries that are unable to spend a minimum of $86 per capita on basic PHC services from domestic government sources alone. Increasing domestic government spending on health is important in the context of the current discussions on UHC and in relation to the need for national governments to ensure 'maximum available resources' for funding health care.

6. EFFICIENT AND EQUITABLE USE OF RESOURCES

It is important to note that, though not the focus of this paper, arguments for increased government funding of health and other social services are inappropriate if those resources are not used efficiently and equitably. Indeed, one of the reasons frequently advanced by ministries of finance for not increasing government funding of health services is the perception that the available funds are not being used efficiently. Thus the health sector must find ways of demonstrating that resources are being used efficiently (Elovainio and Evans, 2013). In particular, there should be good governance within the sector as failure to curb corruption is tantamount to failure to comply with the 'maximum available resources' obligation (Balakrishnan et al., 2011).

Limited absorptive capacity in LMICs can be a major obstacle to the efficient use of additional fund allocations. This is a particular challenge in the health sector, given that service delivery is human resource-intensive. While some additional funds can be absorbed to improve the routine availability of functioning equipment and the supply of medicines and other medical supplies in existing facilities, a requirement for making substantial progress in improving the quality and accessibility of health services is that additional health workers are available. There is a long lead time in training many categories of health professional. Thus the pace of increasing financial resources for the health sector requires careful thought and detailed human resource planning. However, given the suggested emphasis on ensuring universal access to quality primary health care services and the growing evidence of the importance of community health workers in this regard, it may be feasible to improve absorptive capacity significantly. There is also potential to shift tasks to categories of health worker that are able to take on specific activities with less extensive training (e.g., pharmacy assistants can be used for routine dispensing activities instead of pharmacists). Human resource planning should therefore include consideration of introducing or expanding the use of community and mid-level health workers.

While ministries of finance frequently point to the need to improve efficiency in the use of government resources for health services, less emphasis is placed on the equitable use of those resources. As mentioned above, there should be an explicit equity focus in efforts to meet commitments on ensuring the right to health. All too often, health services in geographical areas that are already well resourced are more able to absorb increased funding – including larger urban areas, where it is easier to attract additional staff. This can perpetuate inequalities in access to health care. Specific interventions will be required to improve absorptive capacity in under-resourced areas and ensure that those who currently do not have easy access to quality health services are able to benefit from increased government funding. Progress should be assessed not only in terms of improvements in averages (e.g., the average PHC service utilization rate or the average ratio of community health worker to population) but also in terms of the extent to which inequalities in the realization of those rights across population groups or geographic areas are being reduced.

While this paper focuses on the revenue generation function of health financing, the strategic purchasing function of health financing is critical for ensuring the equitable and efficient use of available resources (Kutzin, 2001). Strategic purchasing implies that the health care needs of the population are actively assessed and that the most appropriate services to meet those needs to the greatest possible extent are purchased. It contributes to ensuring that services are available when and where necessary and are of adequate quality (including through the accreditation of providers). Efficiency is promoted by using provider payment mechanisms that offer appropriate incentives and by making use of purchasing power (particularly when the number of large purchasers is limited to one or a handful) to keep down the prices of services. Thailand's universal coverage scheme (UCS) provides an excellent example of how strategic purchasing can contribute to the efficient use of limited resources. When the UCS decided to include haemodialysis services, it was able to use its purchasing power to negotiate a lower rate per session, thereby saving the scheme some $170 million per year (Tangcharoensathien et al., 2013). Moreover, governance can be strengthened when there is an institution explicitly tasked with strategic purchasing functions.

7. CONCLUSION

The point of departure of this paper is the necessity for governments to provide 'maximum available resources' from domestic sources to fulfil their obligation to implement the progressive realization of fundamental human rights, including the right to health. Current discussions about UHC and the post-2015 sustainable development goals highlight the need to increase domestic government expenditure on health and other social services in many countries.

This paper argues that government expenditure levels are not predetermined or dictated by a country's level of economic development; rather, they are dependent on government revenue generation. For LMICs in which the level of government revenue remains relatively low, there is a range of opportunities to increase that revenue without further burdening the poorer population groups. They include improving tax compliance and reducing tax avoidance and evasion, especially by high net worth individuals and transnational companies; increasing personal income and corporate profit taxes (in countries where those taxes are currently low); and ensuring that government revenue from mineral and other natural resources is maximized.

Improved government spending on all social services is important for meeting commitments on economic, social and cultural rights and contributes to addressing many social determinants of health. But it is critical to ensure a fair share of domestic government resources for health services. This paper proposes a target of domestic government spending on health care of at least 5% of GDP to achieve 'maximum available resources'. That proposal is supported by the following:

- Analyses of the relationship between government spending on health services and health status indicators (for which life expectancy figures integrated into the Human Development Index and IMRs serve as proxies);
- Levels of OOP health care expenditure (which is closely related to the financial protection goal of UHC); and
- Two indicators of service coverage and one indicator of service availability (which are closely related to the UHC goal of access to and use of needed health services).

Moreover, the target of 5% of GDP is supported by analyses undertaken for *The World Health Report 2010* and is in line with the global average of government health care expenditure.

Although this is an aspirational goal for many low-income countries – one that will be all the more difficult to achieve in the current global macroeconomic crisis – it is nevertheless important for all countries to demonstrate movement towards this target if the progressive realization of the right to health is to become a reality and not simply a 'commitment on paper'. In addition, there should be a secondary target of at least $86 per capita government and donor-funded expenditure to ensure universal access to basic PHC services in low-income countries in which domestic government spending of 5% of GDP would be insufficient to provide such access. Finally, efforts to increase domestic public funding of health services in countries that do not currently meet those targets should be accompanied by strategic purchasing reforms to promote the efficient and equitable use of scarce resources.

APPENDIX A: SUMMARY OF CMH AND HLTF COSTING ESTIMATES AND TRANSLATION INTO 2012 TERMS

Commission on Macroeconomics and Health (CMH)

The CMH focused on estimating costs related to improving health services that are regarded as priorities in the context of the Millennium Development Goals (MDGs) – namely, services that could contribute to reducing maternal and child health mortality and addressing the ATM (AIDS, TB and Malaria) diseases. The cost analysis undertaken for the CMH was designed to estimate the additional or *incremental* resources that would be required for a large-scale expansion (of 49 priority health interventions to address the MDGs) from existing levels of services. Cost estimates were developed for the provision of these interventions, particularly at the close-to-client level (e.g., health centre and outreach services) but also included other levels of service delivery where needed for the interventions. Costs included capital components and requirements for complementary management and institutional support as well as investments in new facilities and the recruitment and training of new personnel. The analysis included estimates of the cost of addressing various constraints – specifically a shortage of appropriately qualified staff; poor distribution of staff; weak technical guidance, programme management and supervision; inadequate drug and medical supplies; lack of equipment and infrastructure; and poor accessibility of health services. The cost analysis was based on a set of 83 countries, which included all the countries of sub-Saharan Africa and all other countries with a per capita GNP of less than $1,200 in 2002.

The estimates of the *additional* annual average expenditure required (over and above current expenditure) were added to current expenditure levels in these countries to estimate total resource requirements. All CMH cost estimates were presented in 2002 constant US dollars (see Table A.1 below).

Table A.1: Per capita cost estimates by CMH

	2002 (baseline)	2007 (target) in 2002 $	2015 (target) in 2002 $
Low-income countries	21	34	38
Lower-middle-income countries	28	36	40
LMICs	26	38	42

Source: Commission on Macroeconomics and Health, 2001.

High Level Taskforce on Innovative International Financing for Health Systems (HLTF)

The HTLF costing estimates were based on information provided by two technical teams, with a focus on 49 low-income countries, one of which was a normative approach by the WHO (WHO, 2010a) and the other a 'marginal budgeting for bottlenecks' (MBB) approach by the World Bank, UNICEF, UNFPA, UNAIDS and the Partnership for Maternal, Newborn and Child Health (PMNCH) (2009). Both approaches estimate the cost of scaling up interventions and health system support needed to accelerate achievement of the health-related millennium development goals (MDGs).

The set of interventions included in each approach was fairly similar for MDG No. 1 (undernutrition), MDG No. 4 (maternal health), MDG No. 5 (child health) and MDG No. 6 (AIDS, TB and malaria). The MBB approach also included water and sanitation interventions while the WHO approach also considered the cost of health promotion for MDGs Nos 4–6, two interventions that address chronic diseases (tobacco control and salt reduction in processed

foods) and essential drugs for chronic diseases, some cancers, neglected tropical diseases, mental health and general care as well as the medicines needed for the above-mentioned areas (MDG No. 8e). Although limited information was provided on projected coverage rates, rates of 95% to 100% coverage were referred to where specific coverage rates were mentioned.

Both teams estimated the additional funding needed to expand the coverage of health interventions and programmes. They also calculated the cost of providing the necessary health system support in terms of additional facilities at various levels of care, additional health workers and managers, strengthened procurement and distribution systems for drugs and commodities, better information systems, improved governance, accreditation and regulation and health financing reforms. Payments to pregnant women to encourage the use of safe delivery services and improved remuneration of health workers were considered by both teams. On the basis of assumptions about the pace of expansion, additional capital and recurrent expenditures required annually between 2009 and 2015 were calculated.

The MBB is based mainly on country planning exercises with data produced at the country level and assumes a delivery strategy that emphasizes the full scaling up of community-based services prior to expanding facility-based clinical services. Its scale-up targets are less ambitious and therefore probably more realistic than the WHO's. Three implementation scenarios are simulated using coverage targets ranging from 'close to achieving the MDGs' (minimum scenario) to universal coverage with basic health services (maximum scenario). We present here the cost estimates for the medium scenario, which

> *focuses explicitly on achieving the health-related MDGs where possible and in the most efficient way, by addressing the most critical health system bottlenecks (by 80% on average) and scaling up a package of highly effective interventions proven to positively contribute to the health-related MDG goals (HLTF, 2009a).*

This scenario also corresponds most closely to the WHO approach. Major capital investments for the provision of clinical services are not introduced until the final years of the period and so would not be fully operational until the period after 2015.

The WHO normative costs reflect a more facility-based approach to service expansion and rapid scaling-up; they take a more optimistic view of the pace with which new infrastructure can be put in place and involved greater front-loading of capital. Capital investment would peak in 2012 and hence infrastructure would be fully operational before 2015. The differences in the pace of implementation and incurring recurrent and capital costs over time explain the differences in per capita costs between the MBB and WHO approach (see Table A.2 below).

The cost estimates from the WHO approach are considerably higher than those from the MBB approach, particularly in the earlier years owing to the front-loading of capital expenditure in the WHO estimates. In addition, there are higher human resource costs in the WHO estimates, owing to the organization's greater focus on doctors and nurses compared with the MBB analysis, which placed more emphasis on community health workers. Both the WHO and MBB estimates were higher than those of the CMH, not only because they were expressed in 2005 $ terms but also because they included more comprehensive cost estimates for health system strengthening.

Table A.2: Incremental costs by year (per capita) for the period 2009–15 ($ 2005)

	2009	2010	2011	2012	2013	2104	2015	Total
WHO	14.20	19.75	25.35	28.82	26.72	27.87	29.30	172.01
MBB*	3.00	3.95	5.11	8.49	12.51	17.26	23.66	75.41

*Per capita cost data under the medium MBB scenario are presented here; the maximum scenario was twice as costly compared with the medium scenario, although outcomes were not significantly different.
Source: HLTF (2009a).

The HLTF used the WHO estimates for its analyses. It estimated that total health expenditure per capita would be an additional $29 on top of the current $25 – hence $54 by 2015 (expressed in 2005 $ terms).

Translating CMH and HLTF estimates into 2012 terms

As indicated previously, although both the CMH and the HLTF projected the per capita resource requirements of providing a range of services – particularly those related to the health MDGs – in 2015, the CMH expressed the cost in 2002 $ terms and HLTF in 2005 $ terms. Although the CMH produced estimates for low-income as well as lower-middle income countries, we use the estimate for low-income countries (of $38 in 2002 terms) to enhance comparability with the HLTF, which focused only on low-income countries. As the HLTF did in its final report, we use the WHO estimates (of $54 in 2005 terms), since they include a wider range of services (particularly medicines for a range of acute and chronic conditions) and investment in health facility infrastructure and health professional training.

In order to translate these estimates into cost per capita for low-income countries by 2015 expressed in 2012 $ terms, we obtained information on $ to local currency exchange rates in 2002, 2005 and 2012 and annual inflation rates for the period 2003–12 for all low-income countries included in the CMH and HLTF costing exercises. Such data were not available for some countries (e.g., Sierra Leone, Somalia and Zimbabwe). For all countries for which a full set of data was available, the CMH estimate in 2002 $ was converted into local currency units using the 2002 exchange rate, inflated to 2012 local currency units using the annual inflation rates during the period 2003–12 and then converted into 2012 $ terms using the 2012 exchange rate. Similarly, the HLTF estimate was converted into local currency units using the 2005 exchange rate and inflated using the annual inflation rates during the period 2006–12 and converted to 2012 $ using the 2012 exchange rate.

Table A.3 below presents a summary of key variables from this analysis. The mean among low-income countries was $71.4 using the CMH estimate and $85.6 using the HLTF estimate. Those estimates, which were adjusted both for changes in exchange rates and inflation within low-income countries between 2002 and 2012 in the case of the CMH and between 2005 and 2012 in the case of HLTF, are very similar to estimates that simply inflated the CMH and HLTF estimates using the average inflation rate for low-income countries ($69.4 and $83.6, respectively).

Table A.3: CMH and HLTF per capita cost estimates for 2015 ($ 2012)

Variable	CMH	HLTF
Mean	71.4	85.6
Standard deviation	20.7	21.7
Standard error	3.3	3.4
95% confidence interval	64.8–78.0	78.7–92.6
Median	68.3	81.6
25th percentile	64.4	73.2
75th percentile	81.1	101.1

Source: Authors' analysis.

We strongly recommend that a figure of $86 (expressed in 2012 terms) be used as the estimate of per capita resource requirements for providing a range of key services in low-income countries by 2015. The basis for this recommendation is that there is growing emphasis on all

countries promoting universal access to at least primary-level services that not only deal with maternal and child health services and the ATM diseases but also provide interventions for non-communicable diseases, mental health problems and other conditions beyond the current MDG focus. The HLTF estimate (based on the WHO normative costing) includes the cost of medicines for this broader range of diseases and services as well as costs related to expanding facility and equipment infrastructure, higher staffing levels and other components of health-system strengthening. Although this may not reflect a fully comprehensive set of PHC services, it is unlikely to be far off the mark.

APPENDIX B: LEVEL OF GENERAL GOVERNMENT EXPENDITURE ON HEALTH AS PERCENTAGE OF GDP (2011)

Table B.1

Country	General government expenditure on health as % of GDP (2011)	Country	General government expenditure on health as % of GDP (2011)
Myanmar	0.3	Fiji	2.6
Pakistan	0.7	Equatorial Guinea	2.6
Indonesia	0.9	Dominican Republic	2.6
Azerbaijan	1.1	Jamaica	2.7
Yemen	1.1	Ghana	2.7
Chad	1.2	Ethiopia	2.7
India	1.2	Bahrain	2.7
Eritrea	1.2	Peru	2.7
Cambodia	1.3	Mozambique	2.7
Philippines	1.4	Viet Nam	2.7
Bangladesh	1.4	Uzbekistan	2.8
Lao PDR	1.4	Suriname	2.8
Singapore	1.4	Albania	2.8
Afghanistan	1.5	Burundi	2.8
Qatar	1.5	UR of Tanzania	2.9
Sri Lanka	1.5	DR of the Congo	2.9
Armenia	1.6	China	2.9
Lebanon	1.6	Niger	2.9
Cameroon	1.6	Ecuador	3.0
Guinea	1.6	Grenada	3.0
Malaysia	1.6	Mongolia	3.0
Congo	1.6	Libya	3.0
Turkmenistan	1.7	Trinidad and Tobago	3.0
Guinea-Bissau	1.7	Comoros	3.0
Georgia	1.7	Mexico	3.0
Tajikistan	1.7	Namibia	3.0
Gabon	1.7	Thailand	3.1
Kenya	1.8	Botswana	3.1
Côte d'Ivoire	1.8	Mali	3.1
Syrian Arab Republic	1.8	Algeria	3.2
Oman	1.9	Cyprus	3.2
Venezuela	1.9	Mauritania	3.3
Nigeria	2.0	Burkina Faso	3.3
Central African Republic	2.0	Papua New Guinea	3.4
Egypt	2.0	Tunisia	3.4
Morocco	2.1	Sierra Leone	3.4
Brunei Darussalam	2.1	Bhutan	3.4
Nepal	2.1	Bolivia	3.5
Angola	2.2	Haiti	3.5
Kuwait	2.2	Saint Lucia	3.5
Kazakhstan	2.3	Seychelles	3.5
Iran	2.4	Senegal	3.5
Mauritius	2.4	Chile	3.5
Gambia	2.4	Cape Verde	3.6
Sudan	2.4	Bahamas	3.6

Country	General government expenditure on health as % of GDP (2011)	Country	General government expenditure on health as % of GDP (2011)
Guatemala	2.4	Latvia	3.6
Benin	2.4	Vanuatu	3.6
Saint Kitts and Nevis	2.5	Timor-Leste	3.6
Uganda	2.5	Zambia	3.7
United Arab Emirates	2.5	Russian Federation	3.7
Saudi Arabia	2.5	Paraguay	3.7
Madagascar	2.6	Belize	3.8
São Tomé and Príncipe	2.6	Belarus	3.8
Former Yugoslav Republic of Macedonia	4.0	Montenegro	6.2
Ukraine	4.0	Samoa	6.3
Antigua and Barbuda	4.0	Serbia	6.5
South Africa	4.1	Luxembourg	6.5
Brazil	4.1	Slovenia	6.6
Republic of Korea	4.1	Ireland	6.6
Honduras	4.2	Croatia	6.6
Togo	4.2	Finland	6.6
Dominica	4.2	Portugal	6.6
El Salvador	4.3	Iraq	6.7
Tonga	4.4	Bosnia and Herzegovina	6.9
Colombia	4.6	Spain	7.0
Guyana	4.6	Switzerland	7.1
Romania	4.7	Iceland	7.3
Estonia	4.7	Italy	7.3
Lithuania	4.7	Japan	7.4
Israel	4.8	Sweden	7.6
Poland	4.8	Costa Rica	7.6
Barbados	4.9	United Kingdom	7.7
Argentina	4.9	Norway	7.8
Turkey	5.0	Canada	7.9
Hungary	5.0	Palau	8.0
Cook Islands	5.1	Austria	8.0
Republic of Moldova	5.2	Kiribati	8.0
Andorra	5.3	Belgium	8.0
Djibouti	5.4	United States of America	8.2
Uruguay	5.4	Solomon Islands	8.4
Nicaragua	5.5	New Zealand	8.4
Panama	5.5	Germany	8.4
Slovakia	5.5	Nauru	8.5
Swaziland	5.6	France	8.9
Malta	5.6	Lesotho	9.5
Jordan	5.7	Cuba	9.5
Greece	5.9	Denmark	9.5
San Marino	6.1	The Netherlands	10.2
Rwanda	6.1	Micronesia (Federated States of)	12.2
Liberia	6.2	Marshall Islands	13.8
Malawi	6.2	Niue	14.4
Czech Republic	6.2	Tuvalu	17.3
Australia	6.2		

APPENDIX C: PER CAPITA DOMESTIC PUBLIC EXPENDITURE ON HEALTH IF THE 5% OF GDP TARGET IS ACHIEVED (EXPRESSED IN 2012 $) AND ACTUAL LEVELS OF PUBLIC SPENDING AND EXTERNAL FUNDING

In Table C.1 below, the first column is calculated on the basis of each country's per capita GDP. The second column is drawn from the WHO's National Health Accounts (NHA) dataset, which in its estimate of per capita government expenditure combines domestic government funding and donor funding provided in the form of direct budget support. To provide an indication of the extent to which the second column overstates *domestic* government expenditure, the share of donor funding of total health expenditure is presented (in the third column).

Table C.1

	Public health expenditure per capita ($) at 5% of GDP	Actual per capita government expenditure (2011)	External funding as % of total health expenditure (2011)
Low-income countries			
Burundi	13	8	46.8
Malawi	13	23	52.4
DR of the Congo	14	7	31.4
Niger	19	11	28.0
Liberia	21	17	57.4
Madagascar	22	12	17.6
Ethiopia	24	10	44.3
Central African Republic	24	9	35.5
Eritrea	25	7	69.1
The Gambia	26	15	47.4
Guinea-Bissau	27	10	45.1
Uganda	27	11	27.0
Togo	29	23	17.4
Mozambique	29	15	69.8
Guinea	30	8	12.3
UR of Tanzania	30	15	41.2
Afghanistan	31	9	16.4
Rwanda	31	36	46.3
Burkina Faso	32	19	41.3
Sierra Leone	32	12	19.9
Mali	35	20	26.0
Nepal	35	13	14.6
Bangladesh	37	10	6.6
Benin	38	20	34.6
Haiti	39	25	29.5
Zimbabwe	39		
Comoros	42	25	40.5
South Sudan	43		
Kenya	43	14	38.8
Tajikistan	44	16	14.3
Chad	44	10	15.1
Cambodia	47	11	15.8
Kyrgyzstan	58	43	10.7

	Public health expenditure per capita ($) at 5% of GDP	Actual per capita government expenditure (2011)	External funding as % of total health expenditure (2011)
Lower-middle-income countries			
Senegal	52	39	14.0
Timor-Leste	53	33	50.8
Mauritania	55	35	7.9
Cameroon	58	21	4.3
Lesotho	60	105	25.2
Côte d'Ivoire	62	21	11.2
Pakistan	65	8	5.1
Lao PDR	70	18	23.5
Djibouti	73	72	14.2
Zambia	73	52	27.2
India	74	18	1.0
Yemen (Rep. of)	75	18	4.2
Nigeria	78	29	5.4
Sudan	79	29	4.5
Viet Nam	80	38	3.1
Ghana	80	42	14.2
Uzbekistan	86	45	2.1
Nicaragua	88	68	10.8
Moldova	102	102	9.6
Papua New Guinea	109	62	19.3
Honduras	113	93	3.3
Bhutan	120	78	17.2
Bolivia	129	84	4.9
Philippines	129	32	2.2
Sri Lanka	146	43	2.7
Morocco	146	64	0.4
Swaziland	152	184	19.4
Congo (Rep. of)	158	59	11.2
Egypt (Arab Rep. of)	159	55	0.5
Syrian Arab Republic	164	50	0.4
Armenia	167	51	5.9
Guatemala	168	76	2.1
Kosovo	173		
Georgia	175	57	2.8
Indonesia	178	32	1.2
Guyana	179	158	18.9
Mongolia	184	92	4.9
El Salvador	189	159	1.4
Paraguay	191	136	2.6
Ukraine	193	148	0.4

	Public health expenditure per capita ($) at 5% of GDP	Actual per capita government expenditure (2011)	External funding as % of total health expenditure (2011)
Upper-middle-income countries			
Albania	207	114	1.0
Tunisia	212	147	0.9
Fiji	222	114	7.7
Bosnia and Herzegovina	222	335	2.4
Macedonia (FYR of)	229	205	
Jordan	247	266	3.0
Serbia	259	387	0.7
Algeria	270	182	0.0
Ecuador	273	136	0.4
Jamaica	274	146	1.7
Thailand	274	152	0.4
Angola	274	115	2.2
Namibia	283	161	19.7
Dominican Republic	287	146	2.5
China	305	155	0.1
Iraq	323	268	0.6
Turkmenistan	326	78	1.0
Peru	329	162	1.1
Belarus	334	217	0.3
Montenegro	341	445	0.7
Iran (Islamic Rep. of)	341	138	0.0
Bulgaria	349	288	
Botswana	360	263	9.2
Azerbaijan	361	77	0.7
South Africa	375	329	2.1
Colombia	388	323	0.2
Romania	397	401	
Mauritius	406	205	3.7
Costa Rica	470	661	0.9
Panama	477	474	0.4
Lebanon	485	159	1.0
Mexico	487	306	0.0
Malaysia	519	158	0.0
Turkey	533	522	
Brazil	567	513	0.3
Gabon	572	192	1.1
Argentina	578	541	0.1
Kazakhstan	600	264	0.7
Hungary	631	703	
Venezuela	638	204	0.0

Sources: Data on $ per capita GDP derived from World Bank (multiplied by 5%); data on actual per capita government expenditure and external funding derived from the WHO NHA dataset.

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An earlier version of this paper was written as a background paper for the Chatham House Working Group on Financing. It is part of a Chatham House publication series relating to the the Centre on Global Health Security Working Groups. The first two Working Groups address issues of governance and financing, and the third set addresses antimicrobial resistance.

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CHATHAM HOUSE

Chatham House, 10 St James's Square, London SW1Y 4LE
T: +44 (0)20 7957 5700 E: contact@chathamhouse.org
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Charity Registration Number: 208223