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CENTRE ON GLOBAL HEALTH SECURITY WORKING GROUP PAPERS

Raising and Spending Domestic Money for Health

Riku Elovainio and David B. Evans

May 2013

WORKING GROUP ON FINANCING | PAPER 2



World Health
Organization





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This is a background paper developed to facilitate the deliberations of the Chatham House Working Group (WG) focusing on domestic and international financing for health. Any views expressed are the responsibility of the authors alone and are not necessarily the views of the organization that they represent.

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EXECUTIVE SUMMARY

The health system funding challenge in vulnerable countries

Many of the world's most vulnerable people are not able to use the health services they need, or are being pushed into poverty when they have to pay directly for the services they receive. There are many reasons for this, but two of the most important are insufficient levels of funding for health in low- and middle-income countries, and inefficient use of the few resources that are available.

On average in 2010, the low-income countries spent only \$32 per capita on health – including public and private spending and expenditure originating from both domestic and external sources. The High Level Taskforce on Innovative International Financing for Health Systems (HLTF) suggested in 2009 that to ensure coverage with a relatively limited set of key health services, low-income countries would need to spend an average of \$60 per capita each year on health by 2015. Reaching the \$60 target would mean nearly doubling the current levels of health expenditure. This paper explores whether it would be possible for these countries to fill this gap from domestic sources (another paper in the series looks at the question of external resources). It then considers the scope for using funds more efficiently, particularly the role of provider payment mechanisms.

Importance and limits of international health funding

In accepting the 2000 Millennium Declaration, the global community recognized that overcoming the cycle of illness and poverty in the most vulnerable countries calls for substantial international investments. The conclusions of the 2001 report of the Commission on Macroeconomics and Health, following shortly after the Millennium Declaration, were an important factor underlying the rise of development assistance for health (DAH), which almost tripled between 2000 and 2011, from \$11 billion to \$28 billion.

However, this remarkable rise in external funding has not been sufficient to help low-income countries meet even a basic set of health needs for their populations. Since the financial crisis began in 2007–08 in the traditional donor countries, the risk has increased that some will re-evaluate their international development policies and reduce their DAH allocations.

Current shortcomings of domestic funding for health

Most of the traditional donors have not, furthermore, met their international commitments on development assistance – for many of them set at 0.7% of gross national income. It is crucial that they keep these promises. However, there are also opportunities for all countries, even in low-income settings, to increase their domestic health expenditures and to use their resources in a more efficient manner.

Looking at health funding challenges from the perspective of the 46 vulnerable countries that were the focus of the calculations by the HLTF, low levels of domestic spending are not the only problem. The fact that in many countries a high proportion of the funding derives from direct out-of-pocket payments (OOPs) means that many people cannot use the health services they need because they are unable to pay on the spot. In only five of the 46 countries do OOPs represent less than 20% of total health expenditure (THE), and in five countries they represent more than 75% of THE. Thus, while countries can raise more revenue for health, they need to do it increasingly through mandatory prepayment mechanisms (including earmarked or non-earmarked taxes, other mechanisms for raising government revenue, and compulsory health insurance).

Increased health expenditure through economic growth

We projected total health expenditure (THE) per capita for the 46 vulnerable countries based on predictions for growth reported by the International Monetary Fund (IMF). If we assume that health receives a constant proportion of GDP, domestic health expenditure will fall short of the HLTF requirements by 2015 even with these relatively high rates of economic growth, so GDP growth alone will not ensure that countries can find the necessary resources for health.

Increasing domestic funding for health

One option is to increase the priority that governments give to health when allocating government revenues. Countries differ markedly in the share of general government expenditure (GGE) going to health: in 25 of the 46 vulnerable countries health receives less than 10% and in 10 countries it is even below 5%. The 2001 Abuja Declaration, adopted by African Union heads of state, agreed a goal of 15%, so there is room for governments to increase health spending even without raising additional funds. In countries such as Chile and Viet Nam, large increases in the share of health in public expenditure have occurred amid health system reforms that have created the right context for increased prioritization of health spending.

Countries also have scope to raise additional revenues, at least some of which can be used for health. Indirect public revenue mobilization refers to tax and non-tax mechanisms that can raise government funds from which health will get its share. Some of the strategies relate to tax reforms – such as the one in Sierra Leone where a single goods and services tax (GST) was introduced with the objective of simplifying the tax system and increasing the tax base. The GST reform led to a large increase of the share of government revenues relative to GDP, rising in two years (2010–11) from 11.7% to 14.9%.

Countries with large natural resource sectors are of course in a particular position. With transparent, equitable and efficient managing of the extractive sector, many countries are able to stimulate economic growth and increase government revenues. Botswana, for instance, has shown that revenue from natural resources can be harnessed for financing public goods such as health.

Other methods of increasing public revenue that countries have implemented include various types of luxury taxes (on high-end cars, yachts, etc.), or taxes on mobile phone use. Unhealthy products and their harmful consumption can be a very interesting area for taxation, since they combine public health interventions with revenue-raising. Tobacco and alcohol taxes and levies exist in most countries, but there is often substantial room for raising these further. Egypt is averting tens of thousands of premature deaths and collecting a combined total of \$1.9 billion annually through taxes on tobacco that have been recently tightened. In the Philippines, recent increases in alcohol and tobacco taxes were aimed at providing public funding for the current administration's universal health coverage programme.

Compulsory health insurance is based on the logic of a contribution that is earmarked for health (often in the form of a payroll tax shared between employers and employees). However, when there is an increase in earmarked revenue for health there is always a possibility of reduction in other public revenue based on budget arbitrations. In Kazakhstan, for example, the introduction of a payroll tax earmarked for a national health insurance triggered a reduction in general budget allocations to health by a larger amount than that collected through the payroll tax.

National experiences suggest there are many options whereby countries are able to raise additional funds, although obviously they will need to assess carefully the impact of different revenue-raising mechanisms on the economy and on the distribution of the financial effort among households. In general, governments need to balance the ability of a given mechanism to raise funds with questions of equity regarding the distribution of financial effort and the possible (side-) effects on the economic actors.

Improving efficiency

Raising additional funds for health is critical for the low- and middle-income countries. However, the quantity of money is only one determinant of the ability to improve population health and well-being. Variations in the efficiency with which the available funds are used is one of the reasons why some countries obtain relatively higher levels of service coverage and health outcomes for the resources they invest than do others.

Inefficiency exists everywhere in health systems, although the sources vary by setting. Some of the most common areas where inefficiencies can be found include medicine procurement and use; distribution, skill-mix and motivation of health workers; and provider behaviour (such as length of stay in hospitals). Tackling these inefficiencies will need to be based on a variety of strategies depending on the context and on the tools available. The options for action include administrative interventions (e.g. stronger audit systems for expenditures or clinical practice); legislative measures (e.g. mandatory generic substitution at pharmacies); or changing the incentives of providers and/or consumers.

Provider payment mechanisms are the most important elements for influencing on the incentives determining health care provider behaviour. In many health systems, provider payment mechanisms that offer few incentives for efficiency and quality of care are the norm. Many countries have experimented with alternative approaches involving some form of prospective payment. The most common examples are capitation payments for ambulatory care and payments based on diagnosis-related groups (DRGs) for inpatient care. Capitation at primary provider level has been associated with increased focus on prevention and lower overall costs in countries where it was introduced. Countries that have introduced DRGs tend to witness reductions in the average length of stay in hospitals, and more rational use of medicines.

Provider payment reforms relying on introduction of capitation, DRGs and other case-based payments have been implemented mostly in high-income countries, but also in some middle-income countries such as Thailand. In some low-income countries the focus has been recently on pay-for-performance (P4P) type of mechanisms. Among the low-income group P4P-type mechanisms have been gaining momentum in countries such as Burundi and Rwanda, and the results show that they do incite providers to increase volume (where underservicing is a problem) and quality of care. However, there is very little evidence regarding the efficiency impacts of these reforms, since there is often limited multi-country evidence on the relative costs and effects of P4P mechanisms compared with other interventions that include parallel increases in funding.

Conclusion

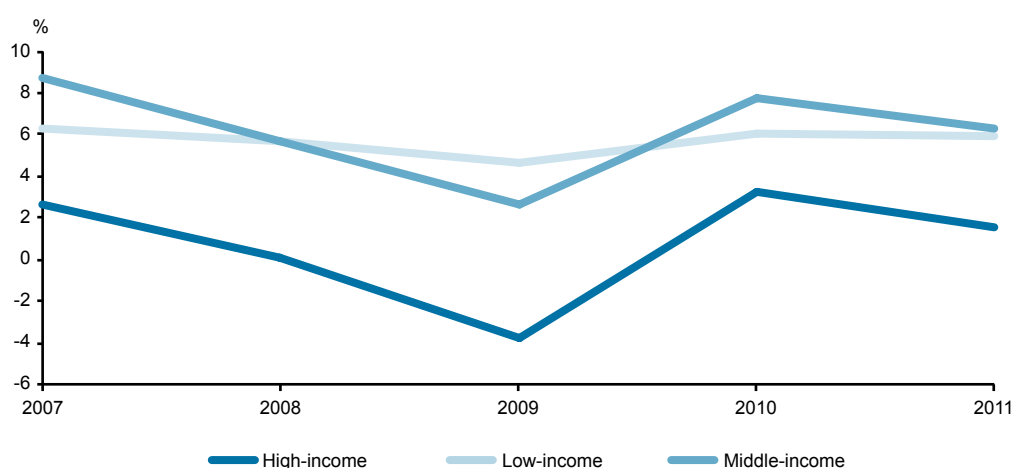
Most low-income countries will not be able to extend coverage of health services and decrease financial hardship arising from direct out-of-pocket payment unless they increase domestic prepaid funding for health and use existing resources in an efficient manner. Many countries have already taken steps to improve the situation, and their diverse experiences, which are highlighted in this document, stand as proof that possible options do exist.

1. INTRODUCTION

All countries face a constant struggle to secure sustainable and sufficient funding of their health systems. Even the richest find it difficult to keep up with rising health care costs, as the current economic downturn puts further pressure on health spending. A recent report focusing on countries in the WHO European Region concluded that while some had been able to maintain their health spending during the current economic crisis, others had seen their health budgets cut – some substantially; in Latvia, for example, government spending on health prevention and promotion activities fell by 89% between 2008 and 2010, while in Iceland total government health expenditure per capita shrank by 13% during the same period.¹

The situation is much more acute for those countries that are home for the ‘bottom billion’, largely low- and middle-income countries. On the one hand, the current international economic turmoil has affected their economic growth much less than growth rates in the high-income countries (see Figure 1). They have been able to increase health expenditures from domestic sources quite substantially, supplemented by increased inflows of development assistance for health (DAH) (shown in Figure 2 for low-income countries). On the other hand, their chronically low starting level of national income has limited their ability to increase health spending to the levels necessary to ensure universal coverage with even a basic set of needed health services, or to ensure financial risk protection for the population. The increases in DAH have not been sufficient to overcome this obstacle.

Figure 1: Economic (GDP) growth, in low-, middle- and high-income countries, 2007–11



Source: World Bank, World Development Indicators Database.

In 2009 the High Level Taskforce on Innovative International Financing for Health Systems (HLTF) estimated that by 2015, the low-income countries² would need to spend an annual average³ of \$60 per capita on health in order to ensure coverage with a relatively limited set of key health services, largely focusing on the conditions targeted explicitly by the Millennium Development Goals (MDGs) for health. This figure included costs associated with strengthening health systems, as well as the interventions themselves. The target can be seen as the very minimum necessary, especially since it assumed that the entire sum would be spent only on the core set of interventions, and this set included very few elements of care and prevention for

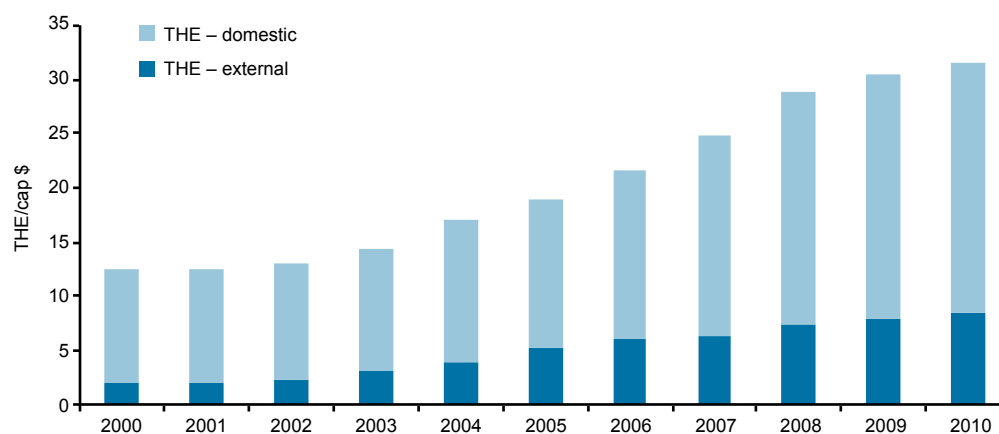
1 Mladovsky, P. et al. *Health Policy Responses to the Financial Crisis in Europe*. Copenhagen, World Health Organization, on behalf of the European Observatory on Health Systems and Policies, 2012.

2 The HLTF analysis included countries classified as 'low-income' by the World Bank as of June 2007.

3 All averages are unweighted averages unless otherwise noted.

non-communicable diseases (NCDs), which are increasingly burdening the poorest countries.⁴ Even that target is ambitious, however. Figure 2 shows that in 2010 low-income countries spent on average only \$32 per capita on health, including all domestic funding sources and financing provided by external donors (which averaged 28% of total health expenditure for these countries).

Figure 2: Growth in average total health expenditure (THE) per capita in low-income countries, by source, 2000–10



Source: WHO, Global Health Expenditure Database.

One of the main conclusions of the 2001 report of the WHO Commission on Macroeconomics and Health (CMH) was that the most vulnerable countries would not be able to raise the necessary funds to cover a core set of key health interventions (smaller than the set described above) from domestic sources for some time. The CMH argued that the only way these countries would be able to extend health service coverage sufficiently was through a massive increase in DAH.⁵ These calls coincided with the acceptance of the MDGs, with their important focus on health, jointly providing a catalyst for increased DAH. As a result, DAH almost tripled between 2000 and 2011, increasing from \$11 billion to \$28 billion.⁶ However, the combination of domestic growth with increased aid flows has been insufficient to allow health spending to increase to the desired levels.

Moreover, domestic funding remains the predominant source of funding for health even in low-income countries – contributing on average 72% of total health expenditures. DAH accounts for more than 50% of total health expenditure in only four countries; in another 21 it exceeds 25%.

The purpose of this paper is not to focus on DAH, the topic of a companion paper,⁷ but to explore the possibilities for increased domestic expenditure on health in the countries most in need. In Section 2 we present information on current spending and some of the recent macroeconomic trends, with a view to understanding how domestic health spending might evolve as a result of economic growth. We concentrate on the 46 countries that were included in the cost calculations for the HLTF described above, because that provides a basis for relating

4 World Health Organization. *Global Status Report on Noncommunicable Diseases 2010*. WHO, Geneva, 2011.

5 World Health Organization. *Macroeconomics and Health: Investing in Health for Economic Development*. WHO, Geneva, 2001.

6 Institute for Health Metrics and Evaluation. *Financing Global Health 2011: Continued Growth as MDG Deadline Approaches*. Seattle, IHME, 2011.

7 Moon, S. and Omole, O. *Development Assistance for Health: Critiques and Proposals for Change*. Chatham House, 2013.

expenditures to need. In Section 3 we ask what would happen if countries chose to spend a higher proportion of their available resources on health, and then turn to different options for raising additional revenue domestically, at least part of which could be used to increase health expenditure.

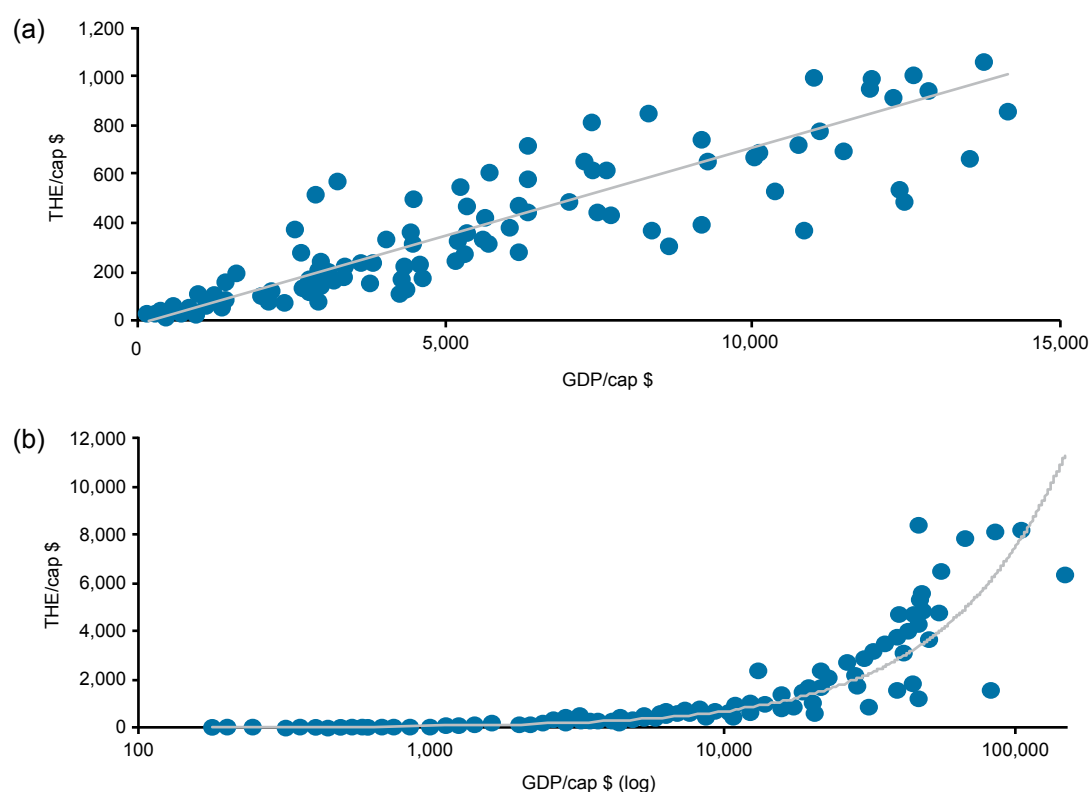
While raising more money for health is crucial, it is also important to ensure that the available resources are used in the best possible way. This involves considerations of both equity and efficiency. Here, we focus largely on efficiency, and emphasize that this is not synonymous with cost-cutting. Efficiency is concerned with maximizing the health gains associated with any level of expenditure.⁸ Section 4, therefore, turns to the possible options countries can take to increase efficiency in the health system, to get 'more health for the money', focusing on the incentives inherent in the way health providers are paid.

⁸ Mathematically, it is also equivalent to minimizing costs for any level of health attainment.

2. HEALTH EXPENDITURE TRENDS AND CROSS-COUNTRY ANALYSIS

The main factors influencing the amount of domestic funding available for health are common to rich and poor countries, with the level of national income per capita being critical. Cross-country comparisons show a strong positive correlation between all indicators of national income per capita and total health spending per capita, illustrated in Figure 3 using GDP per capita. This is not deterministic, however. Some countries spend appreciably more than would be expected relative to their income level, and some considerably less. Even allowing for macroeconomic constraints, policy choices matter; health expenditure is determined by the capacity and desire of governments to raise revenues (through taxation and other mechanisms), and by the willingness and ability of households, firms and governments to spend the available funds on health.

Figure 3: Total health expenditure (THE) per capita and GDP per capita (a) in countries with GDP per capita under \$15,000 (b) in all countries (logarithmic scale), 2010



Source: WHO, Global Health Expenditure Database.

Total health expenditure per capita in 2010 ranged from \$12 in Eritrea to \$8,400 in the United States. Average per capita expenditures varied substantially across different geographic regions and country-income groupings – ranging from \$120 in the WHO South-East Asia Region to \$2,300 in the WHO European Region; and from \$32 in low-income countries to \$3,100 in high-income countries.

However, because the focus of this paper is on the countries most in need, the rest of this section will consider the 46 vulnerable countries that were the basis for the work of the HLTF, as described earlier.⁹ They are listed in Table 1.

⁹ World Health Organization. *Constraints to Scaling Up the Health Millennium Development Goals: Costing and Financial Gap Analysis*. Background Document for the Taskforce on Innovative International Financing for Health Systems. WHO, Geneva, 2010.

Table 1: The countries included in the analysis

WHO African Region	18. Malawi	34. Pakistan
1. Benin	19. Mali	35. Yemen
2. Burkina Faso	20. Mauritania	WHO European Region
3. Burundi	21. Mozambique	36. Kyrgyzstan
4. Central African Republic	22. Niger	37. Tajikistan
5. Chad	23. Nigeria	38. Uzbekistan
6. Comoros	24. Rwanda	WHO South-East Asia Region
7. Côte d'Ivoire	25. São Tomé and Príncipe	39. Bangladesh
8. Democratic Republic of the Congo	26. Senegal	40. Myanmar
9. Eritrea	27. Sierra Leone	41. Nepal
10. Ethiopia	28. Togo	WHO Western Pacific Region
11. Gambia	29. Uganda	42. Cambodia
12. Ghana	30. United Republic of Tanzania	43. Lao People's Democratic Republic
13. Guinea	31. Zambia	44. Papua New Guinea
14. Guinea-Bissau	WHO Region of the Americas	45. Solomon Islands
15. Kenya	32. Haiti	46. Viet Nam
16. Liberia	WHO Eastern Mediterranean Region	
17. Madagascar	33. Afghanistan	

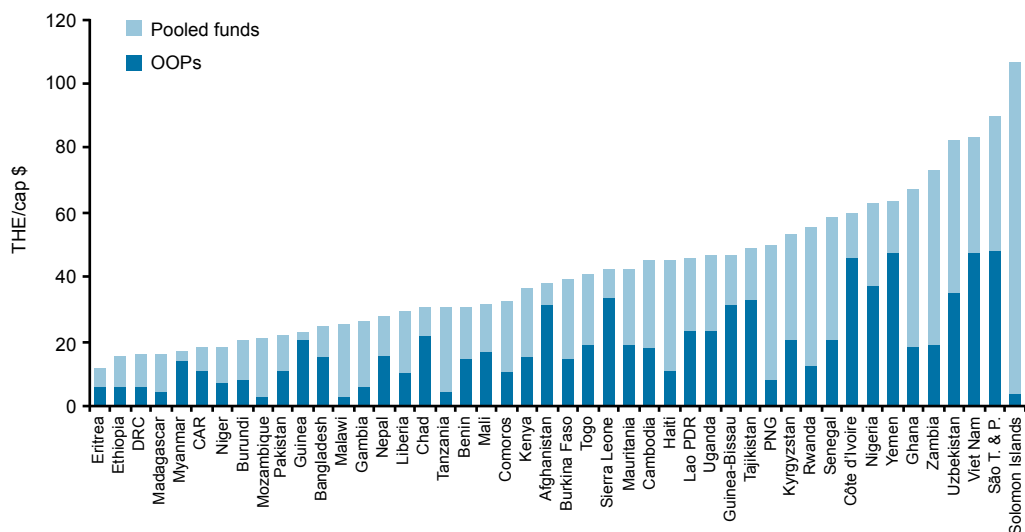
Current situation in 46 vulnerable countries

The question of prepayment and pooling: why health financing channels and mechanisms matter

Domestic funds for health originate from either households or firms and enterprises. They are either paid directly to health providers for the services that they provide or are channelled through different sorts of pooling mechanisms which spread the financial risks of ill health across the population (or across different groups). Prepayment approaches such as taxes and/or insurance contributions provide money which is kept as part of general government revenues and/or health insurance funds, money which is used to meet the costs of health services of various types. When systems for prepayment and pooling are weak, people wishing to access health services are forced to pay for them out of their own pocket. This out-of-pocket spending (OOPs) for health leads to financial catastrophe and impoverishment for some people who need to use health services, while it deters others from seeking or continuing treatment.

In Figure 4, total health expenditure is divided into the shares derived from OOPs and from prepaid and pooled funds respectively for the 46 countries.

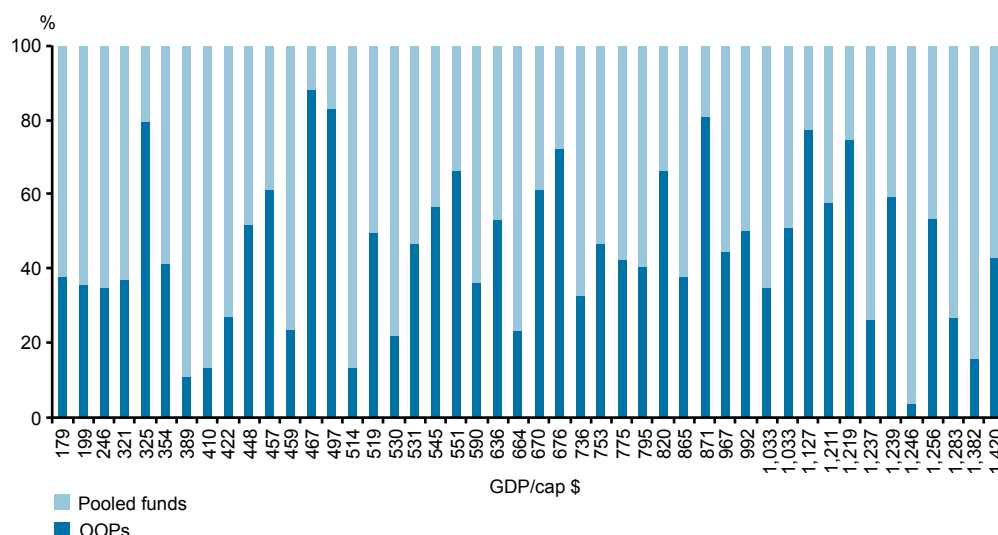
Figure 4: Per capita health expenditure from out-of-pocket spending (OOPs) vs per capita health expenditure from pooled funds, 2010



Source: WHO, Global Health Expenditure Database.

At the two extremes, in five of the 46 countries (Malawi, Mozambique, Papua New Guinea, the Solomon Islands and the United Republic of Tanzania) prepaid and pooled funds represent more than 80% of THE, while in five other countries (Afghanistan, Côte d'Ivoire, Guinea, Myanmar and Sierra Leone) they represent less than 25%. Although it is often argued that the share of prepaid and pooled funds tends to rise with national income over time, in the case of these 46 countries variation in the share is not correlated with differences in national income – as can be seen in Figure 5.

Figure 5: Share of pooled funds on total health expenditure by country GDP per capita, 2010



Source: WHO, Global Health Expenditure Database.

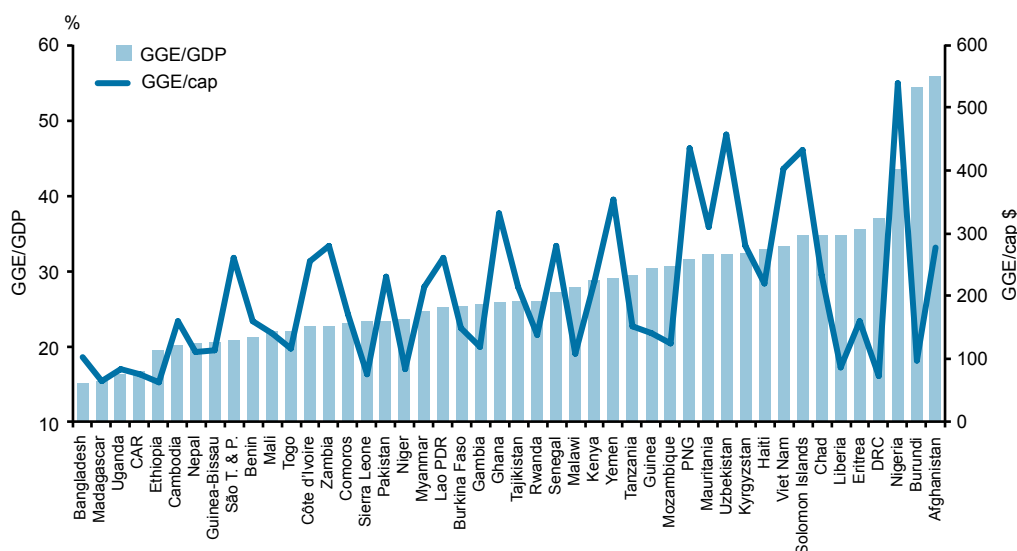
Prepaid and pooled funds in most of the 46 countries consist primarily of government health expenditures and compulsory health insurance (the sum of which is termed general government health expenditure – GGHE). Private health insurance (including voluntary community

health insurance), the other component of pooled funds, represents only 1.5% of total health expenditures in these countries. Sustainable health financing mechanisms that cover the poor and vulnerable cannot be built without pooled funding based on mandatory contributions, so the main question of how to increase domestic pooled funding for health in these countries translates into how they can increase GGHE. The contribution of voluntary mechanisms for raising revenue is discussed later in this document.

General government expenditure – setting the limits for government action

The boundaries around GGHE are set by the capacity to raise public revenues, reflected in the overall level of general government expenditure (GGE). Figure 6 reports GGE per capita (on everything, not just health) for our 46 countries, and GGE as a share of GDP. For 30 of the countries, GGE is below 30% of GDP, and for five of them it is less than 20%.

Figure 6: General government expenditure (GGE) per capita and as a share of GDP, 2010



Source: WHO, Global Health Expenditure Database.

There are no clear benchmark figures on what the share of government spending on national income should be. In the EU countries, for example, GGE as a share of GDP varies from 35% to 58%.¹⁰ Admittedly, it is more difficult to raise revenues in countries where a large proportion of the population is engaged in the informal sector – one of the reasons why GGE/GDP is frequently lower in low-income countries. However, it is also acknowledged that there are ways of expanding the revenue base and improving the efficiency of revenue collection in many of these countries,¹¹ and Figure 6 suggests there is scope in many to raise more revenues, given their levels of GDP. To back this up, the IMF has studied the ratio between countries' fiscal potential and actual government revenues, finding that low-income countries are on average reaching only 78% of their potential, while lower-middle-income countries reach 63% of their potential for mobilizing government revenue.¹²

10 European Commission, Eurostat Database. http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/General_government_expenditure_statistics.

11 *Revenue Mobilization in Developing Countries*. International Monetary Fund, Washington, DC, 2011. www.imf.org/external/np/pp/eng/2011/030811.pdf.

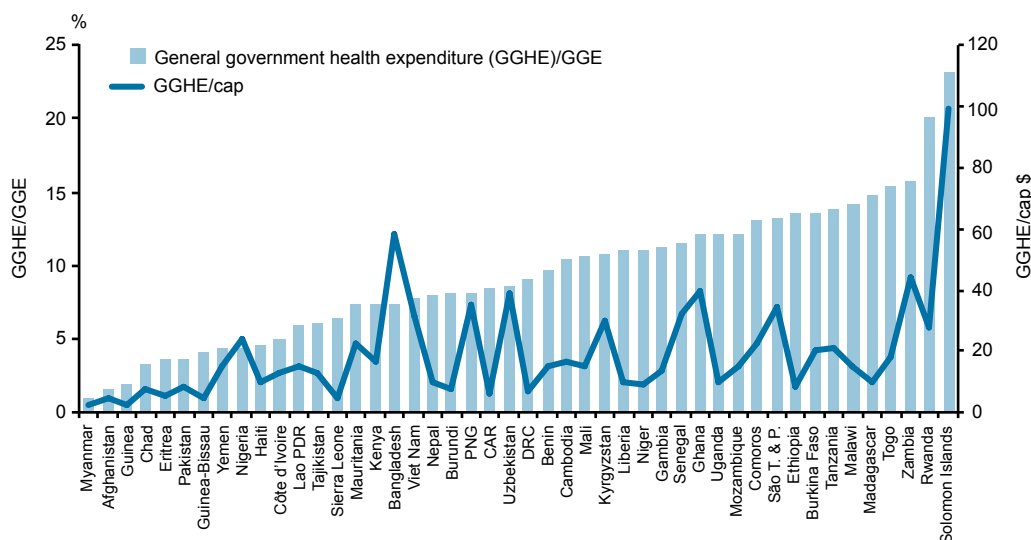
12 Ibid.

Looking simply at the GGE/GDP ratio does not reveal the whole picture of the availability of resources. In absolute terms, in 38 of the 46 countries GGE per capita it is still below \$300; and it is still below \$300 in six of the eight countries that have a GGE/GDP ratio of 35% or more. This money has to be distributed across all sectors, not just health. Even if these countries allocated 15% to health, as suggested in the Abuja Declaration, they would spend only \$45 per capita on health on average, showing the limits imposed on these countries by the low absolute levels of national income.

Priority given to health in government spending

While the amount of revenue raised by governments limits their overall capacity to spend, the priorities they give to health when allocating the available resources vary considerably. Figure 7 shows that the share of GGHE in GGE is below 10% for more than half of the 46 countries (25), and in 10 it is even below 5%. In only 10 is GGHE per capita more than \$30 and the average government health spending per capita is only \$19 for the countries as a whole. This figure includes funding from external sources channelled through government, so the level of government health spending from domestic resources is in most cases lower.

Figure 7: General government health expenditure (GGHE) as a share of GGE and GGHE per capita, 2010



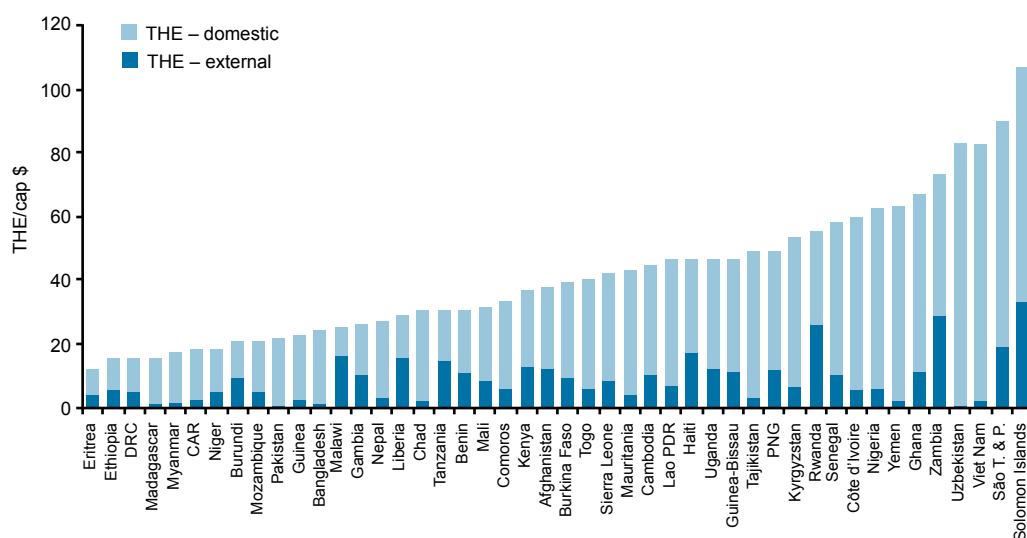
Source: WHO, Global Health Expenditure Database.

In Section 3 options and implications of increasing the share of health expenditure in general government expenditure are discussed.

The share and role of external funding sources

The 46 countries are particularly vulnerable, and DAH continues to be a critical source of financing for many of them – one way to cut the negative spiral of ill health and poverty. The share and volume of external funding for health is reported in Figure 8. In 12 of these countries, DAH accounts for more than a third of all health expenditures, and in a further six its share is between a quarter and a third. The data show that on average in 2010, only \$33 per capita was spent on health from all domestic sources – government, direct OOPs and private enterprises – in the 46 countries, while \$9 came from external sources.

Figure 8: Share of total health expenditure (THE) from domestic and external sources, 2010



Source: WHO, Global Health Expenditure Database.

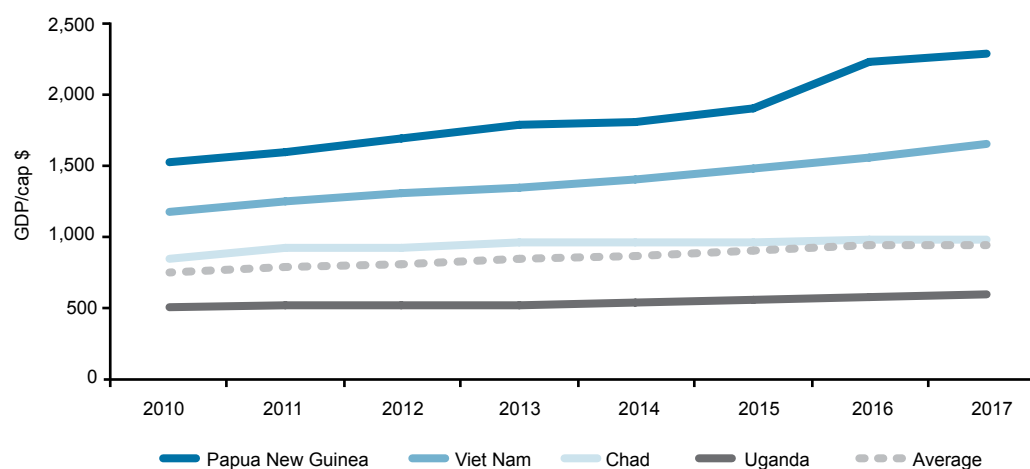
As already mentioned, this paper focuses on domestic revenue collection for health and we shall not discuss options for increasing international DAH. We simply note here that the two sources of finance are not independent of one another. Most obviously, as countries get richer, allowing them to spend more on health, donor assistance is likely to be reduced. On the other hand, governments that receive considerable development assistance specifically for health choose to reallocate part of their domestic revenues to other sectors that do not benefit so much from external support.¹³ That said, total health spending increases overall, despite this domestic reallocation of resources.

Projections of total health spending

The IMF projects that GDP per capita will grow at an average rate of 3.4% per year between 2010 and 2017 in the set of countries that we are following here.¹⁴ Growth rates are expected to vary substantially, however, across these countries, and Figure 9 shows the projected path of GDP per capita for Chad, Papua New Guinea, Uganda and Viet Nam (two rapid-growth countries and two where lower rates of growth are expected). For example, in 2010 Papua New Guinea and Uganda have a \$1,000 difference in GDP per capita, and this difference has been projected to increase to \$1,700 in 2017.

13 Chunling, L. et al. 'Public Financing of Health in Developing Countries: A Cross-national Systematic Analysis'. *The Lancet*, 17 April 2010, 375, pp. 1375–87.

14 International Monetary Fund. *World Economic Outlook Database*, April 2012 edition.

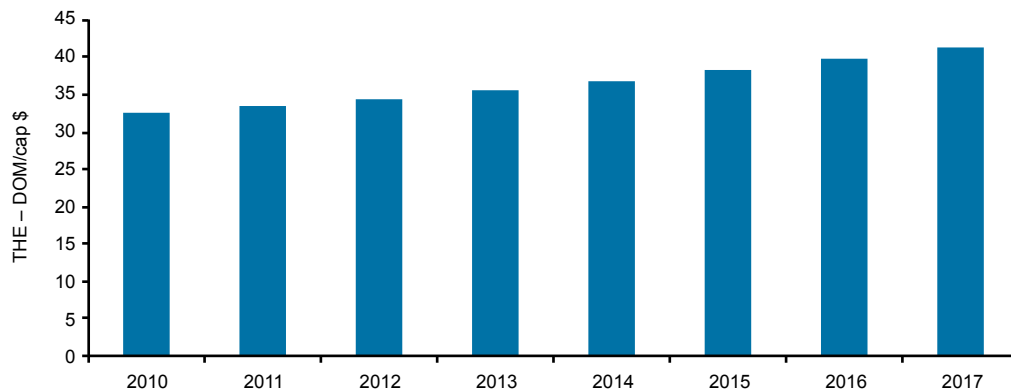
Figure 9: Projected GDP per capita growth in four countries and average for the 46 countries, 2010–17

Source: IMF, World Economic Outlook Database, April 2012 edition.

If we now assume that nothing changes in terms of the situation presented in this section regarding the share of GGE in GDP, share of GGHE in GGE, the share of government health expenditure in GDP and the amount of external funds, total health expenditure from domestic sources will increase by \$22 billion in the 46 countries by 2017 through domestic economic growth alone. This translates into an average increase of \$9.1 per capita in health expenditure, and would allow THE per capita from domestic sources to reach on average \$38 by 2015 and \$41 by 2017 (see Figure 10). The HLTF projected that the low-income countries would need to spend an average of \$60 per capita on health by 2015 in order to ensure coverage with the (limited) set of key health services it defined. This average was based on specific country projections depending on their varying health needs, current levels of coverage of health interventions and levels of coverage necessary to achieve the MDGs. Based on those projections, six of the 46 countries would reach their own spending targets for THE by 2015 from domestic sources alone if the above assumptions about economic growth apply. The others have little realistic chance of reaching the levels required to ensure universal coverage with even a very limited set of services from domestic resources alone.

Only six out of 46 most vulnerable countries will reach their total health expenditure targets from domestic sources with economic growth alone. Even adding the current levels of development assistance for health, countries will fail to meet the spending targets set by calculation used in the analysis of the High Level Task Force on health financing

Figure 10: Projections of growth of total health expenditure (THE) per capita from domestic sources – average of the 46 countries, 2010–17



Source: WHO, Global Health Expenditure Database.

If we add to our projections for 2015 the current 2010 levels of DAH for all the countries, this would nudge a further four countries over their HLTF target, leaving 36 countries under their desirable 2015 spending levels – many of them substantially under. As the HLTF argued, the inescapable conclusion is that if the global community is serious about helping these countries achieve the MDGs, it is important not just to maintain current levels of DAH but to increase them. How to do this is the focus of the other background paper prepared for this working group.¹⁵

¹⁵ See note 7.

3. INCREASING DOMESTIC FUNDING FOR HEALTH

As we showed in Section 1, many of the poorest countries are still struggling to reach a level of health spending that could assure universal coverage with even a minimal set of health services – even if the current projections for economic growth are factored in.¹⁶ While external funding will be crucial for many countries, in this section we will argue that all have options for increasing domestic funds for health within their own macroeconomic contexts.

Formalization of economies

Most vulnerable countries with a large informal sector and a majority rural population are seriously limited in their options to expand government expenditure, even with favourable economic growth. The informal nature of their economies results in fiscal losses related to under-reporting of economic activity (unreported VAT or corporate earnings) and unregistered employment (affecting revenue collection from income taxes, including payroll taxes and social security contributions).¹⁷ Increasing government revenues will depend on the pace at which the formal sector develops, but it can also be influenced by strategies to increase the revenue base and to make revenue collection more effective.

While the causalities of informality are complex, there are strategies for moving towards formality of economies and labour markets. Governance issues have often been identified as a cause for informality; the conclusions adopted by the International Labour Conference of the International Labour Organization (ILO) in 2002 noted that a large informal economy is associated with ‘inappropriate, ineffective, misguided or badly implemented macroeconomic and social policies, often developed without tripartite consultation; the lack of robust legal and institutional frameworks; and the lack of good governance for proper and effective implementation of policies and laws’.¹⁸ Policies that tackle some of these governance issues can thus promote formalization of economies and, subsequently, could help in raising more government revenues. Simplifying some of the administrative procedures could additionally reduce the disincentives for formalization. Studies have also shown that increased trust in public services and their quality will enhance tax compliance.¹⁹

Indonesia, Turkey and Uganda are examples of countries that have actively sought to increase the abilities of government to raise revenues, some of which can be used for health. **Uganda** streamlined its business registration system, building on a pilot in 2000 supported by the United Kingdom Department for International Development (DFID). The administrative processes were simplified in the pilot area, reducing registration time for business from two days to 30 minutes, lowering compliance costs by 75%, increasing business registrations by 43% and increasing government revenue from registration fees by 40%.²⁰

Turkey has taken several measures to speed up the transition to a formal economy, including measures for enforcing existing regulation such as increasing the auditing of workplaces.²¹ The government has also amended labour laws to lower employment costs by introducing progressive social security contributions by employers of women and persons aged 18–29.

¹⁶ We recognize that spending on ‘social determinants’ of health can also improve health outcomes and that this spending is not captured in our analysis of THE.

¹⁷ *Turkey Country Economic Memorandum Informality: Causes, Consequences, Policies*. World Bank, Washington, DC, 2010.

¹⁸ International Labour Organization, 90th session of the International Labour Conference, 2002. Resolution concerning decent work and the informal economy (ILC90-PR25).

¹⁹ Kirchner, E. et al. ‘Enforced Versus Voluntary Tax Compliance: The “Slippery Slope” Framework’. *Journal of Economic Psychology*, April 2008, Vol. 29, No. 2, pp. 210–25.

²⁰ Sander, C. *Less is More: Better Compliance and Increased Revenues by Streamlining Business Registration in Uganda*. Bannock Consulting, London, 2003.

²¹ *Turkey Country Economic Memorandum Informality*.

These measures, accompanied by stable economic growth, have reduced the informal employment rate from 33% in 2005 to 26% in 2011.

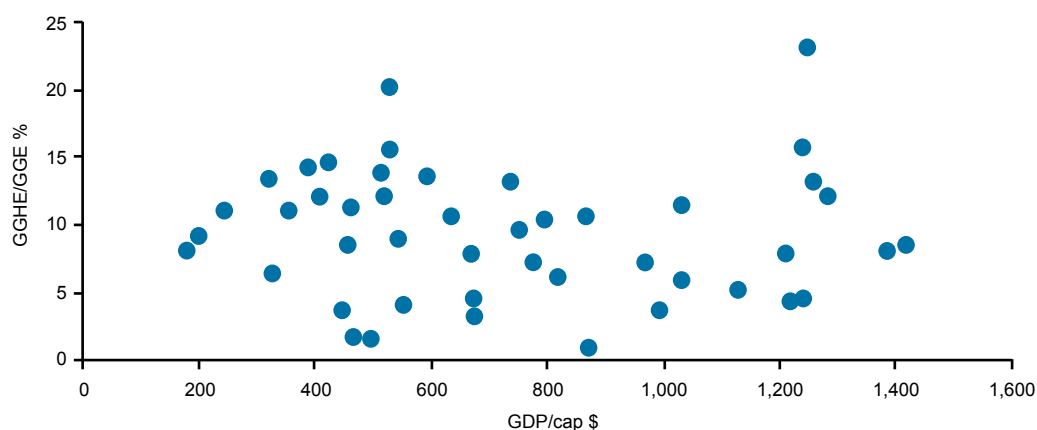
Indonesia's efforts to simplify its tax system and to enforce collection more effectively, as cited in the *World Health Report 2010*, resulted in an increase in tax revenues from 9.9% to 11.1% of non-oil GDP over four years. Health spending benefited disproportionately from the enhanced government revenues.

Increasing the share of existing government revenues allocated to health

The share of government revenue spent on health can be used as an index of government commitment to health and there is often room to mobilize additional funding for health from existing public resources through reprioritization.

In Figure 11 we use the data reported in Figure 5 to map GGHE/GGE against GDP per capita. For the 46 countries, the share of total government spending allocated to health varies from 1% to 23% (including external funding flowing through government mechanisms). It is important to note that GGHE/GGE does not seem to be highly correlated with GDP per capita for these countries. This implies that it is not necessary to wait for national income to grow before a higher proportion of government revenues can be allocated to health.

Figure 11: Priority given to health in government expenditure and GDP per capita, 2010



Source: WHO, Global Health Expenditure Database.

The simple act of reallocating government spending towards health has the potential to raise substantial additional funding. For example, if all the African Union (AU) countries currently spending less than the 15% Abuja Declaration target immediately met it, government health expenditures in these countries taken together would increase by a total of \$29 billion per year, taking 2010 as the base year.

For the 46 countries, increasing GGHE to 15% of GGE overnight would increase the available health revenues by \$26 billion, or \$17 per capita, using 2010 as the base year. And if the 15% threshold was maintained to 2017, government health spending would grow by \$48 billion – assuming the IMF GDP growth rates reported above. There is considerable variation across countries, however. Nigeria alone would contribute \$16 billion to this total, allowing it to increase GGHE by a massive \$63 per capita through the combined effect of economic growth and increased priority to health in public spending.

Increasing the share of government expenditure going to health can, admittedly, be politically complex, as illustrated by the fact that in the 10 years after the Abuja Declaration was signed,

almost as many AU countries moved away from the target of 15% as moved closer to it.²² Ministries of finance, parliamentarians and heads of state have critical decision-making roles regarding public spending priorities, and it has often been argued that health allocations do not increase because of the perceived inefficiency of health spending – something to which we return in the next section. It is also important to note that some of the non-health funding may well improve health, particularly spending on education, water and sanitation, transport and forms of social support. Therefore, the calculation on the share of health in public spending should not be considered in isolation from spending on these other sectors.

As with the case of increases in GGE, a number of low- and middle-income countries have shown that it is possible to increase the share of GGE going to health, which we illustrate here using Burkina Faso, Chile and Viet Nam as examples. **Viet Nam** has been investing heavily in its health sector in recent years. On the supply side, government spending has been used to upgrade hospitals and health stations. On the demand side, public funds have been used to pay health insurance premiums for the poor, other vulnerable groups and children. To fund these policies, the government has been steadily increasing its budget allocation to the health sector: government health expenditure as a proportion of total government expenditure has risen from 5% in 2004 to 8% in 2010. The political will to increase public health spending has been enacted through the National Assembly, which has promulgated several laws guaranteeing increases in the health budget.²³ One of the major motivations behind this recent focus on increasing public health expenditure is the acknowledgment that the liberalization policies of the 1980s and 1990s had increased out-of-pocket expenditure to well over 70% of total health expenditures, a situation that created important barriers to access to health services and pushed people into poverty simply because of health payments.

Increasing the share of government expenditure going to health can be politically complex – it has been argued that health allocations do not increase because of the perceived inefficiencies in health spending

Chile has guaranteed universal access to quality treatment for a set of explicitly defined conditions through the AUGGE plan implemented in 2004.²⁴ Health financing reform has been one of the cornerstones of this policy, resulting in increased government funding for health through additional resources (discussed later) and by means of reprioritizing health in public spending. The share of GGHE in GGE rose from 12% in 2003 to 16% in 2010. As this rise corresponds to a period of relatively strong economic growth and increased public revenues, government health spending per head more than tripled – from \$134 per capita to \$456.²⁵

Burkina Faso's 1991 constitution includes health as right for all the citizens. As in many countries, given the shortage of resources, this *de jure* right has been difficult to translate into *de facto* coverage with needed health services and financial risk protection for the whole population. Acknowledging this, there has been a growing political commitment in increasing

22 WHO Regional Office for Africa. *The Abuja Declaration: Ten Years On*. WHO, Brazzaville, 2011. http://www.who.int/healthsystems/publications/abuja_declaration/en/index.html.

23 Tien, T. V. et al. *A Health Financing Review of Viet Nam with a Focus on Social Health Insurance*. WHO, Geneva, 2011.

24 AUGGE stands for Acceso Universal con Garantías Explicitas; it is also referred to as Régimen de Garantías Explicitas en Salud (RGES).

25 World Health Organization. *Chile: improving access, quality and financial protection*. Geneva, WHO, 2012. http://www.who.int/providingforhealth/p4h_success_stories/en/index.html.

public funding to the health sector. The Burkina Faso government has opted for a gradual approach – beginning with covering 80% of the costs for deliveries, obstetric complications and caesarean sections. The additional public funds required to implement this policy were formalized in a council of ministers' decision that secures earmarked funding for health.²⁶ This increased the share of health (not only through the ministry of health) in the government budget, and by 2009 GGHE/GGE reached 15.46%.²⁷

Raising additional government revenues

Governments in all countries face challenges in mobilizing adequate revenue for the financing of public goods such as health care, education or transport. Many of the richer countries are currently seeking ways to raise additional revenues, but this is not necessarily driven by a desire to increase health spending (or government spending in general); often, rather, the financial crisis and the economic downturn have resulted in spiralling levels of government debt and a lower capacity to service this debt because of reduced government revenues from traditional sources. In addition, as the populations of these countries age, many governments are having to look beyond traditional wage-based contributions to ensure sufficient income to support the health and welfare needs of people who are no longer in formal employment.

France is an interesting example, struggling with rising public debt in the context of declining government revenues associated with the economic downturn. The recently elected socialist administration has been considering a variety of ways to boost government receipts, with one of the possible options being an increase in the Contribution sociale généralisée (CSG). This is a tax (earmarked for social security in general) on incomes that includes wages and salaries as well as revenue from capital gains or dividends. Another alternative put forward by the French government is to increase the progressivity of taxation with a special, time-limited tax of 75% on annual revenues over €1 million (\$1.3 million) – although, as might be expected, there has been strong political opposition from some quarters to its implementation, and the recent decision of the constitutional court has forced the government to reconsider the modalities and the rate of this tax.

As previously noted, many of the poorer countries have limited capacity to collect public revenue because of their relatively large informal sectors and governance gaps, which make public revenue collection ineffective. Earlier in this paper, we looked at the transition to formality of economies and at strategies to support that process; here we shall look at more direct ways of increasing government revenues where the proceeds, or at least some of them, could be used for health. We shall focus on different types of tax reforms and strategies available to governments to levy additional taxes or charges. Ultimately, tax reforms are part of the formalization process, and at the same time the formalization process will determine the impact of the tax reforms, so the end result in terms of government revenue will depend on the combined effect of these two (interlinked) processes. We organize the discussion around options that at least one low- or middle-income country has introduced, as a way of showing feasibility. In the subsequent section we turn to the question of how to choose between the various options.

The Government of **Sierra Leone** has been implementing a series of reforms of tax mechanisms and structures, including the introduction of a goods and services tax (GST) in January 2010. The GST is applied at a single rate of 15% on most goods and services, replacing indirect taxes on imports, goods and services. The replacement of a variety of indirect taxes with the GST, together with stricter enforcement, was seen as a means of increasing the tax base, improving compliance and reducing administration costs. During the first year of implementation, government revenues rose from 11.7% to 13.3% of GDP, with revenue from the

26 Ridde, V. 'The National Subsidy for Deliveries and Emergency Obstetric Care in Burkina Faso'. *Health Policy and Planning*, November 2011, 26 (suppl 2), pp. ii30–ii40.

27 Niteima, A. P. *Efforts faits par le Burkina Faso en matière de financement de la santé dans le cadre de la mise en œuvre de la déclaration d'Abuja de 2001*. Ministère de la Santé de Burkina Faso, 2012.

GST representing 3.2% of GDP.²⁸ Furthermore, the GST reform continued to be a major driver of increased government revenues, which were projected to rise to 14.9% of GDP in 2011.²⁹

Viet Nam has implemented a series of tax reforms during the last two decades, focusing on a unified tax system, on tax administration reform and on increasing the tax base. The tax reforms, together with rising revenues from oil exports, pushed government revenue to an annual average of 23.7% of GDP in 2005–08, and to 28% in 2010.³⁰ Currently, Viet Nam has one of the highest ratios of government revenue to GDP in the developing world, where on average government revenues represent only 20% of GDP.

Countries with large natural resource sectors

Large natural resource sectors do not always translate into high government revenues or strong and equitable economic growth. The problems of Dutch disease, poor governance, conflict, excessive borrowing, inequality and volatility are well documented.³¹ However, if countries can overcome these structural challenges, the discovery of oil and other natural resources in many low- and middle-income countries could offer opportunities for increasing economic growth and tax revenues. For example, according to the IMF, 20 of the 45 countries in sub-Saharan Africa are now significant exporters of natural resources.³² Among them, 10 already collect more public revenues from natural resources than from all other sources together. Volatility in the prices of natural resources means that it is not possible to protect government revenues derived from them in the long term: the IMF predicts that revenues from natural resources will increase markedly in 2011–16 in only two of the countries with significant revenues from natural resources exports. Nevertheless, carefully thought-out levies can increase government revenues substantially in many of these countries.

Australia offers an example of policies that other countries might consider. A Mineral Resources Rent Tax (MRRT) was introduced through the Mineral Resource Rent Tax Act of 2012. MRRT applies since 1 July 2012 to profits from exports of iron ore and coal that are considered to be 'economic rent' – super-normal profits reaped in times of natural resource booms and which, it is argued, should be shared with the entire population.³³ It has been estimated that MRRT would raise around A\$13 billion (roughly the same in US dollars at current exchange rates) during the first four years of its implementation. Although some of the proceeds of this tax will be offset by a simultaneous lowering of the general company tax rate, it has been seen as a response to the need to find new additional resources to pay for pensions and health care in the context of increasing budgetary pressure arising from the ageing population. MRRT revenue will, of course, be cyclical, rising and falling with commodity prices.

A number of developing countries with important natural resource exports have introduced other measures for ensuring that the revenue will be distributed fairly and used for funding of public goods. **Botswana** has a long history of relying on its diamond extraction industry as a source of government revenue, using much of the revenue for social spending. The IMF has praised

28 International Monetary Fund. *Sierra Leone: Poverty Reduction Strategy Paper – Progress Report, 2008–10*. IMF, Washington, DC, 2011.

29 International Monetary Fund. *Sierra Leone: Second and Third Reviews Under the Three-Year Arrangement Under the Extended Credit Facility, Request for Waivers of Nonobservance of Performance Criteria, Request for Modification of Performance Criteria, and Financing Assurances Review – Staff Report; Press Release on the Executive Board Discussion; and Statement by the Executive Director for Sierra Leone*. IMF, Washington, DC, 2011.

30 International Monetary Fund. *Revenue Mobilization in Developing Countries*. IMF, Washington, DC, 2011.

31 Bornhorst, F. et al., 'Natural Resource Endowments and the Domestic Revenue Effort'. *European Journal of Political Economy*, 2009, Vol. 25, No. 4, pp. 439–46; Collier, P. and Goderis, B. *Commodity Prices, Growth, and the Natural Resource Curse: Reconciling a Conundrum*. The Centre for the Study of African Economies Working Paper Series. University of Oxford Centre for the Study of African Economies, 2007.

32 International Monetary Fund, *Regional Economic Outlook: Sub-Saharan Africa. Sustaining Growth amid Global Uncertainty*. IMF, Washington, DC, 2012.

33 Australian Taxation Office. <http://www.ato.gov.au/taxprofessionals/content.aspx?doc=/content/00286481.htm>.

the sound management of diamond-related fiscal revenue,³⁴ while Oxfam argues that the country has been something of an exception in trying to ensure that the revenues from diamond exports are more equitably distributed than is the case in many of other exporters of natural resources.³⁵ The policies that have enabled this positive outcome relate to good governance and transparency; to detail these is not possible within the extent of this document, but the main lesson to be learned is that the 'resource curse' in low- and middle-income countries is far from unavoidable.

The discovery of oil and other natural resources in many low- and middle-income countries could offer opportunities for increasing economic growth and tax revenues. For example, according to the IMF, 20 of the 45 countries in sub-Saharan Africa are now significant exporters of natural resources

In **Papua New Guinea** the proceeds from the country's biggest mine, the OK Tedi copper and gold mine in the Western Province, are collected in a specific fund, the PNG Sustainable Development Program (PNGSDP), which is used for diverse development programmes including for health. PNGSDP receives substantial revenues from the mine, amounting both in 2008 and in 2009 to \$180 million (or \$27 for every citizen). Because many of the PNGSDP projects are multisectoral, it is difficult to identify exactly how much has been spent on health, but one example is a \$9 million project on health and education in the country's Western Province, which has allowed a substantial increase in health spending – representing 25% of the current total health expenditure in that province.³⁶

The **Lao People's Democratic Republic** levies taxes on the sale of electricity to neighbouring countries from the Nam Theun 2 hydropower project. Around \$5.6 million (\$0.88 per capita) was collected in 2010 and it has been projected that the revenues will rise to \$80 million per year over a 25-year period. Revenue allocation is focused on social and infrastructure spending, including health, which had received \$1 million as of May 2011.³⁷

Fiscal policy regarding large corporations (non-oil or mining) and financial markets

The idea that special taxes need to be applied to some industries that make 'super-normal' profits has been extended to companies operating outside the natural resources sectors. A relatively recent example was the **United Kingdom**, where the 2010 Spending Review proposed a permanent Bank Levy of 0.075% on banks' balance sheets. The levy was implemented on 1 January 2011, and it is estimated to be capable of raising £2.6 billion per year (around \$4 billion). The UK government increased the levy to 0.105% with effect from 1 January 2013.³⁸ The Bank Levy can in part be interpreted as a method of recovering some of the public funds used to bail out the banking sector after the financial crisis, although it is also seen as a belated way of taxing and redistributing some of the very high profits earned by the banking sector.

34 Basdevant, O. *Are Diamonds Forever? Using the Permanent Income Hypothesis to Analyze Botswana's Reliance on Diamond Revenue*. IMF Working Paper WP/08/80. International Monetary Fund, Washington, DC, 2008.

35 Ross, M. *Extractive Sectors and the Poor*. Oxfam America, Boston, 2001.

36 Stenberg, K. et al. *Responding to the Challenge of Resource Mobilization – Mechanisms for Raising Additional Domestic Resources for Health*. World Health Report 2010 Background Paper, 13. WHO, Geneva, 2010;

Matheson, D. and Ake, I. *Review of the PNG Sustainable Development Program's Western Province Health Program*, 2010 [unpublished].

37 Nam Theun 2 Factsheet. World Bank, 2011. <http://go.worldbank.org/9VTEYT5Z20>.

38 Bank Levy: 2013 Rate Change. HM Revenue and Customs. www.hmrc.gov.uk/budget2012/tiin-0899.pdf.

An alternative to taxing profits is to introduce small levies on individual financial transactions. Many options exist. The use of bank debit taxes has, for example, been implemented in several Latin American countries. **Argentina** has been taxing current account credits and debits since 2001, reportedly raising half as much as the total corporation income taxes from all sources between 2006 and 2008.³⁹ In 2001 **Brazil** implemented the CPMF⁴⁰ levy of 0.38% on a set of bank withdrawals, raising up to \$20 billion per year. Revenue from the CPMF was partly earmarked for health, and the abolition of the levy in 2007 after political pressure from the financial sector resulted in serious shortfalls in revenue for the public health care system.⁴¹ However, in 2009 Brazil introduced a new mechanism that imposed a 2% levy on stock and bond transactions coming from outside the country, which increased the capacity of the government to fund health.

In 2003, **Zambia** introduced a medical levy imposed on all gross interest earned in any savings or deposit account, on treasury bills, government bonds or other similar financial instruments. The rate was set to 1% on the interest earned and the revenues were hypothecated for supporting government efforts to increase access to HIV treatment.⁴² This levy, which raised around \$2 million yearly, was abolished in January 2013.⁴³

Targeting specific goods and services

Luxury taxes

Luxury taxes are a way of seeking additional revenues from the rich and are frequently levied in the form of differential tax rates applied to existing taxes such as VAT, vehicle and property taxes. **China** has a luxury tax on products including yachts, imported watches and high-performance cars; **Bulgaria** is planning to implement luxury taxes on high-end cars and homes; **Viet Nam** has a special consumption tax (SCT) on premium items such as luxury cars, yachts and private jets, and **Indonesia** has been taxing luxury consumption items for some time.⁴⁴ Very recently, the health care reform in the **United States of America** introduced a levy on certain high-cost and high-coverage health insurance plans. This so-called 'Cadillac tax' has been interpreted as a luxury tax that plays a role in evening out the inequities in health financing.⁴⁵ It has been estimated that the Cadillac tax will raise between \$12 billion and \$20 billion per year.

The advantage of these types of taxes is that they raise additional funds in a very progressive manner – the rich effectively paying higher rates of tax than the poor overall. The disadvantage is that they are more complex and costly to administer, since they are connected to low-frequency transactions and rely on different tax rates for different items.⁴⁶

39 International Monetary Fund. *A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20*. IMF, Washington, DC, 2010. <http://www.imf.org/external/np/g20/pdf/062710b.pdf>.

40 CPMF stands for Contribuição Provisória sobre Movimentação ou Transmissão de Valores e de Créditos e Direitos de Natureza Financeira.

41 'Brazil's March Towards Universal Coverage'. *Bulletin of the World Health Organization*, 2010, Vol. 88, No. 9, pp. 646–47.

42 Zambia Revenue Authority. *Medical Levy Act 2003*. Practice Note No.2/2003. http://www.zra.org.zm/practice_note/medicallevy.pdf.

43 Chansa C. 'Understanding Zambia's National Health Plans' [presentation], www.zuhwa.com/wp-content/uploads/2010/11/Understanding-Zambias-Health-Plans.ppt; 2013 Budget address by Hon. Alexander B. Chikwanda, MP Minister of Finance, 12 October 2012. http://www.mofnp.gov.zm/index.php?option=com_docman&task=doc_download&gid=180&Itemid=122.

44 'China to raise luxury taxes further'. *China Daily*, 15 November 2006, http://www.chinadaily.com.cn/china/2006-11/15/content_733992.htm; 'Bulgaria to introduce "luxury" tax to fight crisis'. Reuters, 21 March 2010. <http://in.reuters.com/article/idINIndia-47098920100321>; Thirsk, W. (ed.). *Tax Reform in Developing Countries*. World Bank, Washington, DC, 1997.

45 Although there has been some discussion as to whether this objective can be reached by this measure: see Gabel, J. et al. 'Taxing Cadillac Health Plans May Produce Chevy Results', *Health Affairs*, web exclusive, published online 3 December 2009. <http://content.healthaffairs.org/content/29/1/174.full>.

46 Di John, J. *The Political Economy of Taxation and Tax Reform in Developing Countries*. World Institute for Development Economics Research, Helsinki, 2006.

Levies on mobile phone use

A levy on mobile phone use is an example of a resource-raising mechanism based on high-frequency transactions, which can thus be based on a very small unitary levy. In that respect it is similar to many of the existing financial transactions taxes. The HLTF noted that as there are 3.5 billion mobile phone users in the world, and as the global revenues from post-paid mobile phone services are high and rising (some \$750 billion per year), establishing a levy on the use of mobile phones would be an obvious option to enlarge the tax base.⁴⁷ The HLTF reported that an international voluntary levy on mobile phone use had the potential to raise between \$260 million and \$1.69 billion annually.

While the HLTF was thinking of raising money globally to augment the flows from traditional donors to developing countries, the International Telecommunication Union estimates that there are 79 cellular subscriptions per 100 inhabitants in the developing world, so even very small unitary levies could raise substantial sums of money domestically in these countries. A number of low- and middle-income countries have already introduced, or are considering the introduction of, this type of tax. The **Philippines** government has proposed a tax on every text message sent; this tax would be in the region of 0.01–0.02 US cents per text. The annual revenue raised by a levy of 0.02 cents per text has been projected at \$1.4 billion.⁴⁸ The income from this tax is currently earmarked for education.

Uganda is levying a targeted tax on mobile phone use, as well as on handset sales. Taking into account the specific levies and other taxes on telecommunications products and services (such as VAT), the Uganda Revenue Authority calculates that the tax revenue from telecommunication companies amounts to \$3.57 billion, representing 9.5% of the country's total tax revenue.⁴⁹ Four other sub-Saharan African countries – **Gabon, Ghana, the Republic of Congo and Senegal** – have since 2010 adopted an additional telecommunications levy called a Surtax on International Inbound Call Termination (SIIT), based on a tax on every incoming international call.⁵⁰ The handling of this tax is managed by a private South African company which takes 50% of the revenues generated. Annual SIIT revenue is estimated to vary from \$7.8 million in the Congo to \$60 million in Senegal.

Mobile phone use could also be taxed indirectly. **Gabon** has implemented a discrete tax on mobile phone companies of 10% of their turnover. The revenue is specifically earmarked for the national health insurance fund and it is used to cover the membership of those who cannot afford to contribute directly. In 2009 the Gabonese government collected 12 billion francs CFA, or \$25 million, through this levy.⁵¹

Taxing unhealthy habits and products

Taxes on products and behaviours that are unhealthy, frequently called 'sin taxes', are particularly interesting options for revenue-raising from the health perspective. These taxes, levies or surcharges lead to a 'win-win-win' situation whereby (1) harmful consumption is reduced, thereby improving population health; (2) more revenues are raised; and (3) the need for costly treatments in the future is reduced.⁵²

47 Mobile Phone Voluntary Solidarity Contribution (VSC). Taskforce on Innovative International Financing for Health Systems Factsheet, 2010.

48 International Monetary Fund. *Philippines: Technical Assistance Report on Road Map for a Pro-Growth and Equitable Tax System*. IMF, Washington, DC, 2012. www.imf.org/external/pubs/ft/scr/2012/cr1260.pdf.

49 Butagira, T. F. 'Uganda: Mobile phone tax – a cash cow or a barrier to development?' Blog post, 20 November 2009. <http://panos.org.uk/features/uganda-mobile-phone-tax-a-cash-cow-or-a-barrier-to-development/>.

50 *Mobile Taxation: Surtaxes on International Incoming Traffic*. Deloitte, London, 2011.

51 Musango, L. and Aboubacar, I. *Assurance Maladie Obligatoire au Gabon: un atout pour le bien-être de la population*. World Health Report 2010 Background Paper, 16. WHO, 2010.

52 WHO Regional Office for South-East Asia. *Tobacco Taxation and Innovative Health-care Financing*. WHO, New Delhi, 2012.

From the purely public health side, this form of taxation would be something to encourage even if it raised no revenues for health. This is because there is very strong evidence, certainly for tobacco and alcohol, that taxation is a very effective means of reducing consumption and improving health.⁵³ From the revenue side, the final impact will depend on the net result of the higher tax rate and lower anticipated consumption of the products concerned. A simulation-based study of 42 countries with varying consumption and income levels showed that the net effect of a hypothetical increase in excise tax on alcohol to at least 40% of the retail price in each country would be an 80% increase in revenue (from \$43 billion to \$77 billion).⁵⁴ However, there are context-specific factors that could affect the net result of a tax hike. In **Latvia** in 2009, the government responded to the challenge of raising government revenue during the economic recession by substantially increasing tax on strong alcohol. This resulted in an almost 50% drop in legal alcohol sales by volume. As a consequence, government revenue from alcohol taxation decreased by €54 million year on year. There is also some evidence that the reduction in legal alcohol sales was offset by higher illegal alcohol sales, resulting in increased alcohol-related deaths.⁵⁵

Tobacco and alcohol taxation is not new; however, since many countries still apply very low rates of taxation on these products, there is considerable scope to increase revenues and improve health. Many countries are now also considering options for introducing specific taxes on unhealthy foods or drinks, such as those with a high sugar or salt content. These are discussed in turn.

Tobacco excise taxes

Egypt has considerably increased its tobacco taxation recently, and is currently discussing whether an earmarked share of the revenues should be allocated direct to health. In 2010 Egypt streamlined its tobacco taxation system by instituting a specific tax of £E1.25 (\$0.23) per pack and 40% of retail price.⁵⁶ On average, these taxes represent 65% of the retail price, compared with 50% previously. In addition, a specific tax of 4 piastres (\$0.007) per pack is applied to locally produced foreign-brand cigarettes. These taxes are not earmarked, but there is a further, longer-standing tax of 10 piastres (\$0.018) per pack that is used to provide medical insurance for students. In 2009 the annual revenue from combined tobacco taxes was \$1.9 billion; if all this were channelled into health, it would represent a 50% increase in total government health expenditure. Moreover, in a country where tobacco-attributable deaths are estimated at nearly 170,000 per year, it was calculated that the increase in tobacco taxation for 2010 alone would avert 190,000 deaths among current adult smokers in the future.⁵⁷

In the last decade **Turkey** has been actively increasing its tobacco taxes. After the increases of 2010, combined tobacco excise taxes and VAT accounted for 79% of the retail price.⁵⁸ Even before these recent increases, tobacco taxes represented 6.5% of all government revenues.

Increasing the proportion devoted to health is another option for raising more revenue in addition to increasing tax rates. **Djibouti** and **Guatemala** earmark all their revenues from tobacco taxes for health, but other countries devote only a proportion of their tobacco revenues (e.g. 2% in **Mongolia, Qatar** and **Thailand**, and 1% in **Bulgaria**), or a specific amount of their tobacco tax

53 Chaloupka, F. J. et al. 'Effectiveness of Tax and Price Policies in Tobacco Control'. *Tobacco Control*, 2011, 20, pp. 235–38; World Health Organization. *Global Status Report on Alcohol and Health 2011*. WHO, Geneva, 2011.

54 Stenberg et al. *Responding to the Challenge of Resource Mobilization* (2010).

55 Strateičuks, A. et al. 'Impact of the Changes in Excise Tax for Alcohol on the State Revenues and Market Players'. International Scientific Conference of Daugavpils University. http://www.dukonference.lv/files/proceedings_of_conf/53konf/ekonomika/Strateicuks_Kaze_Skapars.pdf.

56 Hanafy, K. et al. *The Economics of Tobacco and Tobacco Taxation in Egypt*. MPOWER – International Union Against Tuberculosis and Lung Disease, Paris, 2010. <http://www.tobaccofreeunion.org/assets/Egypt%20Economic%20Report/Egypt%20English%20Report%20Online.pdf>.

57 Ibid.

58 Yurekli, A. et al. *The Economics of Tobacco and Tobacco Taxation in Turkey*. MPOWER – International Union Against Tuberculosis and Lung Disease, Paris, 2010. [http://www.tobaccofreeunion.org/assets/Technical%20Resources/Economic%20Reports/Turkey%20Economic%20Reports%202010/English/Turkey%20English%20Report%20Online%20\(2\).pdf](http://www.tobaccofreeunion.org/assets/Technical%20Resources/Economic%20Reports/Turkey%20Economic%20Reports%202010/English/Turkey%20English%20Report%20Online%20(2).pdf).

(e.g. 2 paise per stick in **Nepal**, 2 cents per cigarette in **Tuvalu**), for the health sector in general or for tobacco control in particular.⁵⁹

The *World Health Report 2010* reported that excise taxes on cigarettes ranged from 11% to 52% of the retail price in 49 low-income countries where data were available. Increasing these taxes by 50% would generate an additional \$1.42 billion overall each year, and in some countries this would allow government health spending to increase by up to 25% if all funds were allocated to health.

Increasing excise taxes on cigarettes by 50% in low-income countries would allow government health spending to rise by up to 25% in some countries if all funds were allocated to health

Alcohol excise taxes

Currently, rates of excise tax relating to the consumption of alcohol vary enormously between countries and across beverage types. For example, a number of wine-producing EU countries currently tax wine at 0%, while the rate of excise tax on distilled spirits commonly makes up more than half the retail price. It has been argued that in general alcohol taxes are well below a maximum revenue-generating potential, and that collected revenue is well below the costs of alcohol to society – including to the health sector.⁶⁰

Thailand is a recent example of innovative approach to alcohol taxation. It has introduced a dual alcohol taxation mechanism – ‘Two Chosen One (2C1)’ taxation – which taxes cheap alcoholic beverages at a specific rate based on alcohol content, and more expensive alcoholic beverages at a rate calculated on the value of the product. This mechanism assures a higher average tax rate resulting in lower alcohol consumption and higher revenue generation.⁶¹

The **Philippines** government pushed through legislation in 2012 that increased alcohol taxation and indexed it to inflation. The government has calculated that the effect of the one-off hike and further indexation will be to increase revenues from strong alcohol taxation by 31 billion pesos (\$760 million) in 2012 and by 94 billion pesos (\$2.3 billion) in 2016. It is planned that the increased revenues from alcohol (and tobacco) taxes will constitute one of the main sources of public financing for the extension of provision through the administration’s universal health coverage programme.⁶²

Excise taxes on unhealthy foods

Taxes on unhealthy foods or drinks, such as those high in salt and sugar, are receiving increased attention, particularly in high-income countries where obesity and NCDs are growing health problems with considerable implications for health costs. Relatively small taxes on unhealthy foods, e.g. soft drinks (soda) or salty snacks, have therefore been imposed in countries including Australia, Canada, Finland, France and Norway, and in some US states. Given the increasing importance NCDs in low- and middle-income countries, there are health reasons for considering this type of taxation – alongside the likely additional revenues that would ensue. Less is known, however, about the impact of taxation on consumption patterns in this area than for tobacco and alcohol.

59 Ibid.

60 Anderson, P. et al. ‘Effectiveness and Cost-effectiveness of Policies and Programmes to Reduce the Harm Caused by Alcohol’. *The Lancet*, 27 June 2009, 373, pp. 2234–46.

61 Sarnitsart, I. ‘Alcohol Excise Taxation in Thailand: More than a Simple One’. *Addiction*, August 2012, Vol. 107, No. 8, p. 1387.

62 Sin Taxes. Official Gazette. Office of the President of the Philippines. <http://www.gov.ph/sin-tax/>.

Revenues from these taxes targeting food items have been more modest than those for alcohol and tobacco. In **France** the tax on soda has been projected to raise €120 million (\$160), equivalent to €2 per capita, per year.⁶³

Direct ways of raising revenue for health

Most of the examples provided in the earlier sections were not introduced specifically to fund health, but benefited health along with other sectors. Examples of actions taken specifically to fund health can also be found. For instance, **Ghana** increased the VAT rate by 2.5 percentage points, called a National Health Insurance Levy (NHIL), to help roll out the National Health Insurance Scheme.⁶⁴ Ghana is currently planning to raise the NHIL to 3.5 percentage points.⁶⁵ **Chile** increased its VAT by 1 percentage point specifically to fund the AUGE plan (see page 22). **Zimbabwe** has since 1999 imposed an additional 3% tax on the income of formal sector employees as a national AIDS levy; this raised \$26 million in additional revenue in 2011, enabling 70,000 Zimbabweans to access antiretroviral therapy.⁶⁶

A recent international review found that there is no conclusive evidence that the introduction of compulsory health insurance had reduced or increased available revenue for the health sector. This may well be because ministries of finance reduce other sources of funding for health when new forms of taxation are specified for health

The introduction of compulsory health insurance is effectively implementation of a tax specified for health. Some governments see compulsory health insurance as a way to raise additional revenues for health, while experts in health financing regard it essentially as a method of modifying the timing and distribution of payments across the population to ensure financial risk protection. All citizens make an annual contribution (payments are typically made from government revenues for people who cannot afford to contribute), the funds are pooled, and only those people who need to use services in any year draw on them. A recent international review found that there is no conclusive evidence that the introduction of compulsory health insurance had reduced or increased available revenue for the health sector.⁶⁷ This may well be because ministries of finance reduce other sources of funding for health when new forms of taxation are specified for health – typically called hypothecation (the same applies also to earmarked tobacco and alcohol taxes). Health-sector actors, and certainly many officials in the ministry of health, often feel that earmarking the revenue from particular taxes for health

63 'La taxe soda ne fait pas le poids'. *Le Monde*, 26 August 2011. http://www.lemonde.fr/economie/article/2011/08/26/la-taxe-soda-ne-fait-pas-le-poids_1563734_3234.html.

64 Witter, S. and Garshong, B. 'Something Old or Something New? Social Health Insurance in Ghana'. *BMC International Health and Human Rights*, 28 August 2009, 9:20.

65 Bagbin, Hon. A. S. K. 'Earmarked Value Added Tax (VAT): The Experience of Ghana'. Presentation to Conference of African Ministers of Finance and Health: Value for Money, Sustainability and Accountability in the Health Sector, 4–5 July 2012. http://www.hha-online.org/hso/system/files/3earmarked_vatghana.pdf.

66 UNAIDS. 'Zimbabwe: AIDS Levy Generates New Resources for Treatment: Feature Story'. <http://www.unaids.org/en/resources/presscentre/featurestories/2012/february/20120221zimbabwe/>.

67 Spaan, E. et al. 'The Impact of Health Insurance in Africa and Asia: A Systematic Review'. *Bulletin of the World Health Organization*, 2012; BLT.12.10230.

would increase the availability of funds and make funding more predictable. Ministries of finance frequently dislike hypothecation on the grounds that it reduces their flexibility to allocate budgets to different sectors.

It is thus clear that the simple act of dedicating a specific tax for health does not necessarily result in increasing health expenditures. In **Kazakhstan**, for example, the introduction of a payroll tax earmarked for health had the opposite effect, because different levels of government reduced their general taxation-based budget allocations to health by a larger amount than that collected through the payroll tax.⁶⁸

Choosing between different options of taxation

Ultimately, the questions around taxation options will depend on many factors – including political will. It is clear, however, that there are many options for countries to increase directly or indirectly domestic funding for health if they wish, in ways that could substantially increase the available funds. The options provided here are not just theoretical possibilities, but options that at least one low- or middle-income country has already successfully introduced, or that are deemed feasible in these countries. Each country will need to consider which option would be most appropriate to it. Many factors influence these decisions, including:

- Adequacy and stability of the revenue raised;
- Efficiency of the measure: i.e. that it does not introduce major imbalances in the economy;
- Equity of the measure;
- Ease and costs of collection;
- Political acceptability.⁶⁹

We suggest a very pragmatic approach. Where informal sectors are large, it is difficult to rely on wage deductions to raise government revenue (or to collect compulsory health insurance premiums), even if wage-based deductions offer the greatest potential for progressive taxation. Forms of indirect taxation are simpler to collect and serve as a means to ensure that everyone contributes pending the growth of the formal sector. There are always concerns that taxes are distortionary – e.g. it is often argued that taxes on mobile phones reduce their potential to be used for ‘good’ purposes such as the transmission of health data. While that is possibly true, all taxes have some distortionary effect. Governments need to consider all possible ways of raising additional funds for health and select among them, comparing their ability to raise revenue with any distortionary effects.

Voluntary contributions to health

To this point, the focus has been on mechanisms for increasing government revenues and expenditure on health. Private philanthropy and leveraging corporate responsibility are additional options. These types of contribution will inevitably come with challenges of predictability and adequacy of the revenue collected, but in some contexts revenues from voluntary contributions can be an interesting option to supplement the existing mandatory systems discussed above.

One of the major sources of voluntary funding for health comes from actions based on corporate social responsibility (CSR). In many countries large corporations (usually extraction industry

68 Kutzin, J. et al. (eds). *Implementing Health Financing Reform: Lessons from Countries in Transition*. European Observatory on Health Systems and Policies, Brussels, 2010.

69 Tsounta, E. *Universal Health Care 101: Lessons for the Eastern Caribbean and Beyond*. International Monetary Fund, Washington, DC, 2009.

companies) have been funding health care services that are available and accessible to the whole population, not only to the companies' employees. In **Papua New Guinea**, for example, mining companies have been funding and providing logistical and other in-kind support to health care facilities in their area of operation and beyond.⁷⁰

The Global Business Coalition on HIV/AIDS, Tuberculosis and Malaria (GBCHealth) is a worldwide initiative that gathers resources from private companies for the fight against HIV/AIDS. Its national organizations manage funds raised from businesses as well as from other actors such as international development organizations. The **South African** Business Coalition on HIV/AIDS is one of the biggest national business-driven organizations. It has been raising revenue for HIV/AIDS prevention and treatment and for health system strengthening from South African business, but has also been channelling external resources to its projects and thus using its own resources as leverage power for enhancing the effectiveness of external support.⁷¹ In **Malawi** the national Business Coalition used its own funds to manage a mixed public–private project that expanded the distribution of antiretroviral therapies through private clinics with subsidized prices.⁷²

Other options for supplementary health funding: diaspora bonds, remittances, tourism levy

Diaspora bonds are a possible source of revenue for countries with a large population that has emigrated to live in another country. The interest rates offered on the bonds are slightly lower than the market rate, in the hope that emigrants will buy them out of patriotism, forgoing a small part of the return they could obtain on the open market. This is particularly interesting for countries with poor credit ratings that consequently have to borrow at high cost on international markets. Even though the financial benefits go to the government, they are included in this section because they are essentially a way of raising funds on a voluntary rather than compulsory basis.

Diaspora bonds are not as yet widely used. **Israel** has used them since 1951, raising more than \$25 billion to date. **India** has issued several types of these bonds, which have raised, net of repayment, \$11 billion in total from three separate bond offers – in 1991, 1998 and 2000. **Sri Lanka** and **Lebanon** have also used this instrument, although no details of their net revenues are available.⁷³ Recently, the **Greek** government has been looking into this option as one possible way of augmenting its revenues in a complicated economic environment.⁷⁴ **Ethiopia** and **Rwanda** have both announced that they will soon issue diaspora bonds.⁷⁵

Remittances constitute for many middle- and low-income countries a large, stable and, to some extent, counter-cyclical source of income. According to the latest World Bank data, remittance flows to low- and middle-income countries were estimated at \$406 billion for 2012.⁷⁶ These remittances are projected to grow by around 10% annually in the next three years and to reach \$534 billion in 2015. While the large volumes of remittances would make this a potentially interesting source of revenue (even with a very low level of contribution), in practice it is neither a simple nor necessarily always a good policy. There are some arguments in favour of taxing

70 Thomason, J. *PNG Mineral Boom: Harnessing the Extractive Sector to Deliver Better Health Outcomes*.

Development Policy Centre Discussion Paper No. 2. Australian National University. <http://ssrn.com/abstract=1919304>.

71 Feeley, F. G. et al. 'The Private Sector and HIV/AIDS in Africa: Recent Developments and Implications for Policy'. In Lule, E. L. et al. (eds). *The Changing HIV/AIDS Landscape: Selected Papers for the World Bank's Agenda for Action in Africa, 2007–2011*. World Bank, Washington, DC, 2009.

72 Ibid.

73 Ketkar, S. and Ratha, D. 'Development Finance via Diaspora Bonds'. In Ketkar, S. and Ratha, D. (eds). *Innovative Financing for Development*. World Bank, Washington, DC, 2009.

74 <http://blogs.worldbank.org/category/tags/diaspora-bond>.

75 Ibid.

76 World Bank. Migration and Development Brief 19. World Bank, Washington, DC, 2012. <http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1288990760745/MigrationDevelopmentBrief19.pdf>.

remittances, based on the fact that in some contexts they are mainly received by middle-class families;⁷⁷ hence there could be room for introducing some redistributive elements in the remittance flows, and the health sector would be a good candidate for channelling this revenue redistribution. However, there are also arguments against taxing remittances, since this could result in diminishing inflows, which could have an adverse effect on many economies. In Liberia, for example, remittances represent 31% of GDP, meaning that large parts of domestic economic activity are dependent on these financial transfers from abroad.

Tourism-related levies could be an option for countries with developed tourism industries. These taxes often already exist in the form of airport levies (departure tax) or taxes for hotel nights. **Zanzibar** in the United Republic of Tanzania has recently been planning to implement a tourism levy that would be earmarked for national malaria control efforts. Zanzibar's objective is to market the levy to foreign visitors on the promise of using the revenue to achieve a 'Malaria Safe Zone' for tourists.

Raising more money for health: conclusions

The list of options for directly or indirectly increasing domestic revenues for health is long, and the fact that all of the options described in this section have been implemented in at least one low- or middle-income country suggests that every country could do something. In Table 2 we summarize the options presented in this section and make some estimation of possible revenue generation.

⁷⁷ United Nations Development Programme. *Human Development Report 2009: Overcoming Barriers: Human Mobility and Development*. UNDP, New York, 2009.

Table 2: Options for increasing domestic revenue for health

Revenue mobilization approaches	Possible actions and strategies	Possible revenues generated (in general and for health)	Remarks
Formalization of economies	Improving governance; enforcing existing regulations; simplifying some administrative procedures	Depends on country contexts, but formalization could potentially increase GGE/GDP ratios by several percentage points	Needs an overarching, long-term politico-administrative approach, so obtaining results may take time
Redistributing existing government revenues to health	Advocacy; creating political will; demonstrating results; demonstrating efficiencies	If AU countries would meet 15% GGHE/GGE target they would increase health expenditure by \$29 billion	Prioritization of health not always evident; need to take into account spending through other sectors for improving health outcomes
Increased government revenue mobilization – structural approaches	Structural reforms in the tax regime (e.g. introducing VAT); strengthening enforcement mechanisms	Context-dependent; could potentially increase GGE/GDP ratios by several percentage points	Needs political will and technical knowledge; need to focus on equity aspects (e.g. seeking to exempt necessity products from VAT)
Increased taxation relying on natural resource exports	Good governance to avoid the 'resource curse'; specific taxation measures on 'super-profits'	Context-specific; Botswana has shown that significant amounts of revenue can be raised with sound policies and transparency	Not an option for countries with no or few natural resources; potentially an unpredictable source of revenues
Increased taxation of large industries	Obtaining support of powerful interest groups; advocacy directed at corporations that it is in their interest that government can invest in public goods	1% tax on turnover of companies that would represent 5% of GDP would yield 0.05% of GDP in revenue	Every country needs to balance the possible gains in revenue collection and possible negative effect on economic activity
Increased taxation of harmful habits and products	Advocacy on the 'win-win' nature of these taxes; creating evidence on implications on revenue and health outcomes	Possibilities for increases, especially for countries with existing rates below regional averages; e.g. Philippines, increased alcohol and tobacco taxes to raise additional \$3.4 billion = 1.3 times current GGHE	Opposition from business interests; need for parallel actions on illegal production and trade; equity – are the poorest more affected by these taxes?; also a 'win' from public health perspective
Taxing specific goods and services (luxury items, mobile phone use)	Linking this approach to overall policy for increasing redistributive effect of taxation; focusing on countering possible tax avoidance strategies	Probably best suited in middle-income country contexts; revenue depends on the type of goods or services taxed and the rate used	Can work with high-value but infrequent transactions, and with low-value and frequent transactions; need to be careful about equity; is mobile phone a luxury?
Increased direct funding for health (earmarked taxation)	Convincing finance ministry and other budget deciders on the need to earmark	Depends on the case – needs additional revenue collection to be fully effective (e.g. earmarking an increase of VAT, not a part of existing VAT)	False hopes – e.g. increased earmarking in the form of statutory health insurance contributions can lead to similar cuts in the regular health budget
Voluntary sources of revenue (e.g. from businesses)	Mobilizing private-sector actors behind public health goals; increase dialogue with private-sector actors	Can provide catalytic resources and can be used as leverage to raise other funds	Need to be aware of the supplementary and possibly unpredictable nature of this type of funding

4. IMPROVING EFFICIENCY

Raising additional funds for health is particularly critical in the 46 vulnerable countries that were the focus of the previous section, but all countries struggle to find sufficient funds to meet population needs and demand. However, the amount of money is only one determinant of the ability to improve population health and well-being. The efficiency with which the available funds are used is also critical.

The *World Health Report 2010* identified 10 common sources of inefficiency, suggesting that around 20–40% of total health spending, or between \$1.3 and \$2.6 trillion, might be lost through waste, corruption and other forms of inefficiency

By 2010, global health expenditure reached \$6.5 trillion, or 10.4% of global GDP. The United States itself represented slightly over a third of total worldwide health spending, and various estimates have found that these funds are wasted or spent inefficiently; for example, a 2009 report suggested that approximately 30% of US health expenditure (or \$750 billion) was wasted because unnecessary services were provided and because of inefficiencies at all levels of the health system.⁷⁸ Other, multi-country estimates, focusing only on fraud and corruption, suggest that as much as 6% of global health expenditure is lost through these practices.⁷⁹ The *World Health Report 2010* identified 10 common sources of inefficiency, suggesting that around 20–40% of total health spending, or between \$1.3 and \$2.6 trillion, might be lost through waste, corruption and other forms of inefficiency.

To provide a background to the subsequent discussion, Box 1 summarizes the meaning of efficiency in economics and briefly describes how these concepts are typically applied to the health sector.

Box 1: Efficiency in economics

Three types of efficiency are defined. **Productive efficiency** involves using the technologies and techniques of production that ensure the highest possible output of goods and services for the available inputs (health workers, medicines, capital equipment, etc.). Technical efficiency is very closely related, ensuring that desired output is produced with the least cost combination of inputs. Technical and productive efficiency together ensure that the available resources produce the greatest possible output or combination of outputs, and, at the same time, that those outputs are produced at the least possible cost. **Allocative efficiency** (also known as Pareto efficiency) is concerned with the question of whether the mix of goods and services produced (with technical and productive efficiency) is the mix that is of most value to society.

In health, technical and productive efficiency are often considered together: would it be possible to reduce the costs of running a 600-bed hospital; or would it be possible to get more than 3,000 inpatient visits and 1,000 inpatient bed-days from the resources invested in a hospital? Allocative efficiency is interpreted in terms of the mix of interventions produced at the right time in the right place that would maximize population health – usually measured in terms of years of life saved, healthy years of life saved, or disability-adjusted life years gained – for the available resources.⁸⁰

78 *Best Care at Lower Cost: The Path to Continuously Learning Health Care in America*. Institute of Medicine, Washington, DC, 2012.

79 *The Financial Cost of Healthcare Fraud*. European Healthcare Fraud and Corruption Network, 2010.

80 Chisholm, D. and Evans, D. B. *Improving Health System Efficiency as a Means of Moving towards Universal Coverage*. World Health Report 2010 Background Paper, 28. WHO, Geneva, 2010.

Health system inefficiencies

Inefficiency exists everywhere in health systems, although the sources vary by setting. Some of the most common are: irrational or inappropriate use of medicines; poorly executed procurement, including paying too much for medicines or technologies; misallocation and mismanagement of human and technical resources; under-use of capital equipment, particularly hospitals; excessive length of inpatient stays, or higher-than-needed admission rates; leakages, waste and corruption; medical errors; and an inappropriate mix of interventions. Variation in efficiency is one of the reasons why some countries obtain relatively higher levels of service coverage and health outcomes than do others for the resources they invest, and the potential to achieve more with the same resources is enormous.⁸¹

Box 2: Possible efficiency gains in medicines

Medicines provide an important opportunity for efficiency in the health system, especially since they represent 20–30% of global health expenditures, and over 30% of THE on average in low-income countries (and more than 50% in some countries, such as the Comoros, Lao People's Democratic Republic and Uganda). Medicines are also one of the fastest growing expenditure areas; in the past 10 years spending on medicines has risen considerably in per capita terms – by 50% in OECD countries, for example.⁸² Medicine purchasing practices are often suboptimal, and cross-country comparisons reveal that prices in many low- and middle-income countries are far from the average internationally.⁸³ By ensuring transparency in procurement, countries can gain an element of leverage regarding negotiations on prices, and hopefully lower costs; WHO's Good Governance for Medicines programme, among other initiatives, has been providing support in this area to many low- and middle-income countries.⁸⁴ Pooled medicine procurement practices are another strategy for bringing down procurement prices; the Southern African Development Community (SADC), for example, has been facilitating joint procurement of medicines for HIV/AIDS, TB and malaria between its member states. Choosing branded medications over generic equivalents can result in tremendous inefficiencies in health spending. By promoting the use of generic medicines, countries can achieve important efficiency gains; a study including 17 medicines estimated that countries could save anything between 9% and 89% by switching private-sector purchases from originator brands to lowest-priced generics.⁸⁵

While it is relatively straightforward to identify sources of inefficiency and to estimate, sometimes roughly, the associated losses, it is less easy to increase efficiency. Almost all changes will be resisted by interest groups that benefit from the type of inefficiency, so the process of change will be very political. It will also involve transaction costs. There are four main mechanisms for improving efficiency:

- Administrative methods: e.g. stronger audit systems for expenditures or clinical practice, or the introduction of clinical guidelines;
- Legislation: e.g. mandatory generic substitution at pharmacies, or restrictions on doctors selling medicines;

81 Ibid.

82 Organisation for Economic Co-operation and Development. *Pharmaceutical Pricing Policies in a Global Market*. OECD, Paris, 2008.

83 Cameron. A. et al. 'Medicine Prices, Availability, and Affordability in 36 Developing and Middle-income Countries: A Secondary Analysis'. *The Lancet*, 17 January 2009, 373, pp. 240–49.

84 Baghdadi-Sabeti, G. and Serhan, F. *WHO Good Governance for Medicines Programme: An Innovative Approach to Prevent Corruption in the Pharmaceutical Sector. Compilation of Country Case Studies and Best Practices*. World Health Report 2010 Background Paper, 25. WHO, Geneva, 2010.

85 Cameron. A. et al. 'Switching from Originator Brand Medicines to Generic Equivalents in Selected Developing Countries: How Much Could Be Saved?' *Value in Health*, July–August 2012, Vol. 15, No. 5, pp. 664–73.

- Voluntary behaviour-change activities: e.g. campaigns to encourage people to demand generics, or to encourage providers to prescribe them;
- Incentives, largely financial, to providers or consumers, usually related to the method of paying various types of provider.

As the areas of inefficiencies in health systems are multiple and interlinked, a full appreciation of the efficiency question would need a much longer discussion that is possible within the limits of this document. The efficiency questions related to medicines discussed in Box 2 give an example of possible health system inefficiencies and the possibilities for creating efficiencies. (More examples can be found in the *World Health Report 2010*, Chapter 4, where 10 most common areas of health system inefficiencies are identified.⁸⁶) However, the main focus of this section is on provider payment mechanisms as a source of inefficiencies, and on provider payment reforms as important strategies for making health systems more efficient. There is a large literature on this from high-income countries, but little evidence from low- and middle-income countries.

Focus on provider payment mechanisms

Financial and non-financial incentives shape the behaviour of health care providers (and patients). One of the key issues for countries is to create incentives for providers to achieve efficiency goals without compromising quality. Provider incentives mainly relate to the mechanism whereby providers are paid.

Fee-for-service payments are well recognized to be devoid of incentives to improve efficiency or quality. Many countries have therefore experimented with alternatives that modify provider payment systems in search of greater efficiency

Historically, two of the most common ways of paying individual health care providers have been salaries and fee-for-service (FFS) payments. For hospitals and other health facilities, the equivalent of wages is a funding stream that simply pays for all needed inputs to keep the facility operating – staff, medicines, equipment, etc. The equivalent of FFS is where the hospital or health facility is reimbursed (by patients, government or insurers) for each patient encounter or service provided – e.g. an inpatient day, an X-ray or an outpatient visit. FFS payments, an example of retrospective, output-based payment, are well recognized to be devoid of incentives to improve efficiency or quality.⁸⁷ In fact, they encourage over-servicing for people who can pay, or whose costs are largely covered by insurance, and under-servicing for people who cannot pay. It is similarly argued that salaries offer no incentives for efficiency or for quality improvement unless combined with other incentives.⁸⁸

Many countries have therefore experimented with alternatives or additions to salaries and retrospective payments, in an attempt to encourage greater efficiency and, sometimes, quality.

86 World Health Organization. *World Health Report 2010*, Chapter 4. WHO, Geneva, 2010. http://www.who.int/entity/whr/2010/10_chap04_en.pdf.

87 Mechanic, R. and Altman, H. S. 'Payment Reform Options: Episode Payment Is a Good Place to Start'. *Health Affairs*, 2009, Vol. 28, No. 2, pp. 262–71.

88 World Health Organization. *Provider Payments and Cost-containment: Lessons from OECD Countries*. WHO, Geneva, 2007.

This has usually involved some form of prospective payment – i.e. fixed fees or payments agreed before the event. The most common examples are capitation payments for ambulatory care, and payments based on diagnosis-related groups (DRGs) for inpatient care. In the former, providers or health facilities are paid a fixed annual sum for each patient enrolled, usually adjusted for perceived need, with no extra payments if the patient is provided with very intensive care. DRGs pay a hospital for each admission based on the DRG – e.g. a normal delivery. The payment does not increase if patients are kept in hospital longer or given more intensive treatment. The next part of this section reviews the experiences of the low- and middle-income countries for which we could find documented reports of the impact of policies that modified provider payment systems in search of greater efficiency, sometimes focusing on individual service providers and sometimes on health facilities. Rather than refer to all the country examples in the text, we summarize them in Table 3 – the full country cases are given in the Annex.

Table 3: Country experience with provider payment reforms

	Type of provider payment reform	Objective of the reform	Result on efficiency
Brazil	Introducing a pay-for-performance system	Increase motivation of health workers to produce quality services	Increased quality, with constant levels of spending
China ⁸⁹	Different pilot projects, including DRG payments and capitation	Decrease provider incentives for over-servicing	Example from one pilot: 69 frequently treated diseases that were reimbursed in the DRG scheme saw a fall in expenditure per case of 30–50%
Lithuania	Introducing a DRG system for inpatient care and a 'blacklist' for non-reimbursed services	Eliminating unnecessary treatment and encouraging outpatient care	Outpatient service utilization increased by 8%, and number of inpatient admissions fell from 23.7% to 20.2%
Kyrgyzstan	Piloting DRGs from 1997 and making them nationwide in 2007	Reduce hospital overcapacity	During the pilot phase hospital capacity was reduced, with no apparent reduction in the quality, and with an increase in utilization
Romania	Introducing a mix of capitation and FFS payments	Increase outpatient service utilization and curb informal payments	Family doctors provided 21% more consultations and 40% more home visits than before; responsiveness increased
Thailand	Introducing DRG payment for hospitals and age-adjusted capitation for primary health care	Increase efficiency by controlling cost while extending coverage	Extension of coverage has been effective without over-straining government budget

These examples focus almost exclusively on DRG payments for hospitals, with some attention paid to capitation for primary care providers. This literature supports the findings with regard to DRGs and capitation in higher-income settings such as Australia, Croatia, Estonia, the Republic of Korea and the United States.⁹⁰ DRGs tend to reduce the average length of stay and the

⁸⁹ We focus here on some earlier pilot project of provider payment reforms; we have not included the more recent provider payment reforms in China.

⁹⁰ Joumard, I. et al. *Health Care Systems: Efficiency and Institutions*. OECD Economic Department Working Paper 769. OECD, Paris, 2010; Kahur, K. et al. *Estonia: Developing NordDRGs within Social Health Insurance. Diagnosis-Related Groups in Europe – Moving Towards Transparency, Efficiency and Quality in Hospitals*. WHO Regional Office for Europe, Copenhagen, 2011; Bogut, M. et al. *Impact of Hospital Payment Reforms in Croatia*. World Bank Policy Research Working Paper, WPS5992. World Bank, Washington, DC, 2012; Kwon, S. 'Payment System Reform for Health Care Providers in Korea'. *Health Policy and Planning*, 2003, Vol. 18, No. 1, pp. 84–92.

intensity of hospital treatment, particularly the use of medicines. None of the studies reported in Table 3 identifies reductions in quality or deterioration in other health outcomes as a result of the change in payment mechanism, although some do not measure this aspect. In one study there was evidence of 'gaming' in the form of 'DRG creep' – i.e. hospitals classifying fewer patients in low-paying DRGs and more in high-paying DRGs, something that has also been identified in higher-income settings, and that necessitates a strong information and monitoring system.

Capitation at primary provider level was associated with more prevention and lower costs in the studies where it was introduced, although in one of them it was combined with FFS payments. In that study, patient satisfaction also improved after the introduction of capitation payment.

We have not reviewed administrative, legislative and behaviour-change methods of improving efficiency in this paper, but have focused on the impact of provider payments. Moreover, we have included pay-for-performance (P4P) in only one case. There is a large literature on P4P in developing countries, but in most cases these initiatives have not been designed to improve efficiency in the sense of getting greater returns from the available funds, or reducing the costs of achieving the same outcome. Most examples – perhaps because they have been strongly supported by donor agencies – have involved increasing costs with a view to obtaining better outcomes. Costs and outcomes (it is hoped) both increase.

In sub-Saharan Africa, Rwanda has been a pioneer in introducing P4P on a national scale. From the outset, the main focus of the Rwanda Performance Based Financing (PBF) scheme was to incentivize the health service providers to increase their service output, especially for the MDG-related conditions.⁹¹ The challenge for the Rwanda PBF, and similar schemes in countries such as Burundi, Cameroon and the Democratic Republic of the Congo, is to ensure that the incentive system adapts to changing disease patterns and population needs, and that there is a good monitoring system to track provider behaviour. Not surprisingly, P4P schemes do have an impact on provider behaviour, although many of the evaluations undertaken have looked only for the expected positive impacts – e.g. the increase in deliveries in hospital for providers paid per delivery.⁹² The evaluations have generally failed to consider, or look for, possible negative impacts such as providers failing to do the things for which they are not paid, a consequence that was observed in some surveys in the United Kingdom when forms of payment for performance were first introduced for general practitioners.⁹³

In fact, one of the main problems with the literature on efficiency (and on P4P) is that the costs of introducing and undertaking the reforms, and the relative costs and effects of achieving the same goal, have rarely been assessed. This is sorely needed if decision-makers are to make informed policy choices.

Accordingly, it is possible to be sure only that there are many sources of inefficiency in the health system, a problem that applies to most countries. A number of low- and middle-income countries have taken steps to improve efficiency, as the *World Health Report 2010* showed, but there is little information on the cost and impact of these actions. We have supplemented that work with a more thorough look at actions taken by low- and middle-income countries to modify provider payment mechanisms in the search for efficiency, but, even here, the evidence is very sparse, and much more research is needed to document good practice in improving efficiency in these settings.

91 Sekabaraga, C. et al. 'Can Innovative Health Financing Policies Increase Access to MDG-related Services? Evidence from Rwanda'. *Health Policy Plan*, 2011, 26 (suppl 2), pp. ii52–ii62.

92 Fretheim, A. et al. 'Performance-based Financing in Low- and Middle-income Countries: Still More Questions than Answers'. *Bulletin of the World Health Organization*. 2012, 90, pp. 559–559A.

93 Lester, H.E. et al. 'Identifying Unintended Consequences of Quality Indicators: A Qualitative Study'. *BMJ Quality & Safety*, 2011, 20, pp. 1057–61.

5. CONCLUSION

Global health expenditure has increased rapidly since 2000, even in the poorest countries. Domestic economic growth has facilitated a considerable part of the increased spending, and, despite the substantial scale-up in DAH, domestic health spending remains the predominant source of finance in all but a handful of countries. We have shown that in the 46 vulnerable countries that were the focus of the detailed analysis, only six would be able to reach the level of per capita spending needed to ensure even a very minimum set of key interventions from their own domestic sources by 2015, assuming current projections of economic growth. Increased, predictable flows of external funding for health are still needed, despite the economic downturn in the high-income countries.

That said, there is considerable scope for countries to increase their own domestic funding for health, independent of economic growth. Many low- and middle-income countries have already taken steps to do this, and their diverse experiences were highlighted, providing both proof that it is possible to do this and options for other countries to consider.

Improving efficiency at the same time as raising additional funds would provide a double boost to population health, but the evidence on how best to improve efficiency is not strong

Raising additional funding is, however, not sufficient in itself. As discussed in the *World Health Report 2010*, the magnitude of inefficiencies in the health sector can result in important wastage in health spending. Improving efficiency, at the same time as raising additional funds, would provide a double boost to population health. But while it is clear that inefficiency is a problem in health systems everywhere, the evidence on how best to improve efficiency is not strong. We focused on one small part of this literature here – the question of the impact of modifying provider payment mechanisms in low- and middle-income countries. The evidence from the studies mirrored the findings in higher-income settings: forms of prospective payment reduced costs, with no apparent negative effects on outcomes. There are too few studies, however, to be sure that this can be generalized. Moreover, information on the costs and impacts of efforts to improve efficiency simply does not exist, even with these studies. Accordingly, it is certainly possible to provide a long list of options for countries wanting to raise additional funding for health, but much more needs to be done to help countries decide on the best ways of improving efficiency.

ANNEX: COUNTRY CASES OF PROVIDER PAYMENT REFORMS

Kyrgyzstan

The objective of the provider payment reforms in Kyrgyzstan was to reduce excess capacity in hospitals (forcing some inefficient hospitals to close) and to reduce over-servicing and costs in ambulatory care. A form of case-based payment based on DRGs was implemented in 1997 for inpatient care in 66 chosen hospitals with capitation for primary care.⁹⁴ At the same time, hospitals were allowed to pay financial bonuses to staff based on their performance. From 2007, when the mandatory health insurance fund became a single public purchaser, DRGs were generalized as the payment method for almost all inpatient care. A variety of other reforms was undertaken at the same time – e.g. patient freedom of choice among hospitals and primary health facilities, and improved hospital information systems – meaning that it is difficult to separate the contribution of the reforms aimed at improving efficiency from the whole package of changes. However, between the introduction of the payment reform in 1997 and 2004, hospital capacity had been reduced by 47% and the saved funds were used to augment salaries, among other things. There was no apparent reduction in the quality of services provided, and utilization increased – particularly among the elderly.⁹⁵

Lithuania

Changes were made in the health financing and provider payment mechanism in 2003 that aimed to reduce excess capacity in hospitals, encourage more outpatient care and eliminate unnecessary treatment. These were implemented largely through the DRG system, where the payments for each diagnostic group were set with the aim of achieving the above goals; for example, reimbursements for outpatient surgery were relatively high. A 'blacklist' was also created for services that would not be reimbursed to the providers.

As a result, the number of outpatient surgeries increased fivefold; the number of other outpatient services increased by 8%; and number of inpatient admissions fell from 23.7 to 20.2 per 100 people.⁹⁶ There was a small decrease in average length of stay and in the total number of beds, and an accompanying increase in bed turnover. However, the number of beds was still 35% higher than the EU average, which might imply that there was still some excess capacity.

Romania

In the 1990s Romania had unnecessarily high rates of hospitalization and specialist consultations accompanied by high levels of reported informal payments.⁹⁷ Primary-level provider payment systems were reformed. Output-based contracts were introduced in eight of 40 districts. Each primary care physician had the right to enrol 500 patients, with a mix of capitation and FFS payment – approximately 60%:40% on average. Capitation payments were designed to increase incentives to enrol more patients, while FFS gave incentives to increase some targeted primary care services.

Subsequently, family doctors provided 21% more consultations and 40% more home visits than before, while 87% of them were providing emergency coverage at night and at weekends. Patients claimed that physicians had become more responsive to their needs and that informal

⁹⁴ Kutzin, J. et al. (eds). *Implementing Health Reform: Lessons from Countries in Transition*. European Observatory on Health Systems and Policies, Brussels, 2010.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Vujcic, M. *How You Pay Health Workers Matters: A Primer on Health Worker Remuneration Methods*. World Bank Technical Brief. World Bank, Washington, DC, 2009.

payments had declined, so patient satisfaction rose.⁹⁸ However, hospitalization rates remained higher than the EU average, suggesting that there was room for further improvement.⁹⁹ Romania followed the payment reform at primary care level with a hospital payment reform first piloted in one hospital in 1999, and then rolled out to 185 hospitals in 2004 and a further 278 in 2005.¹⁰⁰ We could, however, find no evaluation of this reform.

China

In China before the 1990s, FFS was the predominant source of payment for ambulatory care, while government hospitals had global budgets – a fixed amount to spend each year – but could also charge for investigations, medicines, interventions, etc. There was considerable over-servicing for people who could afford to pay, while those who could not pay missed out. To improve efficiency, pilots were made to test a number of other payment mechanisms.

Three hospitals were chosen in 1994 in Harbin (Heilongjiang Province) to pilot a DRG payment scheme, and the scheme was extended to 16 hospitals in 2000. The results were positive. To illustrate, in one hospital expenditures for acute appendicitis were reduced by 100%. Drug expenditures as a proportion of total spending fell by 35 percentage points.¹⁰¹ In another hospital 69 frequently treated diseases that were reimbursed under the DRG scheme saw a fall in expenditure per case of 30–50%. Drug expenditure per case decreased by 34–64%, while for five diseases the average length of stay decreased by 0.4–2 days.¹⁰²

In 1995 two other experiments were conducted in hospitals in two cities, Zhenjiang and Jiujiang. Capitation for inpatient care was introduced in Jiujiang, resulting in a reduction of inpatient care costs of 23%, and in the proportion of total costs spent on medicines by 16 percentage points.¹⁰³ In Zhenjiang a pilot DRG scheme was implemented, after which the costs per case were shown to be 25% lower than in hospitals not covered by the DRG scheme.¹⁰⁴

Thailand

When Thailand moved to 'universal health insurance' in 2001 – with what was then called the 30 Baht scheme, later the Universal Coverage Scheme (UCS) – careful attention was given to how to pay health care providers. The two other health insurance schemes in operation – for civil servants and formal sector workers – retrospectively paid providers and hospitals for the services provided, resulting in the usual problem of constantly increasing costs. In contrast, the UCS introduced DRG payment for hospitals and age-adjusted capitation for primary health care. The DRG payments for hospitals were capped by a regional global budget.

A recent evaluation of the UCS showed substantial improvements in access to and use of health services, and in financial risk protection. Moreover, the level of funds needed to support it has stayed well within the financial capacities of the government, at rates much lower than those in many of Thailand's neighbours.¹⁰⁵ Government health expenditure has risen from 2% to 3% of GDP, but at the same time out-of-pocket expenditure has decreased from 1.2% to

98 Ibid.

99 Vlădescu, C. et al. 'Romania: Health System Review'. *Health Systems in Transition*, 2008, Vol. 10, No. 3, pp. 1–172.

100 Ibid.

101 Yang, Z. et al. 'The Impact of DRG-based User Charge on Expenditure Control'. *Chinese Journal of Health Economics*, 2001, 4, pp. 25–26.

102 Ibid.

103 Eggleston K. et al. 'Health Service Delivery in China: A Literature Review'. *Health Economics*, 2008, 17, pp. 149–65.

104 Wu Y., Zhang X., Zhou Z. and Wang X.. 'Contract Services in Community Care System'. *Chinese Journal of Health Economics*, 2004, 9, pp. 4–45.

105 *Thailand's Universal Coverage Scheme: Achievements and Challenges. An Independent Assessment of the First 10 Years (2001–2010)*. Health Insurance System Research Office, Nonthaburi, 2012.

0.6% of GDP. As a result, total health expenditure has remained between 3.5% and 4% of GDP for the last 10 years. There is wide consensus that the provider payment strategies for inpatient and outpatient care were critical in keeping costs down while ensuring increases in service availability.¹⁰⁶ However, there is some evidence that quality in terms of the time health providers can spend with patients may have been negatively affected by the capitation payment system at the primary care level, although patient satisfaction surveys show consistent improvements over the last decade.¹⁰⁷

Brazil

A large experiment with modifications to provider payment mechanisms was initiated in hospitals in the Belo Horizonte area, designed to increase quality for no increase in costs – one way to increase efficiency. First, efforts were made in 2005 to reduce costs. For example, a global budget for surgeries was introduced, as was a series of management controls to contain costs. A decision was then made to use these savings for a P4P programme for health workers, in order to improve overall quality and outcomes. In this way, total spending would not rise, but quality would increase. By 2009, 19 of the 45 hospitals had obtained official accreditation, indicating an increase in quality at least in these.¹⁰⁸

In 2007 a P4P system was extended to primary care providers, in which they were given financial incentives to engage in prevention and early treatment of selected conditions such as childhood asthma, diabetes and other forms of cardiovascular disease, schizophrenia and bipolar disorder, and complications in maternal health.¹⁰⁹ These were the main causes of preventable hospital admissions. The goal was to keep people out of hospital.

Preliminary results of three targeted conditions (childhood asthma, diabetes and other cardiovascular disease) show a reduction in hospital admissions of asthma patients, an increase in the number of patients with cardiovascular disease achieving adequate levels of blood pressure and cholesterol, and an increase in the number of type 2 diabetes patients controlled. The programme reduced the total cost of treatment by 17%, mainly as a result of the decrease in the number of hospitalizations.¹¹⁰

106 Li, C. et al. 'Moving Towards Universal Health Insurance in China: Performance, Issues and Lessons from Thailand'. *Social Science & Medicine*, 2011, Vol. 73, No. 3, pp. 359–66.

107 Hughes, D. et al. 'Using Economic Levers to Change Behavior: The Case of Thailand's Universal Coverage Health Care Reforms'. *Social Science & Medicine*, 2010, 70, pp. 447–54.

108 Forgia, L. et al. *Hospital Performance in Brazil: The Search for Excellence*. World Bank, Washington, DC, 2008.

109 Borem, P. et al. *Pay for Performance in Brazil: UNIMED-Belo Horizonte Physician Cooperative*. Health Systems 20/20 project, Abt Associates Inc, Bethesda, MD, 2010.

110 Forgia et al. *Hospital Performance in Brazil*.

ABOUT THE SERIES

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