Responding to the challenge of resource mobilization - mechanisms for raising additional domestic resources for health

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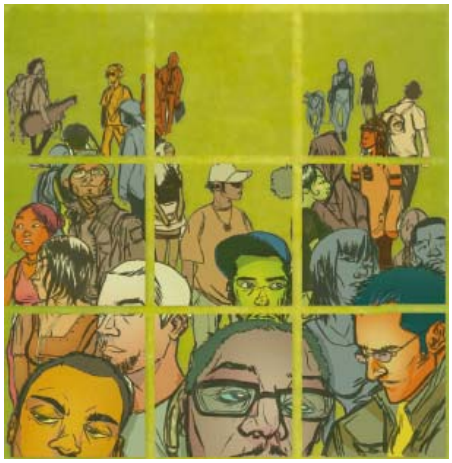
HEALTH SYSTEMS FINANCING
The path to universal coverage

World Health Organization



Responding to the challenge of resource mobilization
- mechanisms for raising additional domestic resources for health

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Summary

The absolutely low level of health spending in many low - and middle-income countries is a significant obstacle to moving towards universal coverage. Although development assistance can have an important catalytic function for countries to finance their push towards universal coverage, domestic resources for health will need to increase in the longer term in order to ensure more predictable and sustainable funding. In this background paper to the World Health Report 2010 on health systems financing, we provide an overview of innovative methods for raising new domestic resources in low- and/or medium-income countries that would enable a greater flow of funds into the health sector. This includes options for broadening the general tax base as well as levies on specific consumption goods or sectors. We start with a discussion on the fund-raising potential of enhanced taxation or levies on large corporations. This is followed by a discussion and analysis of excise taxes on products harmful to health (such as tobacco and alcohol use). We then proceed to a consideration of levies on financial transactions and instruments, followed by other targeted levying mechanisms (such as mobile phone use and remittances). The options presented differ in their capacity to generate resources, with some more impressive than others. In addition to the absolute amounts likely to be raised, policy makers need to take into account a number of other factors such as earmarking, potential regressivity (i.e. impact on the poor), administration costs and political feasibility.

1. Introduction

1.1. The limits of current funding for health

There is no magic formula for defining what is the correct or sufficient level of health spending in a particular country. Some countries like Rwanda, Sri-Lanka or Thailand have shown that a broad range of accessible and affordable health services can be provided to the population with a relatively low level of health expenditure[1,2,3]; at the other end of the spectrum, certain high-income countries spend vastly more per head on the provision of health services, yet arguably do so in an inefficient and/or inequitable way, which implies that the same health outcomes could have been achieved with lower spending levels.[4,5]

Nevertheless there have been attempts to identify minimum target levels of health expenditures. For example, a recent analysis undertaken by WHO for the Taskforce on Innovative Health Financing in 2009 estimated that low-income countries would need to spend an average of US$54 per capita in order to have a fully functioning health system covering a basis package of services. [6] Overall, the average health expenditure level for low-income countries is only $27 per capita,[7] despite these countries facing the greatest disease burden. The South Asian and sub-Saharan African regions together account for over 50% of the global disease burden – and 37% of the world's population – but only 2% of global health spending.[8] The absolutely low level of health spending in many low - and middle-income countries is a definitive obstacle to moving towards universal coverage, whereby everyone would have access to needed health services (curative, preventive, promotional and rehabilitation) and no one would suffer undue financial hardship for having to pay for these services. The money needed for setting up a health financing system that would guarantee universal coverage simply is not available from domestic sources in most low- and middle-income countries.

In the short to medium term, many of the poorest countries will need substantial external support. The richer countries must thus stick to their commitments [9] and channel more resources into the development of health systems in poorer countries. Nevertheless, external aid has its limits. Although development assistance can have an important catalytic function for countries to finance their push towards universal coverage, domestic resources for health will need to increase in the longer term in order to ensure more predictable and sustainable funding. Today, while a few countries are very donor-dependent, on average external resources represent less than 25% of total health expenditure in low-income countries, the rest coming from domestic sources.[10]

All this means that it is imperative that countries plan their long-term health financing needs on the basis of domestic resource availability. Moreover, this will need to be done in a way that reduces the financial barriers to care such as the burden of out-of-pocket (OOP) expenditures on health (which constitute more than half of total health spending in low-income countries and 40% in middle-income countries). The obligation to pay directly for services at the time of need presents a barrier to people seeking care when they do not have the financial means at hand; this has a particularly dire impact on the poor.[11] Moving away from an undue reliance on OOPs will be crucial in order to remove some of the most important obstacles for access to needed health services. Arguably, therefore, new sources of funds should aim to increase the proportion of prepaid contribution mechanisms over OOP expenditures.

In every country there is a competition for resources between different sectors. Countries differ with regards to the emphasis placed on the government contribution to different sectors, as shown in Table 1. On average, government expenditure on health represents around 11% of total government expenditure, which is appreciably lower than that for education (15.9%).[12]

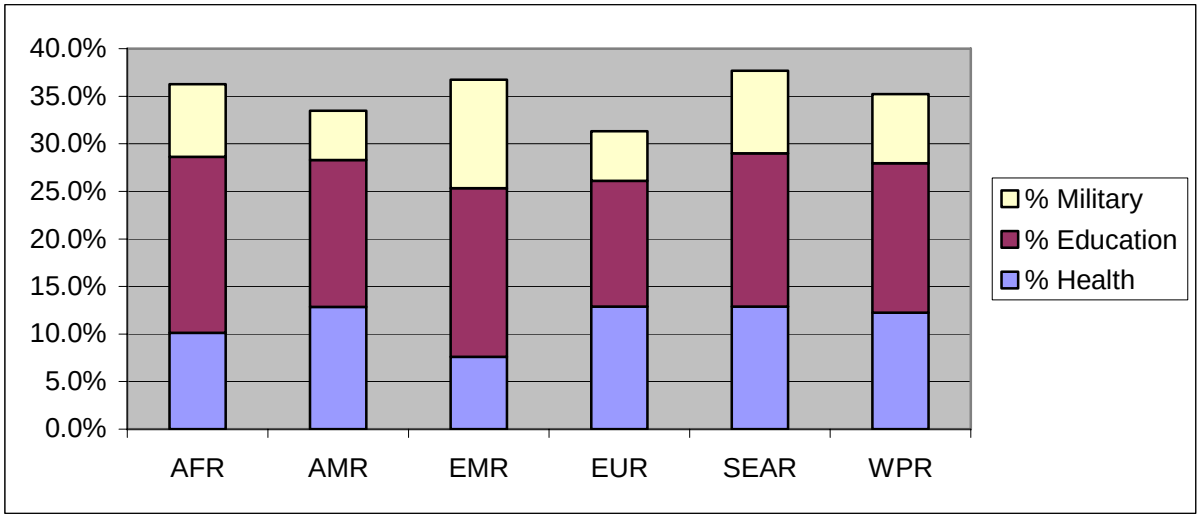
Table 1 Allocation of government expenditure towards health, education and military sectors, as % of total government expenditures, by country income category

	Health expenditure [a]			Education expenditure [a]			Military expenditure [a]		
Income level	Average [b]	Median	N	Average [b]	Median	N	Average [b]	Median	N
High	14.0%	14.4%	25	13.5%	12.7%	25	6.9%	4.2%	23
Upper-middle	12.0%	10.8%	19	14.5%	13.9%	19	5.5%	4.7%	17
Low-middle	13.8%	10.7%	29	17.3%	16.7%	29	5.1%	7.0%	23
Low	13.7%	9.5%	27	17.6%	17.5%	27	4.9%	7.5%	24
All		10.8%	100	15.9%	15.1%	100	6.9%	5.1%	87

[a] Data sources: Health expenditures from WHO, refer to 2008. Military expenditure from www. sipri.org, refer to 2008. Education spending from UNESCO, most recent year for which data is available 2006-2008. [b] Simple unweighted averages.

We can also see regional differences. In Sub-Saharan Africa, where countries face the greatest challenges in terms of human and economic development, education accounts for about 18.5% of total government spending on average, while health only receives 10.2% (Figure 1). On the other hand, military spending amounts to about 7.6% in the region. Even if these figures would suggest that there is a case for reallocation of resources from other sectors towards health, the actual implementation would be quite difficult - mainly because in most of the resource-poor countries all the social and development sectors are basically under-financed relative to the needs.[13] Low-income countries on average collect some 22.6% of their GDP as government revenues, which severely limits their ability to finance essential public services (the corresponding measure for middle and high income countries is on average twice as high: 39.5% for middle-income and 41.8 % for high-income countries).

Figure 1 **Average (unweighted) levels of government expenditure on Education, Health and Military sectors, as % of total government expenditures, across WHO regions** [a]



[a] AFR: African region; AMR: Region of the Americas; EMR: Eastern Mediterranean region; EUR: European region; SEAR: South-East Asia region; WPR: Western Pacific Region

1.2. The potential for raising new resources for health

While certain regional targets favour a reallocation of resources between sectors (as implied by the Abuja target to allocate 15% of government revenues to health [14]), the key challenge for low-income countries is more about raising new resources. From a health financing perspective, the challenge is two-fold; how to raise overall general government revenues (since this would translate into more money for health, even if the proportion of money going to health stays the same); and how to raise new funds that could go directly to health.

The Taskforce on Innovative International Financing for Health Systems, chaired by the Prime Minister of the United Kingdom, Gordon Brown and World Bank President Robert Zoellick, was set up in September 2008 and focused on finding innovative financing mechanisms to strengthen health systems in the poorest countries in the world. In its report "More money for health, and more health for the money" [15], released in June 2009, the taskforce recommended, among others, to explore the technical viability of solidarity levies such as tobacco taxes. The Task Force was mainly focusing on North-South resource transfers.

In this paper, our focus is on innovative and additional methods of raising new *domestic* resources in low- and/or medium-income countries that would enable a greater flow of funds into the health sector. We have focused on public resource collection, in other words ways through which governments or para-

governmental organizations can raise resources that could be used for providing or purchasing health services to the population. In subsequent sections we provide an overview of different mechanisms for expanding the resource base. This includes options for broadening the general tax base as well as levies on specific consumption goods or sectors. We start with a discussion on the fund-raising potential of enhanced taxation or levies on large corporations. This is followed by a discussion on excise taxes on products harmful to health (such as tobacco and alcohol use) - the so-called 'sin taxes'. We then proceed to a consideration of levies on financial transactions and instruments, followed by other targeted levying mechanisms (such as mobile phone use and remittances).

We have attempted to assess the fund raising potential of selected options that governments may wish to consider. For some of the proposed mechanisms, such as enhanced taxation of tobacco products and alcoholic beverages, we have produced gross estimates of the amount of additional earnings that can be generated, based on country data. For other promising options, such as taxes on foods high in fat or sugar content and currency levies, there is insufficient data to examine current or potential resource flows in the low-income countries. The methods used to assess the likely fund-raising potential of each option thus vary, taking into consideration the available data and the latest evidence. The reason why many of the options listed here are called "innovative" is precisely because of their limited implementation to date.

It is important to note and acknowledge that any new resources raised can either be used as general government revenue - to be allocated between different government sectors as needed - or specifically allocated to health. We present different country examples of where resources are earmarked expressly for health, whether this is the entire revenue raised, or a fixed proportion. Taxes where the revenue is designated to be spent on a particular programme or use are often called *hypothecated* taxes. Hypothecated taxes can refer to levies on specific products, for example taxes on gasoline or tobacco. They can also refer to overall revenue collection through taxes. Several countries have implemented a Value Added Tax (VAT) or sales tax which is earmarked for health. An example is Ghana, where the National Health Insurance Scheme (NHIS) is financed through individual premium payments and a 2.5% National Health Insurance Levy collected using the same mechanisms as the already existing (12.5%) VAT. The additional funds raised from the levy (~3% of total NHIS budget), contributed significantly to increasing enrolment from 7% in 2005 to close to 50% of the population in 2008.[16] There may also be arguments against hypothecation since it exempts the tax revenues in question from scrutiny and potential reallocation with annual budget reviews, and constrains the ability of the government to reduce spending as may be needed depending on the economic cycles. Arguments for and against hypothecated taxes are discussed in a separate WHR2010 Background Paper.[17]

2. Sector-specific ("Big corporation") taxes

Countries may look into taxing specific profitable sectors or big corporations as an additional source of revenue. On the 21st of October 2010 the government of the United Kingdom published the 2010 Spending Review that introduced the government's plan to impose a permanent Bank Levy which would consist of a yearly charge of 0.05% to 0.1% on the banks' balance sheets. The British government has estimated that this levy could raise £2.5 Billion per year (around US$ 4 Billion)[18,19] The Bank Levy can partly be interpreted as a reaction to the public "bailouts" of the banking sector which came with a very heavy cost to the taxpayers; thus a levy on banks can be seen as a measure to recuperate some of that money. But the levy is clearly also a mechanism that is meant to strengthen public resource collection by taxing some of the largest companies in the United Kingdom - the banks - which, after a short negative period, are now back to healthy profits. It is interesting to note that the Spending Review also revealed that health will be (alongside international development) the only sector that should see real growth in its government budget allocations. Although there have not been any information on how the Bank Levy will be allocated, it will unavoidably directly or indirectly also support public funding for health in the future.
Other countries that have implemented a Bank tax include Brazil, where the *Social Contribution on New Corporate Profits* - tax (CSLL) is differentiated so that a rate of 15% is applied to financial institutions, rather than the standard rate of 9% for other corporations.[20]

Australia has been preparing for some time the introduction of a levy on mining companies. The fate of this tax, the Mineral Resources Rent Tax (MRRT), previously known as the Super Profits Tax, is not yet clear and depends on the political negotiations, but it seems that the current government has the will to introduce it.[21] The currently planned version of the levy would consist of a 30% tax on iron and coal mining company (super) profits that exceed a 12% threshold in the rate of return.[22] One of the rationales behind the implementation of this levy is the extensive rise in commodity prices that has been continuing, excluding the 2008-2009 slump, for at least a decade; this means that the mining company profits include a certain "windfall" element that can be seen as a very popular, logical and equitable taxation target. It has been estimated that the MRRT would raise around AU$10 Billion (around the same amount in US dollars) during the first two years of its implementation. Although some of the proceedings of this tax will be offset by the simultaneous lowering of the general company tax rate, it has been also introduced as a response to the need to find new additional resources for paying for pensions and health care in the context of an increasing budgetary pressure derived from the ageing of the population.[23, 24]

As in the Australian case, the extraction industry (mining, oil, gas, etc.) is often seen as one of the most promising sources for raising additional resources for public budgets. This is especially true for a variety of low- and middle-income countries with exploitable natural resources. However, there is abundant evidence on the existence of the so-called "resource curse" which falls upon countries who have vast natural resources but whose populations do not seem to reap the economical benefits from them.[25, 26] Several factors behind the resource curse have been put forward, including: Dutch disease (when an increase in revenues from natural resources (or inflows of foreign aid) raises the value of that nation's currency which results in exports becoming more expensive, making the manufacturing sector less competitive), governance, conflict, excessive borrowing, inequality and volatility.[27] Without going into the details of this phenomenon and its root causes, it should nevertheless be underlined that introducing new levies on the big companies involved in natural resource extraction might not be the most appropriate solution if the more basic questions on managing and distributing the richness from natural resources have not been answered. Nevertheless, even in contexts where there are serious problems in the management and distribution of wealth derived from the natural resources, an earmarked levy for health (and other social sectors) could maybe break some of the deadlocks and bring more accountability to the way public resources are derived from these industries. In Papua New Guinea, the proceedings of the country's biggest mine are collected in a specific fund - the PNG Sustainable Development Program (PNGSDP) - that is used for divers development programs including for health[28]. The PNGSDP receives substantial revenues from the mine - in 2008 and 2009 the dividends from the mine to PNGSDP amounted to US$ 180 million. Many of the PNGSDP projects are multisectoral so it is difficult to see what is the exact part going to health, but for example a US$9 million (24 million Kina) project on health and education in one province (the Western Province) represented a substantial addition in health spending there.

Another successful venture is in Lao People's Democratic Republic, where a new hydropower project is proving to be a welcome additional source of income for the government. The Nam Theun 2 (NT2) hydropower project is a development project that aims to generate revenues for poverty reduction. It is expected to generate US$ 2 billion over 25 years for the Lao Government to invest in education, health, infrastructure and environmental protection.[29] During the first 6 months since the start of commercial operations in April 2010, the Government received about US$5.6 million from the sale of electricity generated by the facility, of which so far approximately U$1 million has been channeled into spending on public health. In the poorest 47 districts, NT2 revenues are financing a program on improving mother and child services along with providing surgery items. Money is being spent on training to health care staff, medicines, medical equipment, and financing a health equity fund. It is projected that annual revenues for the Government will average about US$30 million per year during the first ten years while commercial

debt service is paid, then rising sharply thereafter to an average of approximately US$110 million from 2020 to 2034. The project also helped to facilitate NT2 revenue management arrangements. The implementation of revenue management arrangements have helped the Lao government to put in place tools for transparent, efficient and accountable management of public resources.

In many low- and middle-income countries large private companies can be found in sectors other than oil or mining; the telecommunications sector for example has become one of the largest economical actors in many countries. Gabon has implemented a specific tax on the mobile phone companies which is directly used to cover population not economically capable of contributing to the National Health Insurance. In 2009 Gabon collected 12 Billion GCFA, or US$25 Million, with the levy on mobile phone companies.[30]

When considering different options for taxing large companies, governments need to keep in mind that they need to find a balance between upholding incentives for investments and generating adequate resources for public expenditure. The policy options are thus highly context-specific. In most cases private companies are already paying some form of corporate tax: corporation income taxes represent around 10% of the total tax revenues in rich countries and around 19% in developing countries. [31] This is of course already a non-negligible contribution to public finances but in many countries there could be good reasons to implement specific measures of levying funds from large and profitable private companies either for health directly or to consolidate public finances in order to secure a sound tax base that will indirectly profit health. Contributing directly or indirectly to health also makes good business sense for companies, not only in terms of maintaining a healthy workforce, but also in terms of image.

3. Excise taxes on harmful products - "sin taxes"

3.1. The rationale for sin taxes

Certain products and activities in society are seen as socially undesirable and/or contribute significantly to welfare loss within societies. Taxes on such products are commonly referred to as "sin taxes" - so called because the consumption of addictive substances such as tobacco or alcohol is seen by some as immoral. The consumption of tobacco, alcohol and unhealthy foods, contribute to health care costs for diabetes, cancers and other non communicable diseases which impose significant costs on health systems. More than 10% of global disease burden is linked to conditions related to alcohol, tobacco and unhealthy foods. Consequently, a considerable amount of public and private resources must be spent to treat the diseases caused by these behaviours. When the associated care is funded through national health insurance systems

where resources are pooled to facilitate risk sharing, significant externalities are imposed on the entire population, which provides justification for taxation.

The introduction or ramping up of excises taxes on products that pose risks to health have long been seen as one of the key mechanisms by which additional government revenues may be secured and used for health-related (or indeed other) welfare programmes. These 'sin taxes' are certainly not new or innovative, because they already exist in most countries of the world for tobacco and alcohol. Many countries are now also looking at options for introducing specific taxes on unhealthy foods such as sweets and sugary drinks, including Norway, Romania, and the United States.

While taxation on sugar or fat is a fairly recent innovation, there appears to be considerable leg room remaining to increase existing levels of excise taxation for tobacco and alcohol, as illustrated below. Excise taxes can be based on quantity (e.g. a specific amount of tax per pack of cigarettes) or based on value or price (e.g. as a percentage of the manufacturer's supply price). From a public health standpoint, sin taxes stand to offer a 'win-win' situation because they have been found to lead to reductions in risky health behaviours (due to the preparedness of drinkers or smokers to moderate their demand in the face of a price rise)[32] while at the same time increasing state revenues. Arguments against such taxes include the potentially increased level of smuggling or black market production, as well as their regressive nature (that is, they tend to have a proportionally larger effect on lower-income consumers).

Just because the source of these tax revenues derives from behaviours potentially injurious to health does not necessarily mean that the proceeds will be ploughed back into their prevention or treatment. So although sin taxes are often regarded as a subset of earmarked or hypothecated taxation, in many countries the funds are allocated across a wide range of programmes (the preferred approach of Ministries of Finance wanting to retain the flexibility to allocate funds as they see fit).

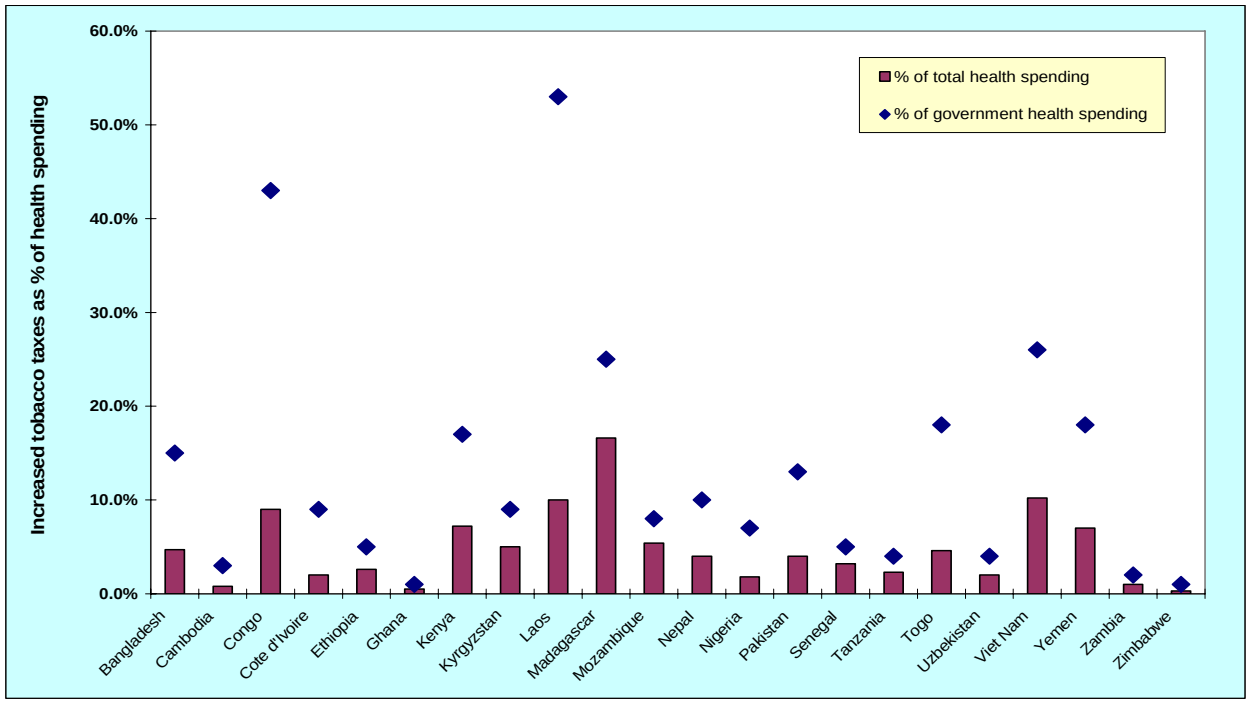
3.2. Tobacco excise taxes

Most countries already impose tobacco excise taxes. In the analysis below we identify what additional level of funding could be made available for health, firstly if governments increased the rate of excise tax (by 50%), and secondly if existing revenues were fully allocated to health. For this analysis, we used a price elasticity of demand estimate of -0.6. This implies that an increase in price of 10% will lead to a decrease in consumption of 6%, which is in the mid-range of published estimates for low- and middle-income country settings (WHO, 2010). We made use of data available for 22 of the 49 countries classified by the World Bank as 'low-income' (in 2009). In this sample, the current excise tax ranges from 11% to

52% of the retail price of the most sold cigarette brand. In nominal terms the excise tax amount varies from US$ 0.03 to 0.51 per pack. Aggregate revenues from these taxes are estimated at 2.85 billion USD.

An increase of 50% in excise taxes would generate a total of 1.42 billion USD in the 22 low income countries. Looking more closely at country cases, Figure 2 shows how much this extra revenue represents in terms of current (2007) *total* expenditure on health, and also as a proportion of *government* health spending. In countries such as Lao People's Democratic Republic, Madagascar and Viet Nam the extra revenue can represent 10% and more of total expenditure on health, providing means to increase government expenditure and reducing the burden of out of pocket expenditure. In countries like Congo, Lao People's Democratic Republic, or Viet Nam, the extra revenue would be equivalent to an increase in current government health expenditure by more than 25%.

Figure 2 Additional tax revenue from a 50% increase in cigarette excises as a proportion of government and total health spending (in selected low-income countries)



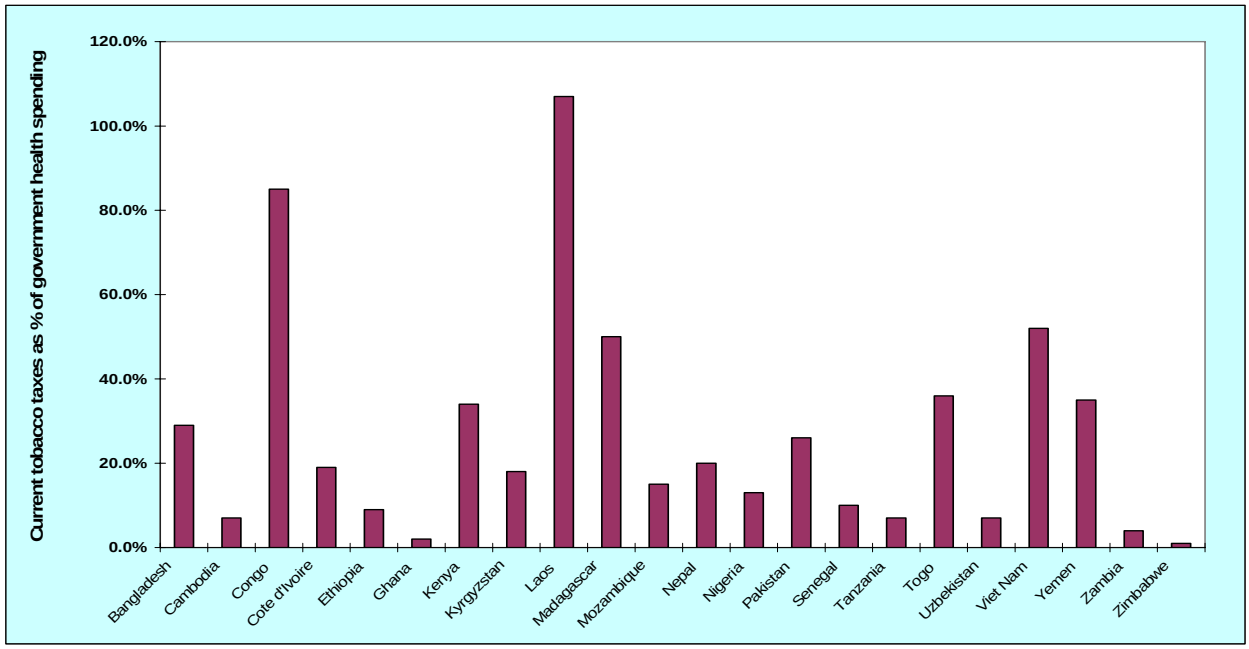
Sources: WHO calculations using data from the MPOWER report 2009 (2008 prices and taxes), WHO health expenditure database (2007 total expenditure on health), ERC 2009 (2008 cigarette consumption data) and World Bank income country classification for 2008.

A further breakdown, this time by external expenditures on health in these 22 low-income countries, found that the additional revenues generated from a 50% increase in excise taxes on cigarettes can represent close to and sometimes more than double the external aid to health in countries like Madagascar, Pakistan,

Uzbekistan and Yemen. The extra revenues also represent close to or more than 50% of external aid for health in countries like Bangladesh, Côte d'Ivoire, Lao People's Democratic Republic, Nigeria and Togo.

As discussed above, many countries around the world treat the excise revenue raised as general government resources whose allocation is determined by the Ministry of Finance. Other countries dedicate part or all of their revenues from tobacco taxes to the health sector, and some earmark revenues specifically to tobacco control. For example, Guatemala and Djibouti earmark all their revenues from tobacco taxes to health but other countries devote a proportion of their tobacco tax revenues (e.g. 2% in Mongolia, Thailand and Qatar, 1% in Bulgaria) or a specific amount of their tobacco tax (e.g. 2 cents per cigarette in Tuvalu) for the health sector in general or tobacco control in particular. Figure 3 shows how much current revenues from excise taxes represent in terms of government health expenditure in our sample of 22 low-income countries. By dedicating current excise tax revenues exclusively to health, governments could double their health spending in countries like Lao People's Democratic Republic or Congo or increase them by 50% in countries like Madagascar or Viet Nam. If that is not feasible, increasing the proportion of tax revenues for health could still provide important new resources for health in the country.

Figure 3 Current tobacco excise revenues as a proportion of government health spending



Whether to earmark the tax revenues entirely to health or not is subject to policy discussion at individual country level. Given the heavy burden of tobacco use, particularly in developing countries where most of

the smokers live (82% of smokers at the global level [33]), dedicating part of the revenues from tobacco excise taxes for health purposes makes sense and can be easily justified for correcting market failures, reducing negative externalities and protecting public health. Tobacco taxes are good candidate for ensuring, at least in the short to mid term, sustainable revenues for the health care system. As can be seen above, many low income countries have the potential to increase the resources generated from excise taxes on tobacco products because demand is inelastic to price, because price does not increase to the same extent as taxes increase and because there is room to increase excise taxes (total excise taxes as a percentage of the price of the most sold brand of cigarettes amounted to only 25.4% on average in low income countries in 2008, compared to 37.4% globally and 53.3% in high income countries [34]). Therefore, for low-income countries but also developing countries in general, increasing tobacco excise taxes and dedicating revenues can be a promising innovative way of financing health.

3.3. Alcohol excise taxes

As with tax revenues from tobacco products, increased or better enforced taxation on the consumption of alcoholic beverages has the potential to add to available expenditures for health (while at the same time reducing the harmful consequences of alcohol use due to the reduction in demand that follows a tax-induced increase in price). These harmful consequences not only fall on consumers, but also on their families and communities in the form of violence and crime, road traffic crashes and impaired work performance. Such negative spillover effects or externalities provide a robust economic rationale for government intervention and action.

Currently, rates of excise tax relating to the consumption of alcohol vary enormously across countries and also across beverage types. For example, a number of wine-producing EU member states currently exercise their right to tax wine at the minimum permitted level of zero per cent, while the rate of excise tax on distilled spirits commonly makes up more than half of the retail price. In order to make cross-country estimates of the extent to which excise taxes contribute to the current or target price of alcohol, we used detailed country information collected in 2008-09 via WHO's Global Survey on Alcohol and Health relating to the following:

- consumption per adult (adjusted for the rate or unrecorded consumption, which we use as a proxy for untaxed consumption),
- the breakdown of this consumption - i.e. the market share - by three categories of alcoholic beverage (beer, wine and spirits)
- taxation rates and local prices for each beverage type (reflecting a weighted average of most popular and best-selling premium brands).

These data were used to derive weighted estimates of the retail price of one litter of pure alcohol (in US dollars), including the proportion attributable to excise tax. We then assessed the financial and health impacts of raising the level of excise tax to at least 40% of the retail price for all beverage types. Such a rate of excise tax on alcoholic beverages is towards the maximum currently in force (for all alcoholic beverage types combined), but is still some way lower than target or even current rates of tax on tobacco products. For countries with alcohol excise tax rates above this level - e.g. in Norway or the Republic of Korea, where distilled spirits are taxed at the rate of 70% of the retail price - no change was made.

Results shown below relate to 42 countries, grouped according to level of yearly per capita adult consumption (low < 5 litres, middle 5-10 litres, high > 10 litres), and also by World Bank income level (low, middle and high income). A list of countries and their categorization is given in the Annex. Across these countries, the mean retail price of one litre of pure alcohol was US$62, ranging from US$ 40 in low-income countries to US$ 83 in high-income countries (Table 2). On average, excise tax currently represents 20% of the retail price, with the highest rates occurring in high-income countries.

Table 2 Current price and tax structure of one litre of pure alcohol (by selected countries categorized by income level and consumption level)

Country categorization	No. of countries	Current price and tax for 1 litre pure alcohol		
		Retail price (US$)	*Excise tax (US$)*	*Excise tax (% of price)*
By alcohol consumption level				
Low (< 5 litres per capita)	13	$ 57.38	$ 11.85	19%
Mid (5-10 litres per capita)	10	$ 68.73	$ 18.19	21%
High (> 10 litres per capita)	19	$ 60.39	$ 12.04	19%
By income level				
Low-income	12	$ 40.26	$ 5.19	14%
Middle income	12	$ 49.86	$ 9.35	20%
High-income	18	$ 83.29	$ 21.67	23%
All countries	42	$ 61.44	$ 13.44	20%

Increasing the excise tax to at least 40% for all alcoholic beverage types would be expected to lead to a change in consumption and a change in revenues. We used estimates of the price elasticity of demand for beer, wine and spirits (-0.46, -0.69 and -0.80 respectively [35]) to show how tax-induced increases to the price of alcohol would affect consumption. Current excise tax rates reduce consumption by an estimated

6%, whereas an increase in excise tax to at least 40% of the retail price would reduce consumption by 18% (Table 3). To be conservative, this latter estimate incorporates a 15% potential increase in illegal / untaxed consumption.

Table 3 Changes in consumption of alcohol following an increased excise tax (to at least 40% of the retail price)

Country categorization	No. of countries	Estimated excise tax revenue ($ million)	
		Current rate	*If increased to at least 40% of the retail price*
By alcohol consumption level			
Low (< 5 litres per capita)	13	-8%	-15%
Mid (5-10 litres per capita)	10	-5%	-16%
High (> 10 litres per capita)	19	-6%	-22%
By income level			
Low-income	12	-4%	-11%
Middle income	12	-9%	-19%
High-income	18	-6%	-23%
All countries	42	-6%	-18%

Taking into account the higher rate of tax but also the lower anticipated consumption of alcoholic beverages, what is the net impact on revenues? Results for 42 countries with varying consumption and income levels suggests that even after allowing for the reduced volume of consumption, excise tax revenues would rise considerably (by 80%, from US$43 billion to US$77 billion) - see Table 4. Expressed as a proportion of total current spending on health, it is low-income countries that have most to gain (additional receipts would amount to 38% of total current spending on health).

Accordingly, a robust argument can be made on both fiscal and public health grounds to increase alcohol excise taxes, since they are an effective mechanism by which demand for alcohol - and the harmful consequences of its use - can be harnessed while generating additional domestic resources that can be deployed for health or other pressing welfare programmes.

Table 4 Net impact on revenues following an increase in alcohol excise taxes (to at least 40% of the retail price)

Country categorization	No. of countries	Estimated excise tax revenue ($ million)		
		Current revenue (US$ million)	*Revenue if tax increased to at least 40% retail price*	*Increased tax revenue as % of total health spending*
By alcohol consumption level				
Low (< 5 litres per capita)	13	$ 2,338	$ 4,516	18%
Mid (5-10 litres per capita)	10	$ 4,848	$ 6,153	20%
High (> 10 litres per capita)	19	$ 35,663	$ 65,989	10%
By income level				
Low-income	12	$ 774	$ 2,875	38%
Middle income	12	$ 6,727	$ 11,784	7%
High-income	18	$ 35,348	$ 61,999	5%
All countries	42	$ 42,850	$ 76,658	15%

[1] *Adjusted for reduced consumption*

3.4. Excise tax on foods which may contribute to an unhealthy diet

Taxes on unhealthy foods such as those high in salt, fats and sugar content are receiving increased attention, particularly in high and middle-income countries where obesity and non-communicable diseases are growing health problems with considerable implications for the health budget. WHO Resolution WHA57.17 recommends that member states consider fiscal measures (taxes and or subsidies) while ensuring no unintentional effects on vulnerable populations.[36] The objective of taxes on selected food products, sometimes referred to as "fat taxes", is to increase the price of unhealthy foods relative to healthy foods or ingredients, thereby encouraging consumers to switch to healthy alternatives. Relatively small taxes on unhealthy foods, e.g., carbonated beverages containing sugar (sometimes referred to as "soft drinks") and products high in salt, have therefore been imposed in countries such as Australia, Canada, Finland, Norway and some states of the US. While evidence needs to be strengthened on the effects of such taxes and their possible effects on vulnerable populations, low-and middle-income countries may consider the potential benefits from implementing mechanisms to reduce unhealthy eating habits and at the same time generate additional revenues.

Reviews of the available literature have found that the anticipated health effects vary widely depending on the specific foods targeted, the tax rate, and the characteristics of the consumers.[37] [38] Similar to tobacco and alcohol, demand for sweet and salty foods appear to be quite inelastic when price changes are low and

thus taxes may need to reach a significant level before they impact consumer behaviour.[39] [40] Nordström and Thunström (2009) in their analysis look at reforms that would be revenue neutral for the Swedish government.[41] They found that in order to finance a substantial subsidy (50 percent) on wholesome foods the VAT on food particularly rich in calories and fat would need to be raised to 114 percent, which corresponds to a level similar to the tax on tobacco in Sweden. They also simulate a more politically feasible reform, where they show that removing the VAT on wholesome products could be funded by a VAT of 34 percent on products rich in calories and fat.

Most of the studies on food taxes to date have focused on consumer behaviour, sometimes reporting anticipated health outcomes resulting from behaviour change. To our knowledge there have not been many studies that have attempted to assess the potential government income that could be generated by taxes on fats or sugars. Norway is one of the few countries to implement a VAT on sugar and chocolates. Tax revenues in 2009 amounted to 1324.4 million NOK in 2009, equivalent to 210 million US$. [42] A study by Gustavsen et al found that imposing a higher VAT tax on carbonated sugar beverages, candy and ice cream in Norway (from 14% to 25%) could have raised an additional 846 million NKR in year 2005 (equivalent to 131 million US$ or an additional 1% increase in government spending on health). This increase in revenue would however not be sufficient to fund an accompanying removal of VAT on healthy food groups such as fruits, vegetables and fish. [43]

A few more studies have been done in the United States and look specifically at carbonated beverages containing sugar. [44] One assessment found that a penny-per-ounce excise tax could raise an estimated $1.2 billion in New York State alone,[45] while another study for the US state of Maine found that a 10% tax on carbonated sugar beverages would give revenue of an additional US$ 31.4 million per year.[46] European countries are also considering public intervention in order to fund increasing expenditure on noncommunicable disease. Attila Cseke, the Health Minister of Romania, recently announced plans to implement an extra charge on fatty, salty and sugary foods which is expected to raise £860 million,[47] an amount equivalent to more than 15% of the current (2008) annual government spending on health. Similar analysis would be useful particularly in low- and middle-income countries where consumption patterns are changing. For example in Brazil sales of carbonated beverages containing sugar are estimated to be growing at about 4% per year.[48]

Critics of taxes on fat, salt and sugar underline the need to carefully analyse potential effects, and that effectiveness may be limited unless taxes are accompanied by a comprehensive nutritional health education scheme.[49] They are also regressive as they impose a disproportionate burden on low-income

households. At the same time these households can make substantial health gains by adjusting their consumption patterns. Another problem with taxing food groups is deciding which goods should face the tax and which would be exempt, and whether to tax specific "categories" of food items (such as carbonated sugar beverages, candy, snack foods with high salt content, and fast foods with high fat content), versus products with a specific nutrient profile.[50] The effects of introducing single-food or nutrient taxes can also have undesired effects in form of e.g., reduced fiber consumption. [44, 51] Ideally in order to lessen the regressive effect a tax on sugar or fat should be accompanied by a subsidy on healthier foods to encourage a shift in consumption. [54]

A review of the effect of food prices on consumers found that carbonated sugar beverages offer a possible target for public health tax policies as a result of their negative effects on nutrition and their current low taxation status.[52] Carbonated beverages containing sugar have been found to have a relatively high elasticity compared to general food products high in fat and sugar, meaning that consumers would reduce consumption if prices were increased, and this may lead to health benefits.[53]

With food being a basic consumption good, policy makers have to be careful when considering the introduction of such taxes. One argument in favour of small percentage taxes on selected food products is that they are more politically feasible and that on a broad base they could raise significant revenue. Out of four countries in the Pacific, two of these (Fiji and Samoa) introduced a tax on carbonated sugar beverages for the purpose of raising revenue while the other two (Nauru and French Polynesia) mainly did so for health-related reasons.[54] While Fiji later withdrew the tax due to lobbying from the domestic non-alcoholic beverage industry, the revenue collected was equivalent to 0.1% of the government budget in Samoa, 0.9% in French Polynesia and 0.5% in Nauru.

Finally, it should be kept in mind that all of these instruments have costs related to administration. While a tax or subsidy on specific nutrient is most effective in terms of health outcomes the administrative cost is considerable, whereas a tax on specific food categories has a lower administrative cost but a smaller estimated health effect. [54]

Overall this is an area which warrants additional policy research as to the benefits of targeting various products, both with regards to health benefits and revenue generating potential. Evidence is particularly scarce from low and middle-income countries and future studies should include an assessment of the impact on vulnerable populations.

4. Targeting financial transactions (financial instruments)

4.1. Currency transaction levies

The High Level Taskforce, alongside other organizations and fora, have been increasingly advocating for the adoption of a currency transaction levy (CTL) that would consist of a 0.5 basis point - or 0.005% - levy on currency exchange markets (spot, futures, swap, etc.). The Taskforce calculated that this type of levy could raise at least US$33 billion yearly on the basis of four major currencies alone - the US Dollar, the Euro, the Yen and Pound-Sterling.

The discussion around the CTL often assumes that it would be implemented in high-income countries and that the proceeds would be pooled at a global level and redistributed to lower-income countries. Targeting CTL implementation on high-income countries and their currencies might make sense from the perspective of volume, since the 10 largest currency exchange markets cover 85% of the global transactions. Trading volumes are comparatively light in many low - and middle-income countries, but some could still collect a fair amount of resources with a CTL. As an example, India has a foreign exchange market of US$34 Billion daily turnover[55], so a CTL rate of 0.005% could generate US$374 million of potential funds (assuming 220 bank days per year). This is only a very rough estimate established without taking into account any decrease in the volume of transactions due to the levy.

One argument against a country-specific currency transaction levy is that its effectiveness will be less than if the levy is implemented in a coordinated way, ideally including all countries and territories. This seems to be true to some extent since a more coordinated implementation would first of all capture the larger markets that offer the larger tax bases and secondly would make avoidance much more difficult. However, taking into account the previous examples of financial transaction levies (other than CTL) that have been unilaterally implemented, it might be that the fear of driving out financial institutions with taxation can be overestimated.[56]

4.2. Other financial transaction-related taxes

The currency transaction levy is only one form of a financial transaction taxes. Many countries have implemented a wide variety of other taxing mechanisms that target other types of financial transactions. The use of bank debit taxes has been implemented in several Latin American countries, for example. Argentina has been taxing current account credits and debits since 2001; it has been reported that this tax raised, between 2006 and 2008, half as much as the corporation income taxes from all the other sectors combined.[57] In 2001 Brazil implemented the CPMF levy (Contribuição Provisória sobre Movimentação

ou Transmissão de Valores e de Créditos e Direitos de Natureza Financiera) that put a tax of 0.38% on a set of bank withdrawals. This levy raised up to US$20 billion per year and its use was health-targeted, covering a large share of the funding for the Brazilian public health care system. This levy was abolished in 2007 causing a serious diminution in funds available for health.[58] However, in 2009 Brazil introduced a new mechanism that imposed a 2% levy on Brazilian on stock and bond transactions coming from outside of the country.

Zambia has introduced a Medical levy that is imposed on all gross interest earned in any Savings or Deposit Accounts, Treasury Bills, Government Bonds or other similar financial instruments. The rate is 1% on the interest earned and the revenues are hypothecated for supporting government efforts to increase access to HIV treatment. [59] In 2009 this levy raised US$3.9 million.[60]

Many different type of taxes and levies on financial transactions in fact exist, and not just in high-income countries. They have been criticized on the basis that they represent an obstacle to trade and distort transactions, but they are also potential sources for a substantial amount of money that could be used also for health. As with other mechanisms, countries will need to carefully think through if and how these types of taxes would fit in their contexts.

4.3. Diaspora bonds

Diaspora bonds are a possible source of revenues for countries with large diasporas worldwide. Currently the use of Diaspora bonds is limited to only a few countries including India, Israel and Sri Lanka. The basic rationale behind this mechanism is that the diaspora purchases bonds issued by their country of origin with a patriotic discount, meaning that they do not seek as high a risk premium as pure market logic would suggest. The Diaspora bonds thus have an element of philanthropy since the motivation to purchase them is not linked solely to financial gains. At the same time they go beyond simple "patriotic charity" since they enable the leveraging of this philanthropy into a long-term financing instrument that has the potential to raise large amounts of capital for needed investments.

Israel has used diaspora bonds since 1951, and to date over US$25 billion has been raised through them. India has issued several types of bonds designed and destined for the diaspora, collecting US$11 billion in total. Sri-Lanka and Lebanon have also used this instrument.[61] The total amounts of money raised with the bonds does not of course reflect a net flow of funds, since the bond-holders are paid back; but this mechanisms does nonetheless provide a vehicle for a stable and cheap source of external revenue (the interest rates are low because of the patriotic discount). Many low- and middle-income countries have

sizable diasporas - often living in high income countries. For these countries Diaspora bonds could be one more option to consider.

5. Tourism and travel-related levies

In recent years there has been increasing interest in taxing international travel, particularly air travel. The solidarity levy on airline tickets, introduced in 2006, now generates about €180 million per year in France with an additional €22 million per year from domestic sources in other participating countries.[62] To date, the primary aim of such schemes is to raise resources for global development institutions or mechanisms such as UNITAID. Lower income countries, particularly tourist destinations, may also want to consider a tax on foreign exchange transactions from tourism or international travel with a view to contributing towards their domestic health needs. As part of our analysis we looked at different mechanisms that could be implemented to generate resources from international visitors.

5.1. Tax related to international visitors' spending

Data on the foreign exchange earnings from international tourism/country/year were obtained for 39 low-income countries from the World Travel & Tourism Council (WTTC).[63] We modelled the potential revenue generated from a hypothetical foreign exchange tax applied to tourists exchanging money upon arrival. This would effectively be a tourism consumption tax. Applying a 5% tax to all *visitor exports* (spending by international visitors) would bring in additional resources equivalent to more than 1% of current (2008) government health expenditure in at least 31 of 39 countries, with a median increase of 5%. The amount would be close to 40% in countries with a significant tourism industry such as Cambodia and Lao People's Democratic Republic (partially because of low current government health spending), and more than 10% increase in countries like Kenya and Madagascar. This analysis assumes that currencies are traded on an open market and upon arrival (which may not hold). There would be additional costs associated with revenue collection and enforcement.

5.2. Tax related to number of visitors / country / year

A more feasible source of revenue from tourism may be an entry tax for foreign visitors. A simple analysis based on 2008 data available for the 39 countries reveals that a US$ 5 blanket tax per international visitor (including those in transit or there only for the day as well as those staying overnight) could result in an amount equivalent to more than 1% of current government health spending would be raised in at least 12 countries, with a median increase of 0.6%. Countries such as Gambia and Kyrgyzstan could raise funds equivalent to 10% and 7% of current government spending on health respectively.

An argument against any tax on tourism-related activity is that it may reduce economic activity and incomes. It would also impede trade-related travel across neighbouring countries. The calculations presented here are simply for illustrative purposes. A more effective and equitable measure may be to target luxury travel.

6. Targeting specific items of consumption

6.1. Luxury taxes

Luxury taxes have been implemented in diverse forms in different contexts: China has a luxury tax on products such as yachts, imported watches and big cylinder cars; Bulgaria is planning to implement luxury taxes on high-end cars and homes; and Indonesia has also been taxing luxury consumption items for some time now.[64, 65, 66] Often these luxury taxes are not new taxes as such but rather targeted hikes introduced through the existing tax mechanisms (VAT, vehicle tax, propriety tax). 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 seen as a luxury tax which plays a role in reducing current inequities in health financing.[67] It has been estimated that the Cadillac tax will raise US$12 to US$20 Billion a year.

Taxing luxury items will not only be a way of raising new resources in absolute terms. Many low- and middle-income countries have wide income disparities. In this context the luxury taxes can have a distributive effect by raising more funds from the richer population groups; indeed it has been argued that taxing luxury consumption items (for example through differentiated VAT) will bring more progressivity in consumption taxation.[68]

6.2. Levies on mobile phone use

An example of a resource-raising mechanism based on high frequency transactions would be via a small unitary levy on mobile phone use. The High Level Taskforce on innovative financing noted that since there are 3.5 billion mobile phone users in the world and since global revenues from post-paid mobile phone services is very high and rising (750 Billion US$), establishing a levy on the use of mobile phones would be a clear option to enlarge the resource collection base.[69] In the estimations used for the Taskforce work, an international voluntary levy on mobile phone use was considered to have the potential to raise between €200 million and €1.3 Billion annually. It was projected that most of the revenues would have been raised in high-income countries, but that middle-income countries such as China could also use this

mechanism to raise substantial amounts of money. As the collection of this voluntary levy is fairly uncomplicated and as the mobile phone use in many low- and middle -income countries is relatively high - the International Telecommunications Union estimates that there are 67.6 cellular subscriptions per 100 inhabitants in the developing world - it could be argued that this mechanism could work also at country-level for raising domestic resources, even with very small unitary donations.

In the model assessed by the Task Force, the mobile phone levy was voluntary, but this type of levy could also come in a form of an obligatory tax. In fact there are examples where direct taxation on mobile phones has been implemented. In the Philippines, the government has proposed to introduce a tax that would levy five centavos (USc 0.1) on every text message sent. The income from this tax is currently earmarked for education; however, this planned tax has faced fierce criticism and the government has not yet chosen to implement it. There have also been some concerns that taxing mobile phone use would be counter-productive since it could add obstacles for adopting mobile technologies which have been seen, in the domain of e-health for example, as a technology to mitigate a number of problems in the poorer countries.

Mobile phone use could also be taxed indirectly. The Gabon solution of taxing the companies providing mobile phone services, discussed earlier, is one example. Taxing these companies could result in two different outcomes - either the companies reduce their margins or they increase the prices. The experience in Gabon was first that of a price increase that cascaded the effects of the levy on the consumers but after a short while the competition between the four major companies pressured them to lower prices again and absorb the impact on their margins.[26]

6.3. Franchising products

Franchising a certain line of products for the purpose of raising resources for health has already been implemented through the Product Red initiative, which has raised $150 million for the Global Fund. Companies participating in the Product Red initiative create specific products that are sold under the Product Red logo[70]. It has been argued that this creates a win-win situation where the companies can boost their sales through branding their products or services for a good cause. The ultimate source of funding in this initiative is of course the consumer who is buying the product (although the companies can also add their share in the funding, thus leveraging even more resources). Franchising products could be a rather easy solution in some low- and middle-income countries to raise resources. The fund-raising potential of this measure could be quite limited, although in some of the more populated middle-income countries

where the purchasing power is rising and where the manufacturing sector is thriving, this type of mechanism could be an interesting option to consider.

7. Discussion

We have outlined a number of options that low- and middle-income countries may consider for new innovative resource generation for health. Table 5 provides a rough idea of their income-generating potential as well as limitations that need to be considered within the country context. Not all options will be applicable in all settings, and the level of funding that can be raised will also vary across countries.

Table 5 Domestic options for innovative financing

Mechanism	Fund-raising potential [a]	Limitations	Other considerations
VAT with a share earmarked for health sector	$$–$$$	High administrative and compliance costs (especially if exemptions and multiple rates)	Potentially regressive, especially if there is a uniform rate of VAT.
Sector-specific ("Big corporation") taxes	$$–$$$	Context specific. Opposition from business interests.	Pro-poor.
Tobacco excise taxes	$$	Opposition from business interest	Regressive
Alcohol excise taxes	$-$$	Enforcement, Opposition from business interests.	Regressive
Excise taxes on foods which may contribute to an unhealthy diet	$-$$	Limited research to date on their potential. Concerns around definition of products to be taxed. Opposition from business interests.	Regressive
Levy on currency transactions	$$–$$$	Might need to be coordinated with other financial markets if undertaken on a large scale	Pro-poor
Financial transaction tax	$$	May be perceived as an obstacle to trade.	Pro-poor
Diaspora bonds	$$		Likely to be progressive
Tourism and travel related levies	$	Challenges around enforcement and regulation. Administration costs may be considerable.	Moderately pro-poor, particularly if the mechanism targets high-income travellers
Luxury taxes	$		Pro-poor
Levies on mobile phone use	$$	Administrative costs are likely low.	Pro-poor if voluntary, less so if mandatory.
Selling franchised products	$		Pro-poor
General philanthropy [b]	$		Pro-poor

[a] $, low fund-raising potential; $$, medium fund-raising potential; $$$, high fund-raising potential;

[b] There is a growing presence of philanthropy in low- and middle-income countries. In India with its booming economy, the government established the Public Health Foundation of India as a public-private partnership to address public health education and research: contributions from Indian philanthropists amounted to $20 million. In Pakistan, private philanthropy totals over a billion dollars.[71]

The options discussed in this paper must be discussed within the individual country policy space. Some of these could be introduced purely for their revenue-generating capacity, whereas others would have additional benefits in terms of a positive impact on population health. For example, while a tax on soft drinks may significantly reduce consumption and bring health benefits, taxes on alcohol, tobacco and unhealthy foods are less likely to lead to a significant reduction in consumption unless accompanied by education campaigns. Such taxes can however be introduced with a revenue generation perspective, with a part dedicated either to fund health care specifically aimed at promoting healthy lifestyles and behaviour change, or treating the chronic conditions occurring from engaging in unhealthy behaviours. Similarly, the level of the tax will determine to what extent the revenue generation is the chief objective or whether behaviour change in favour of population health is the main purpose. For example the tax on chocolates and sugar in Norway was chiefly introduced in order to raise revenues and not to reduce consumption.

The options presented differ in their capacity to generate resources, with some more impressive than others. In addition to the absolute amounts likely to be raised, policy makers need to take into account a number of other factors such as earmarking, potential regressivity (i.e. impact on the poor), administration costs and political feasibility.

7.1. Whether to ear-mark or not

Funds for health are directly increased when a specific tax/levy is ear-marked for the health sector (so called ring-fenced financing). Ear-marking can be more or less specific. For example tax revenue from tobacco products can be earmarked for tobacco prevention only, for broader health promotion strategies, or for overall health care provision. However, treasuries dislike ear-marking as it limits the government choice on allocation of limited funds. Also, with an emphasis on needs-based planning and financing, the ear-marking of a health tax/levy may be counter-productive when the government experiences a change in needs over time. The recent financial crisis demonstrated the need for many governments to be able to introduce and fund high-cost measures at short notice. Moreover, ear-marked or hypothecated taxes can be linked to higher levels of corruption if their channelling and management mechanisms are not carefully designed.

Ear-marking may be an option to consider where there is considerable risk of opposition from business interests. In French Polynesia 80% of the tax funds generated from domestic production of soft drinks have been ear-marked for health. General policy lessons from four island states in the Pacific is that importers and manufacturers were more supportive in countries where the link between the soft drink tax

in health had been made explicit. This may be one reason in favour of ear-marking in contexts where there is a strong industry lobby opposing a less direct tax. Similarly the public support for taxes on tobacco products, even by smokers, has been shown to be higher when some of the revenue from these tax increases would be used to support state tobacco control programmes. [72]

7.2. Potential regressiveness

With regards to broad-based taxes, a general tax on consumption such as V.A.T. (which is the main funding source for the national health insurance schemes in countries such as Ghana) is regressive, as poorer households often have a limited ability to reduce their consumption of taxed goods. By comparison, general taxation (based on personal income and other taxes) may be considered more progressive.[73].

With regards to levies on specific sectors or products, taxes on tobacco, alcohol and foods high in salt, fats, and sugars will be attractive options for many policy makers in countries where the burden of non-communicable disease is growing, but are fraught with complications. For food, there are definitional problems in terms of defining the exact product to be taxed. A common objection to food and beverage taxation on equity grounds is its regressive nature, since low-income individuals spend a higher proportion of their income on these goods. Studies have shown potential adverse distributional effects of a "fat tax" on low-income households.[74] However, studies also show that low-income individuals are more responsive to price changes, which is why they should also derive greater benefits from the related reductions in consumption. As their consumption falls more sharply, their relative tax burden will decrease compared with that of the richer consumer. Arguments about the regressivity of tobacco can be further addressed by demonstrating the potential progressivity of tobacco tax increases, when the use of revenues generated by the tax increases to support public insurance and other programs targeting low-income populations. In order to offset the regressive nature of taxes on food, subsidies for healthy foods could accompany a tax intervention on foods seen as contributing to an unhealthy diet (and could be financed from the revenue generated from the sin taxes).

7.3. Administrative costs

Some of the proposed options are estimated to have lower transaction costs than others. In general, excise duties and levies on specific products such as luxury goods, tobacco products and mobile phone use can be expected to have low administration costs. The analysis of the High level Task Force reported that tobacco taxes and financial levies are likely to have transaction costs as low as 1-2% of revenues. As

mentioned above in section 3.4, when it comes to food taxes, a tax or subsidy on a specific nutrient is more effective in terms of health outcomes but bears a greater administrative cost than a tax on specific food categories.

7.4. Political costs

Whenever a tax targets a specific industry or activity there will be political opposition. This needs to be taken into consideration by the policy maker. When there are strong political interests or industry lobbies to address, the time frame for implementing the mechanism may be longer.

Conclusion

A number of options have been presented. These all warrant further research, particularly in low- and middle-income countries from which evidence is often lacking. There will still be a need for official development assistance for years to come. In fragile states in particular, the ability of the government to raise and manage resources may be limited, particularly in countries that have experienced extended periods of conflict. There will be a need for continued assistance through external funds while the capacity of the domestic institutions is strengthened.

Annex Characterization of countries included in alcohol taxation analysis

Country	Income category	Alcohol consumption per capita [1]
Australia	High-income	High
Belarus	Upper middle-income	High
Belgium	High-income	High
Benin	Low-income	Low
Burkina Faso	Low-income	Mid
Burundi	Low-income	High
Chile	Upper middle-income	Mid
Croatia	High-income	High
Czech Republic	High-income	High
Democratic Republic of the Congo	Low-income	Low
Eritrea	Low-income	Low
Estonia	High-income	High
Ethiopia	Low-income	Mid
France	High-income	High
Gambia	Low-income	Low
Ghana	Low-income	Mid
Hungary	High-income	High
Iceland	High-income	Mid
India	Lower middle-income	Low
Ireland	High-income	High
Latvia	Upper middle-income	High
Lithuania	Upper middle-income	High
Mongolia	Lower middle-income	Low
Mozambique	Low-income	Low
Myanmar	Low-income	Low
Netherlands	High-income	High
Niger	Low-income	Low
Norway	High-income	Mid
Poland	Upper middle-income	High
Portugal	High-income	High
Republic of Korea	High-income	High
Serbia	Upper middle-income	High
Singapore	High-income	Low
Slovenia	High-income	High
Sri Lanka	Lower middle-income	Low
Sweden	High-income	Mid
Trinidad and Tobago	High-income	Low
Turkey	Upper middle-income	Low
United Kingdom	High-income	High
United Republic of Tanzania	Low-income	Mid
Uruguay	Upper middle-income	Mid
Venezuela	Upper middle-income	Mid

[1] *See Table 2 for threshold values used*

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