Using Health Taxes to Support Revenue: An Action Agenda for the IMF and World Bank

Chris Lane, Amanda Glassman, and Eleni Smitham

Abstract

The Covid-19 pandemic has led to large budget gaps in low- and middle-income countries, with revenues projected to be reduced for years to come. This is the moment for policymakers to consider whether health taxes—levied on tobacco products, alcoholic and sugar-sweetened beverages, and polluting fuels—can play a part in boosting revenue while also supporting better health. Our estimates suggest that health taxes, even excluding fuel taxes, could close at least half of their revenue shortfall in the near term. The International Monetary Fund and the World Bank could help in this effort given their extensive engagement on health taxes which we illustrate from their recent program engagement. Building on this track record and generalizing it to more countries with low health taxes could constitute a new IMF/WB agenda for action to more consistently promote taxes on tobacco, alcoholic and sugary beverages in their member countries.

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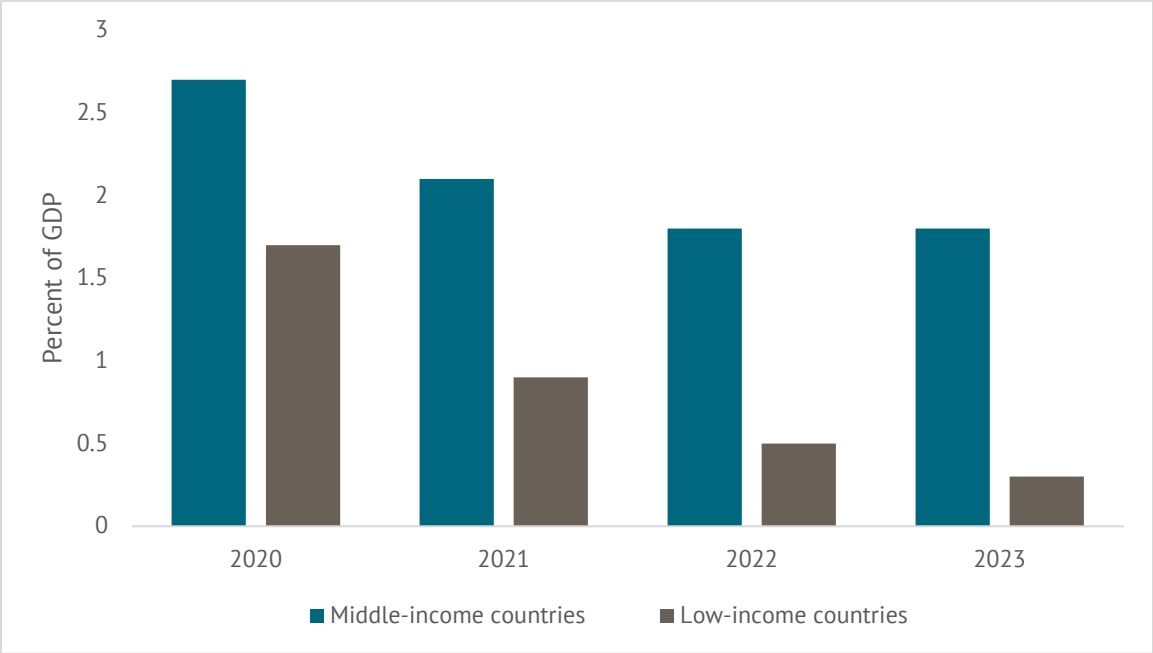
The Covid-19 pandemic has led to large budget gaps in developing economies with large revenue declines and higher spending, putting public debt on a steep upward trajectory. Revenues in low-and middle-countries are not expected to recover quickly, buffeted by subdued commodity prices, weak external demand, and persistently lower travel and tourism[1] and are currently projected to remain below 2019 levels until at least 2023.[2] The shortfalls are larger in middle-income countries than low-income countries, mainly because their revenue base is larger (Figure 1).

Figure 1. Revenue shortfall relative to 2019 in low-and middle-income countries, percent of GDP



Source: IMF, Fiscal Monitor Oct 2020

With policymakers considering new or expanded revenue sources to close these revenue shortfalls and to avoid a spending crunch, this is the moment to consider whether health taxes on harmful products could play a role in bridging the revenue gap. Our estimates explained below suggest that about half the gap could be covered with tobacco, alcohol and sugary beverages taxes, and more if fuel taxes are also included.

The case for health taxes

"Two things in life are absolutely certain, one is death and the other is taxes; [but you can] use one to defer the other."– Christine Lagarde, former managing director of the International Monetary Fund (2018)[3]

Consumption taxes constitute the backbone of most tax systems, especially in low- and middle-income countries (LMIC). Consumption and consumption tax revenues are likely to rebound faster than investment and corporate profits after the Covid-19 pandemic, as was the case after the Global Financial Crisis of 2008–09.[4] Consumption taxes also have the advantage of not affecting employment or investment decisions as directly as taxes on income.

Within consumption taxes, **health taxes** deserve special attention as they not only raise revenue, but they also discourage consumption of goods that are harmful and costly to society (externalities) and to the health of the consumer (internalities). The Taskforce on Fiscal Policy for Health, the World Health Organization (WHO), and others have consistently promoted health taxes as a highly effective instrument for tobacco control and alcohol harm reduction.[5] Actions of note include the inter-governmental Framework Convention on Tobacco Control (FCTC) ratified by 168 WHO member states,[6] a WHO global strategy to reduce the harmful use of alcohol,[7] as well as WHO guidance on healthy sugar intake and the cost-effectiveness of taxes on sugar-sweetened beverages.[8]

The **economic or Pigouvian approach** to setting corrective health taxes focuses on externalities arising from consumption such as airborne pollution, secondhand smoke, car accidents from drunk driving, and health costs not borne by the consumer such as higher insurance premiums and higher public spending on health, as well as the loss of tax revenue from premature death. Taxes on producers or consumers for external costs to induce them to lower consumption to the socially optimal level are known as Pigouvian taxes.[9]

The **public health approach** to setting health taxes aims to maximally discourage consumption of health-harming products to address both externalities and internalities.[10] The argument for corrective taxes to reduce internalities, or self-imposed costs, rests on informational failures that result in excessive consumption due to imperfect health and nutrition knowledge, such as underestimating the long-term health costs, especially when addictive consumption begins at an early age.[11,12]

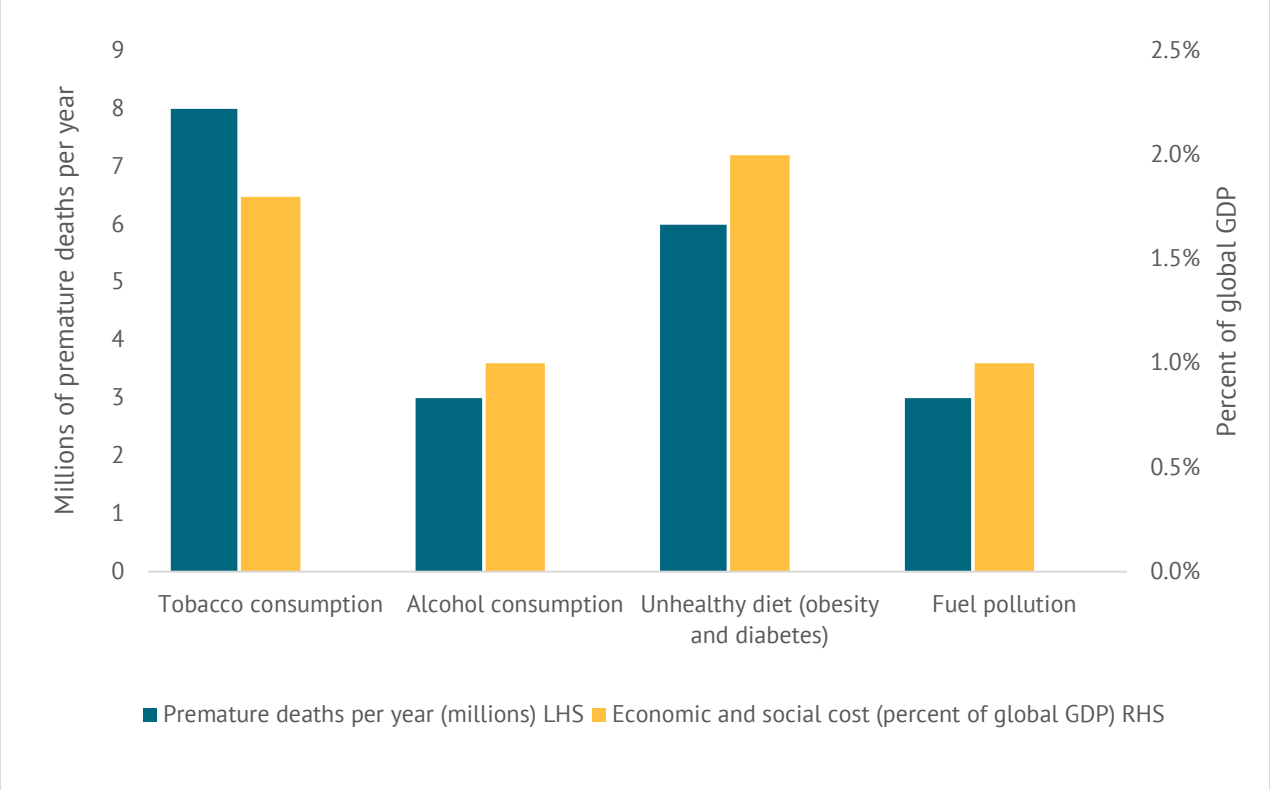
While taxation is an important instrument to discourage consumption, other complementary supply and demand measures such as product regulation, advertising bans, and health education are also important.

In this paper, we follow the public health approach as these considerations generally dominate the policy-making process and, more pragmatically, it can be difficult to separate internalities from externalities, for example in assessing who bears the burden of additional health care expenses resulting from consumption of harmful products.

Argument for health taxes to correct for social and economic costs

Tobacco consumption is the single largest cause of premature death worldwide, accounting for 8 million deaths per year—a slow moving pandemic in itself—out of 55 million annual deaths worldwide. Alcohol consumption accounts for almost 3 million premature deaths per year.[13] Another 3 million premature deaths per year are attributable to ambient air pollution, largely resulting from particulates emitted from the combustion of coal and petroleum.[14] Obesity and diabetes are associated with an additional 6 million premature deaths per year[15] and on current trends are projected to be the largest single source of premature death in the 21st century. Reducing sugary beverage consumption through taxes on sugary beverages is a first step toward addressing this threat to population health as this represents the largest single source of added sugars in many countries.

Figure 2. Global estimates of premature deaths and economic and social costs of tobacco, alcohol, fuel, and unhealthy diets



Sources: See references in text discussion

Consumption of tobacco, alcoholic and sugary beverages imposes large economic and social costs from healthcare and productivity losses, as does pollution from fuel combustion, and are closely correlated to premature deaths (Figure 2):

- The total economic cost of smoking attributable diseases, including cancers and heart diseases, arising from health expenditures and productivity losses is estimated to be equivalent to 1.8 percent of GDP (2012);[16]

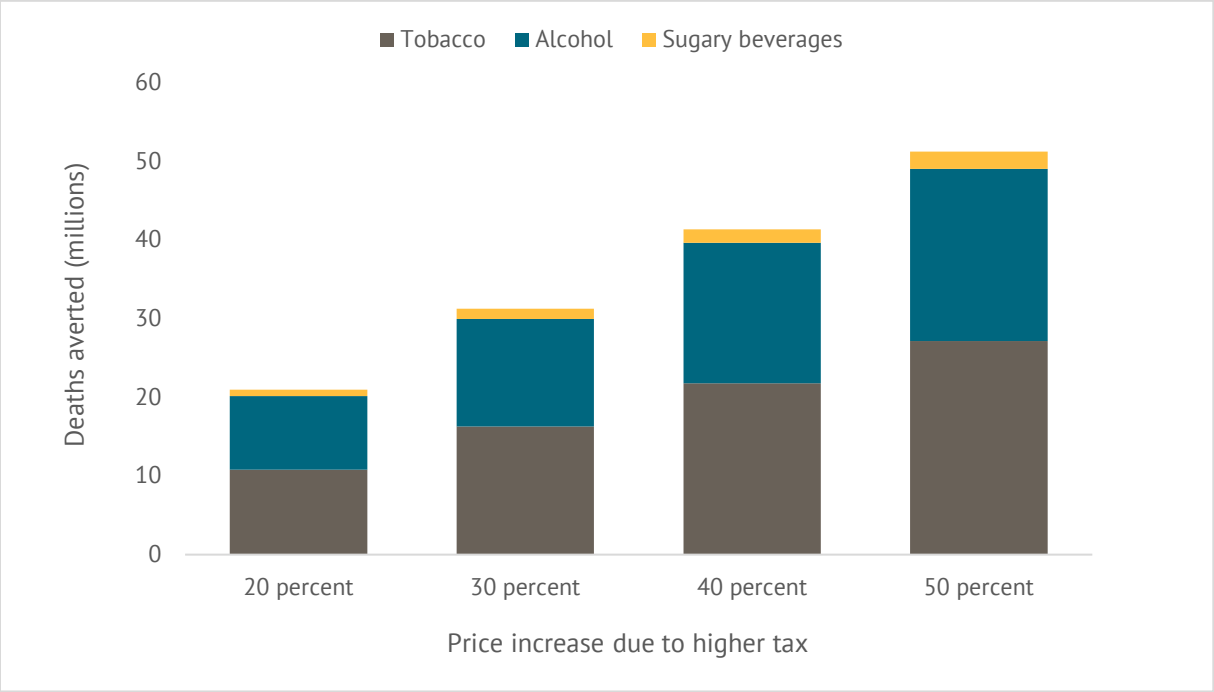
- The annual economic costs from alcohol consumption, including liver disease, cancers and road traffic accidents, in middle- and high-income countries are estimated to be over 1 percent of GDP (2009);[17]

- Sugary beverage consumption is one contributing factor to obesity, which has estimated annual economic costs of US$2 trillion (about 2 percent of global GDP)[18] as well as diabetes, which has healthcare costs alone of US$760 billion (2019);[19]

- Premature deaths from outdoor air pollution, primarily from fossil fuel combustion, is estimated to cost about 1 percent of GDP for the United States and almost 4 percent for China.[20]

Placing corrective health taxes on tobacco, alcoholic and sugar-sweetened beverages as well as polluting fuels reduces their consumption, saves lives over the medium- to long-term, and reduces other economic and social costs of consumption. Higher taxes that lead to higher prices for health-harming products save more lives (Figure 3). An additional significant advantage of health taxes is that they are a tried and tested revenue source for countries in a fiscal fix as health tax rates are generally easy to adjust, generate revenue quickly and reliably, and generally do not require new administrative arrangements.[21] However, given that incentives for fraud are broadly related to the size of the tax wedge, increasing taxes should go hand in hand with tighter administrative controls.[22]

Figure 3. Deaths averted by health taxes, 2017-2067



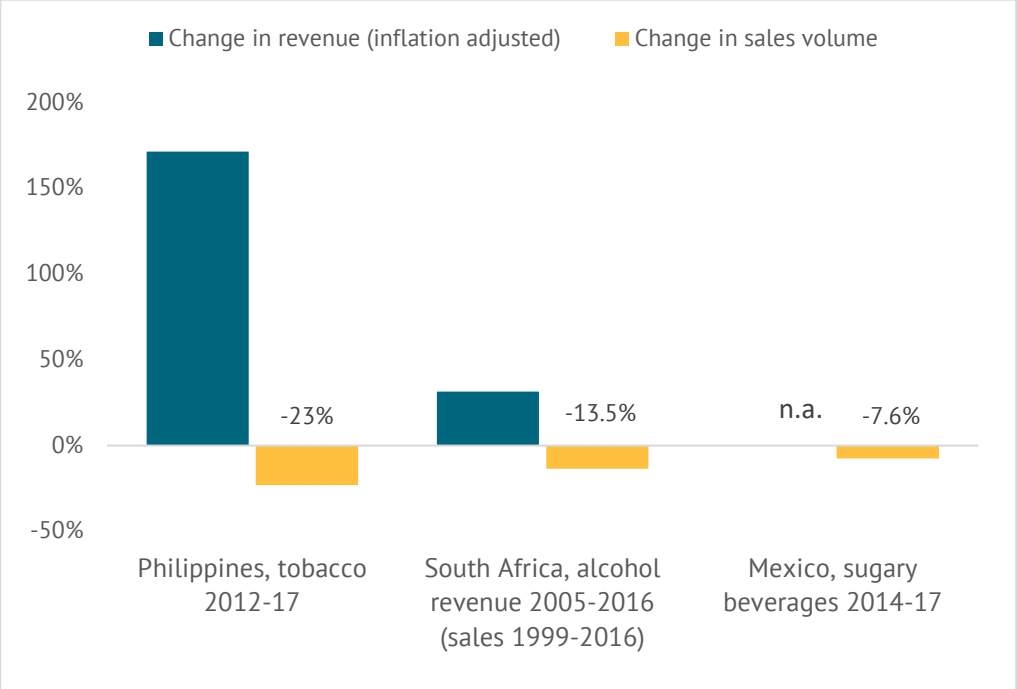
Source: Health Taxes to Save Lives, 2019, Task Force on Fiscal Policy for Health

Previous work on health taxes identified sizeable actual and potential revenues from health taxes. The Task Force on Fiscal Policy for Health analyzed the impact of tobacco, alcohol, and sugary beverage taxes in the Philippines, South Africa, and Mexico, respectively.[23] Findings show that taxes resulted in both a decrease in demand for taxed products and an increase in revenues (Box 1). The Task Force on Fiscal Policy for Health also simulated tax increases that raised tobacco, alcoholic and sugar-sweetened beverages prices by up to 50 percent. These result in a change in annual tax revenues of up to 0.7 percent in upper middle-income countries, 1 percent in low-income countries and 1.2 percent in lower middle-income countries. [24] [25] As regards fuel taxes, the IMF estimates that raising polluting fuel prices by eliminating subsidies and raising taxes to correctly account for their environmental costs on health and climate would increase government revenue by 3.8 percent of GDP, while significantly lowering deaths from air pollution and curbing carbon emissions—for developing countries most of the corrective tax was aimed at curbing local pollution, i.e. for health reasons rather than climate change.[26]

Box 1. Case Studies on Tobacco, Alcohol, and Sugary Beverage Taxes

In 2012, the Philippines adopted a Sin Tax Reform Act (Republic Act 10351) which significantly altered its tobacco excise tax system, dramatically raising taxes on nearly all cigarettes sold. The large tax and price increases reduced affordability, leading to a sharp reduction in cigarette sales and smoking prevalence. Tobacco excise tax revenues also rose sharply. 85 percent of incremental revenue from tobacco was soft earmarked for health, helping to triple the Department of Health's budget.

Figure 4. Country cases of health tax reforms



Source: Task Force on Fiscal Policy for Health, Country Cases

In South Africa, starting in 2006, taxes on alcoholic beverages were increased annually above inflation to reduce harms caused by excessive drinking. These increases reduced consumption by 13.5 percent from 1999 to 2016 and increased real tax revenues by a third.

In 2014, Mexico introduced a specific tax of 1 peso per liter on non-alcoholic beverages with added sugar. Before the tax, which was motivated by high rates of obesity in the country, the average Mexican consumed 160 liters of sugary beverages per year. In the two years following the implementation of the tax, purchases of the taxed beverages fell significantly–by an average of 7.6 percent and more sharply among households at the lowest socioeconomic level with related public health benefits. The tax generated over 100 billion pesos in new revenues from 2014 to 2017.

Arguments against health taxes

Perhaps the most vocal argument against health taxes is that they may adversely impact poorer households as a higher share of their spending is on these products. At the same time, a disproportionate share of the health and economic costs of consuming alcohol, tobacco and sugared beverages falls on poorer households.

Multiple studies show that the health benefits accrued over time from reduced consumption for poorer households often outweigh the tax costs as they are more responsive to health taxes than richer households.[27] For example, the World Bank has conducted over a dozen country-level studies that show the distributional impact of tobacco tax increases is generally progressive because low-income consumers reduced consumption of these products and reap a disproportionate share of health benefits along with lower medical spending and extended working lives.[28]

For taxes on polluting fuels, there is considerable evidence that taxes on motor fuels tend to be progressive in developing countries.[29] For other fuels, such as coal, the incidence of taxes is dependent on many factors. However, overall, the World Bank concludes that "concerns about distributional equity and poverty are not strong justifications for maintaining low environmental taxes" and that "where the poorest lose out in relative terms, only a small portion of environmental revenues is needed to compensate and protect lower-income groups."[30]

Nonetheless, even if health taxes are progressive, they can still have a large impact on low-income consumers. The short-term impact on poverty and inequality can be offset by a tax and spend package ensuring that some of the revenues raised are spent on pro-poor programs such as expanding health care to low-income groups or providing child allowances, e.g. Philippines, Montenegro (discussed further below).[31] However, social safety net coverage in low-income countries is often weak, and if health tax revenue is used to expand social safety nets it may generate public support for health tax reform. A poverty and social impact analysis (PSIA) should be used to identify mitigating measures to counter adverse distributional effects of tax increases. Distributional impact can also be altered by tackling exemptions such as duty-free sales which typically benefit internationally mobile higher income residents and non-residents.

Aside from the distributional impact, health taxes also face strong opposition from producer lobbies, with arguments that revenue and health gains are overstated due to illicit trade, potential job losses, while consideration is also needed for changes in consumption patterns resulting from changing relative prices (Box 2).

Box 2. Impact of Health Taxes on Illicit Trade, Employment, and Cross-Price Effects

Illicit trade. Critics of health taxes argue that higher taxes and prices result in increased illicit trade and tax avoidance. However, a review of country experience indicates that taxes and prices have only a limited impact on the illicit market share for cigarettes. Non-price factors such as governance status, weak regulatory framework, social acceptance of illicit trade, and the availability of informal trade networks appear to be far more important determinants. Accordingly, the strengthening of tax administration and tobacco tax reform should be viewed as mutually complementary activities.[32] In every country that has raised tobacco taxes by a non-trivial amount, consumption fell and revenues rose.[33]

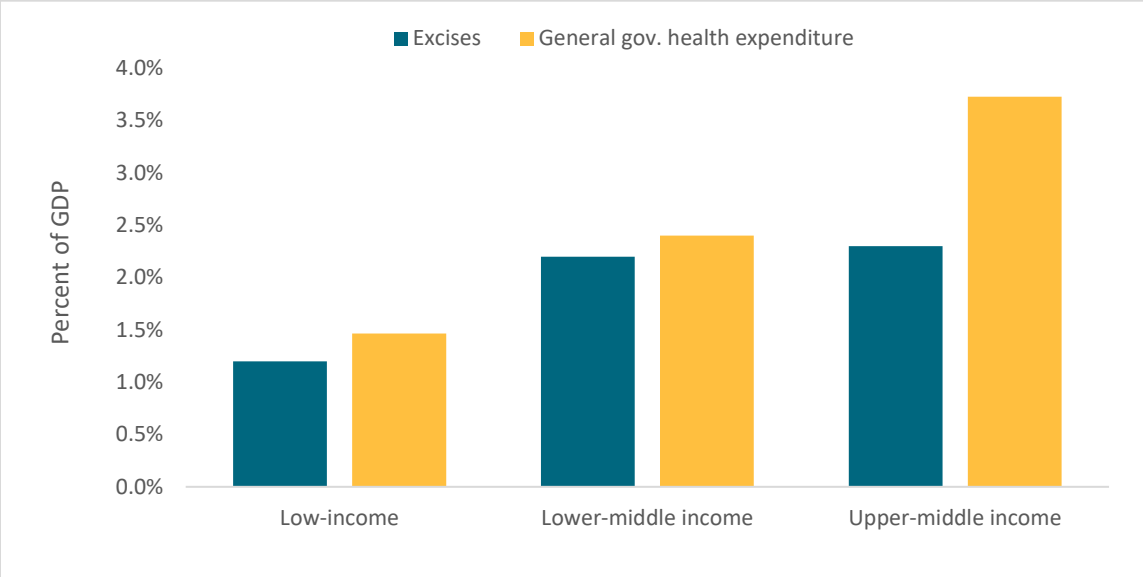
Employment. The argument that taxes, by reducing sales, cause significant job losses at producers and distributors of tobacco, alcoholic and sugary beverages needs to be weighed against the new jobs created by the shifting of consumption to other products as well as jobs created by spending tax revenues on other activities. For fuel, the reduction of jobs in polluting fuels is likely to be counteracted by new jobs in non-polluting solar and wind power. Studies on the overall impact of tobacco control on employment find no net effect or modest gains.[34] Nonetheless, it is important to assist workers affected by shifting consumption patterns.

Cross-price effects. Consideration needs to be given to how consumers react to changing relative prices resulting from health taxes. For example, higher prices for cigarettes may lead consumers to trade down to cheaper tobacco products such as bidi cigarettes or roll-your-own tobacco, leading to lower revenues and no improvement in health outcomes—which can be avoided through careful tax design. Also, health taxes on foods containing high levels of salt and saturated fats (junk food) may induce substitution to other unhealthy foods[35] —given the limited information in this area we do not consider health taxes on foods high in salt and/or saturated fats although additional research may help validate these taxes.

Room to grow: Excise taxes are an important strategy

Excise revenues, as a proxy for health tax revenue from tobacco, alcohol and fuel taxes, are significant in relation to government spending on health in low- and middle-income countries, with fuels being the largest single contributor (Figure 5).

Figure 5. Excise revenues and health expenditure, 2017 (percent of GDP, unweighted averages)



Source: ICTD World Revenue Database and WHO World Health Expenditure Database

Excises are also significant in size relative to other standard sources of tax revenue. Excises yield slightly over 2 percent of GDP in LMICs, compared to, for example, 2.7 percent of GDP raised by corporate income taxes.[36] The potential for excise taxes also compares favorably to new tax proposals to fill fiscal gaps such as wealth taxes, excess profits taxes, and digital services taxes (Appendix 1).

Despite their potential, there is large variation in excise revenue yields across LMICs, illustrating the ample room for realistic improvements in yield from this source. For example, rising from the median to the 75th percentile of excise revenue collection by country would imply a 1 percent of GDP increase in revenue.

Historically countries have been able to achieve this magnitude of excise revenue increase, illustrating the feasibility of this strategy for revenue growth—looking at the period 2014–17, 12 LMICs increased excise collections in the range of 0.7-1.6 percent of GDP, including Barbados, Egypt, Ghana, Jamaica, Moldova, Sri Lanka, and Ukraine. Moreover, these increases do not include related revenues from value added or sales taxes or import duties. Data limitations do not allow a breakdown of these excise revenues by product, which we discuss further in the next section.

Benchmarking potential revenues from tobacco, alcoholic, and sugary beverage taxes

As noted above, our focus in this brief is on tobacco, alcoholic and sugary beverage taxes. Taxes on polluting fuels are, of course, an important contributor to population health but because they also impact climate change through greenhouse gas emissions, they have already risen high in the policy agenda for post-pandemic economic recovery. These policy positions are informed by previous work by the World Bank and the IMF that urges countries to correctly price polluting fuels through tax measures to account for their impact on health and climate.[37]

We argue that a similar approach should be consistently taken for tobacco, alcoholic and sugary beverages to account for their health impact. Almost all countries tax tobacco[38] and alcohol,[39] and 44 countries tax sugar-sweetened beverages to some extent.[40] However, the potential revenue yield will vary from country to country depending on the level of consumption of these products, the existing tax level, the proportion of consumption that is taxed, and the demand response to tax increases.

Optimal health taxes

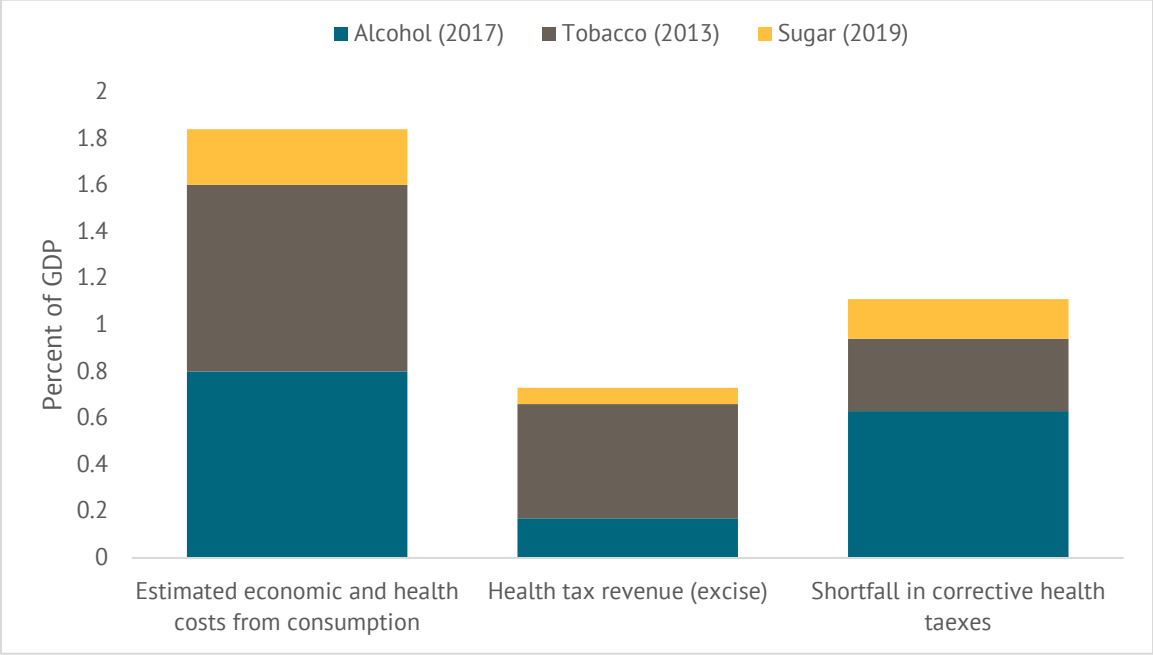
Providing that consumption of a harmful product is not banned or prohibited, where taxes would play no role in reducing consumption, an optimal health tax would set tax rates such that product prices reflect the total economic and social cost of consumption including for premature death, lowered productivity, health care costs, and externalities arising from consumption such as accidents and crime (alcohol) and secondhand smoke (tobacco), i.e. the public health approach mentioned above. The difference between optimal taxes and current health tax collections would provide an indicator of the extent to which additional corrective excises are needed for tobacco, alcoholic and sugary beverages.

While we are not aware of a database that would support the calculation of optimal health taxes for low- and middle-income countries, we can illustrate this approach using data provided in a recent IMF/OECD study of excise taxes in Chile which shows ample scope to raise existing health taxes to fully cover economic and social costs of consumption (Box 3).[41] Accordingly, the following section looks at benchmarks for these taxes rather than optimal taxes.

Box 3. Chile: Health Tax Revenues and Social Costs of Consumption

The consumption of tobacco, alcohol and added sugar is high in Chile relative to regional comparators. Existing tobacco taxes are high at around 80 percent of retail price, there is a sugar-sweetened beverage tax in place, while alcohol taxes are relatively low. The total social cost of consumption of tobacco, alcohol, and sugar is estimated (in three different studies that are cited) and compared to current excise tax collections (Figure 6). The social cost of alcohol consumption is nearly five times higher than alcohol excise revenues, the social cost of sugar consumption from SSBs is more than three times the SSB tax collections, and tobacco consumption social costs are 60 percent higher than tobacco excise collections.

Figure 6. Chile: Economic and social costs of tobacco, alcohol and sugar consumption and health taxes



Source: Data from Brys et al, 2020

Levying corrective excise taxes would lower the social costs of consumption and raise revenue although the revenue yield would depend on price elasticity of demand and the extent to which tax evasion increased. Of course, as noted by the IMF/OECD authors, the optimal corrective tax might not be feasible unless tax administration is strengthened (tobacco) or for political reasons (wine producers) but this approach does flag the extent to which corrective excises are needed in a relatively high-income economy.

A benchmark for health taxes potential

We refine the previous long-term revenue simulations prepared by the Task Force on Fiscal Policy for Health by estimating short-term revenue benchmarks for tobacco, alcohol, and sugar-sweetened beverage revenues as a timely response to the impact of Covid-19 on developing country revenues (Appendix 2 provides information on methods for benchmarking).

The short-term revenue potential benchmark is estimated as 0.6-0.7 percent of GDP, equivalent to an increase of total tax revenue of 3-6 percent depending on the level of total revenue. This is lower than previous estimates reflecting the shorter time horizon. However, this compares favorably to the Covid-19 induced revenue shortfalls covering close to half of the 2023 revenue shortfall for middle-income countries (1.8%) and all of the low-income country shortfall (0.3%).

Increased health taxes on tobacco and alcohol comprise the bulk of the benchmark with a modest contribution from sugary beverages, as detailed below. Health tax potential would depend critically on country circumstances: ambitious multi-year approaches can raise more than the benchmark and political resistance may lower the feasible benchmark or the scope to frontload tax changes. The benchmark would be somewhat lower in low-income countries as on average excise tax yield is lower, though some low-income countries have strong excise collections, e.g. Burkina Faso, Malawi, Rwanda.

The size of health tax revenue increases will depend on price elasticity (the sensitivity of demand to tax-induced price increases) and, relatedly, the effectiveness of **tax administration** in ensuring that noncompliance is minimized. In general, revenue will increase as long as the price elasticity is greater than the inverse of the share of all taxes in price. For example, if taxes are 50 percent of retail price, tax revenue will increase as long as the price elasticity is greater than -2.0 (that is -100/50).[42] Empirical studies show that the price elasticity in low- and middle-income countries for tobacco products is around -0.5[43], -0.64 for alcohol products[44], -1.21 for sugary beverages[45], all well above the revenue increasing threshold for this tax share while also reducing the consumption of these harmful products. Tax evasion and avoidance can be minimized through policies including a uniform tax rate system, monitoring production and trade, audits, physical controls, and enforcement actions.

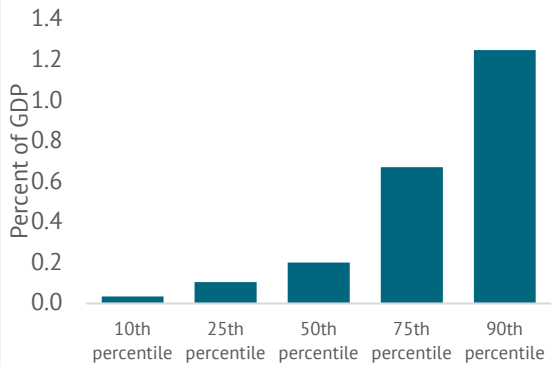
Tobacco tax collection varies significantly across countries (Figure 7) as tax rates and tax bases vary widely across countries, and sometimes within countries if taxes are levied by sub-national governments, as does consumption.

We estimate revenues resulting from raising excise taxes towards the WHO-recommended level of 70 percent of the retail price capped at a 50 percent post-tax price increase.[46] Small increases would be needed for countries already near to 70 percent and larger changes for countries further away. Changes in tobacco tax structure can also yield significant revenues, notably by shifting from ad valorem to specific taxes, and expanding the tax base, e.g. by applying a VAT on the price including excise.

There are 59 LMICs with taxes less than 70 percent of retail price for which we have data (and 12 at or above 70 percent). Increasing tax rates toward 70 percent such that post-tax prices rise by no more than 50 percent would result in an average increase of tax collection of 0.24 percent of GDP, after taking account of consumption declines resulting from higher

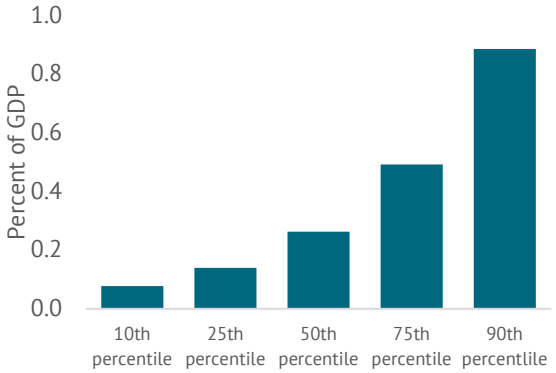
prices. Tax administration improvements should go hand-in-hand with excise tax increases to support compliance and become increasingly important as tobacco tax revenues rise.

Figure 7. Tobacco tax collection, latest available year



67 low- and middle-income countries.
Source: WHO

Figure 8. Alcohol excise collections, 2015

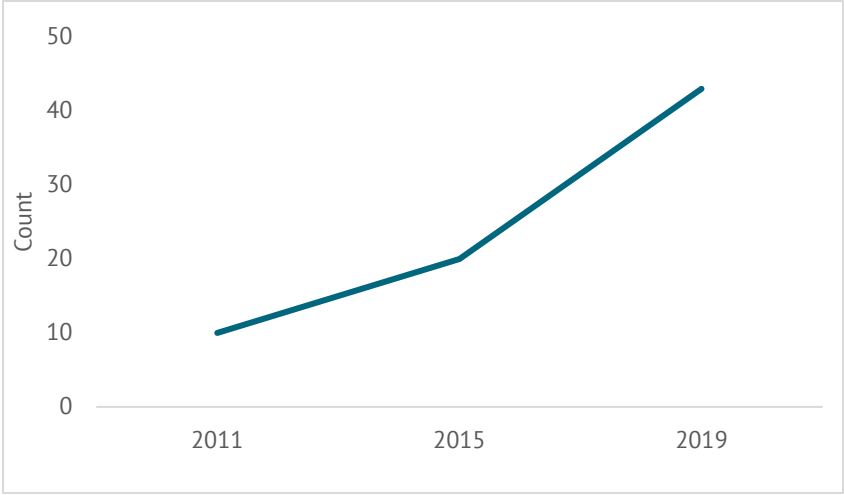


50 countries
Source: WHO

For **alcohol** taxes, again there is a large amount of variation of the tax take across countries although data is more limited. We estimate revenue potential of another 0.35 percent of GDP from alcohol excises would accrue for a country moving from the 25th percentile of revenue to GDP to the 75th percentile based on data for 50 countries, and 0.39 percent moving from the 75th percentile to the 90th percentile (Figure 8). Related increases in VAT or sales taxes would increase this yield. While there is not a significant cross-country relationship between alcohol consumption per capita and alcohol tax revenue (percent of GDP) the revenue potential would be larger in high consumption countries, e.g. Eastern Europe.

Many middle- and high-income countries have recently introduced **sugar-sweetened beverages** (SSB) taxes (Figure 9) including Colombia, India, Mexico, Panama, Peru, Philippines, South Africa and Thailand.[47] SSB taxes tend to be implemented in countries with high levels of consumption of SSB and a high prevalence of obesity and diabetes. Revenue yields for SSB taxes are smaller than tobacco and alcohol as the tax base is smaller, and in most cases the tax rates currently in place are lower—at or below 20 percent. Some countries tier SSB excises with high sugar content beverages attracting higher taxes to set incentives for producers to reformulate beverages with less sugar, as successfully implemented, for example, in the United Kingdom and South Africa. Reformulation would reduce revenues but nonetheless achieve the desired reduction in sugar consumption.

Figure 9. Number of countries or territories with SSB taxes, 2011-2019



Source: World Bank (2020

Recent SSB tax implementation in Mexico, Hungary, Chile, and South Africa, suggests a revenue yield of less than 0.1 percent of GDP (See Appendix 2 for details). Nonetheless, 50 percent SSB tax rates in the Gulf Cooperation Council countries could push revenues higher, as would taxes on sugar in a wider range of products as sugar-sweetened beverages account for only about one quarter of added sugar in foods overall in high-income countries such as Chile.[48]

Health taxes in the context of Covid-19

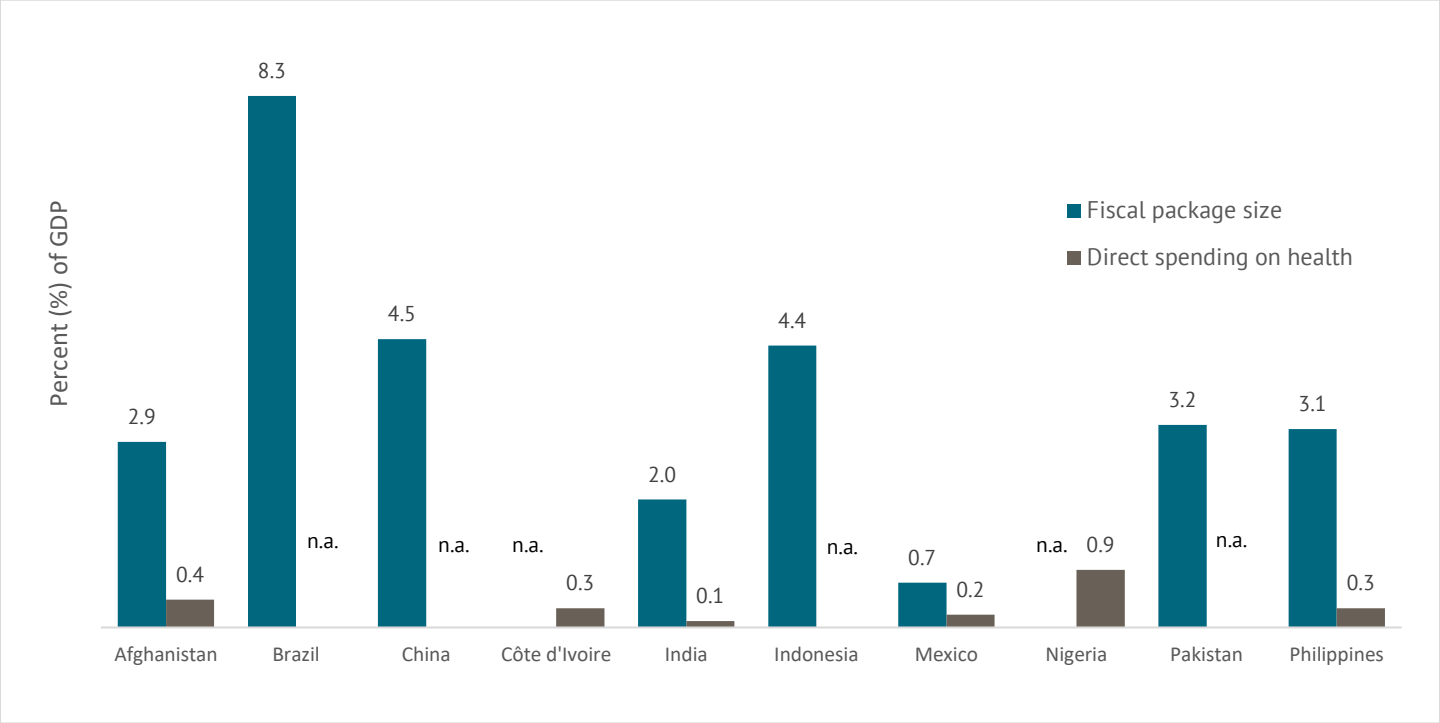
The revenue potential from health taxes is also significant in relation to direct spending on health to counter the impacts of the pandemic (Box 4), but it would necessarily be only a part of a broader package of measures to meet the challenge of closing revenue gaps resulting from Covid-19.

Box 4. Health Taxes and Covid-19 Health Spending

Governments around the world have responded swiftly with fiscal packages to counter the impact of the Covid-19 pandemic. These measures typically have three components: (i) direct support for health sector spending including for testing, PPE, etc.; (ii) other direct spending and tax breaks to protect vulnerable populations and firms; and (iii) financial support for firms affected by Covid-19. Health taxes have not been reduced but in some cases planned increases have been deferred (UK, Austria, Seychelles, British Colombia).[49]

Estimates for 2020 fiscal costs as of September 2020 for a diverse group of LMICs suggest additional spending needs can vary widely but are at least 3 or 4 percent of GDP, while the direct spending on the health response is usually less than 0.5 percent of GDP (Figure 10 and Appendix 3).[50] Raising health taxes in line with the benchmarks identified above clearly has the potential to cover the Covid-19-related additional spending on health needs. While it would not be necessary to earmark additional health taxes to finance the Covid-19 response, as the expenditures have already been committed, a health tax and spend package that supports health spending over the medium term could provide a compelling reason to use health taxes as part of the pandemic response.

Figure 10. Fiscal responses to Covid-19 in selected LMICs



Source: IMF Covid-19 Policy Tracker

While country circumstances would determine the composition of revenue packages, there is potential for other measures in addition to a focus on excise taxes on harmful products. [51]

These measures include, among others:

- Rationalizing tax expenditures including incentives, exemptions, reduced taxes, deductions and tax credits. In our view, tax expenditures for tobacco, alcohol, and beverage companies, especially for multinationals that wield considerable influence on tax policies,[52] should be a priority;

- Improving efficiency of value added tax (VAT)/sales taxes through measures to improve producer compliance, especially for harmful products which are major contributors to VAT/sales tax;

- Considering higher corporate profits taxes on alcohol and tobacco producers, i.e. supertaxes, with due attention paid to the risks of profit shifting that could increase as a result.[53] Taxation of extractive industries and the banking sector in developing countries provides a useful precedent for differential taxation.[54]

Moving to implementation: IMF and World Bank track record on health taxes

International Financial Institutions (IFIs) could play a significant role in helping countries implement health taxes as part of the fiscal response to the pandemic, building on a well-trodden path of engagement in this area. We focus our attention on the IMF and World Bank although regional development banks also have a role to play.

We analyzed the universe of IMF-supported financial programs and World Bank Development Policy Loans during January 2017—August 2020 for policy commitments and associated conditionality for raising health tax revenues from tobacco, alcoholic and sugary beverages.

While these instruments are one important way of supporting specific policy changes, a more holistic picture of IMF and World Bank engagement on health taxes would include World Bank Investment Project Financing, Program-for Results loans, IMF Article IV surveillance, and technical assistance from both institutions. While many technical assistance reports are not published, the World Bank has published reports on health taxes for Afghanistan, Guinea, Senegal, and Tonga[55] while the IMF has made technical assistance recommendations on health taxes for Cambodia, Chad, Chile (published), Ecuador, Ethiopia, Guatemala, Madagascar, Malawi, Pakistan, Slovakia, and Sri Lanka since 2016.[56] The World Bank has also undertaken extensive diagnostic work to set out the evidence base for health taxes, especially for tobacco (Box 5).

Box 5. World Bank Analytical and Diagnostic Work on Health Taxes

The World Bank has been active in both global health tax policy and country level diagnostics, especially for tobacco and more recently sugar-sweetened beverages. Some of the key outputs include:

- A multisectoral analysis of tobacco tax reform and its impact on health, revenue, employment, and welfare, prepared in 2017 as a launch vehicle for the Global Tobacco Control Program (GTCP);[57]
- Overview policy papers on the economics of tobacco taxation, distributional effects of tobacco taxation, e-cigarettes and their taxation, and a study of tobacco stamp programs;[58]
- Country papers on tax reform and/or impact of tobacco taxation increases including country briefs for 37 primarily middle-income countries;[59]
- Distributional impact of tobacco tax country studies including Armenia, Bangladesh, Chile, Russia, Indonesia, and Vietnam;
- Impact of taxes on sugar-sweetened beverages and prepackaged foods in Central America;[60]
- A cross-country study of experiences in confronting illicit tobacco trade, completed in 2019 by the GTCP, with 20 country case studies plus studies of the European Union, Southern African Customs Union and Organization of East Caribbean states. The report highlights effective strategies and actions to confront illicit trade in tobacco;
- A review of the international experience with sugar-sweetened beverages taxes, completed in 2020.[61]

During 2017-2020, we found 49 policy commitments in IMF and World Bank programs on the taxation of alcohol, tobacco, and non-alcoholic beverages in 22 countries. Over half of these commitments relate to tobacco products and one third to alcoholic beverages (Figure 11a). Actions mostly focused on raising excise rates, a few changed tax design (e.g. moving to specific taxes from ad valorem taxes) or introduced track and trace systems for tobacco products. This survey did not include fuel tax measures which are also important revenue raisers in IFI programs.

For the IMF, program conditions in the form of prior actions and structural benchmarks signify that these actions were critical to program success, i.e. "macro-critical". World Bank prior actions or indicative triggers are required to be implemented prior to World Bank

disbursement of financing (Figure 11b). A single program condition could comprise of one or more health tax actions, e.g. a package of tobacco and alcohol tax changes.

Figure 11a. Health Tax Commitments in IMF and World Bank Supported Programs by Commodity, 2017-2020

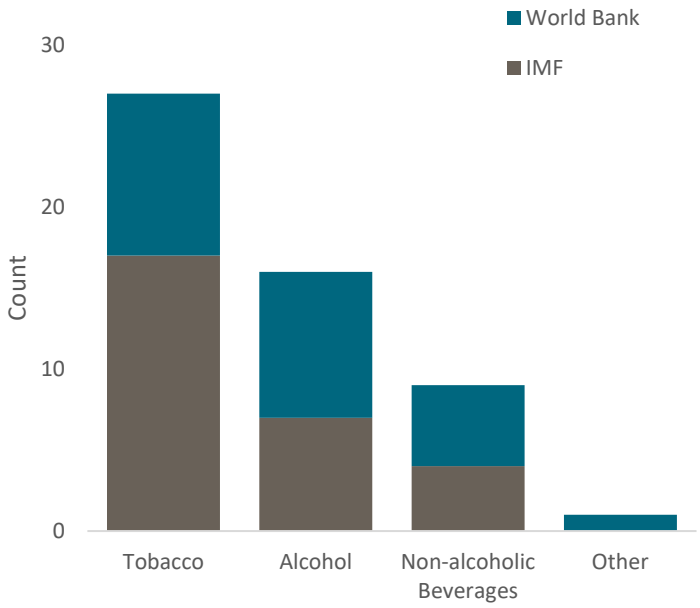
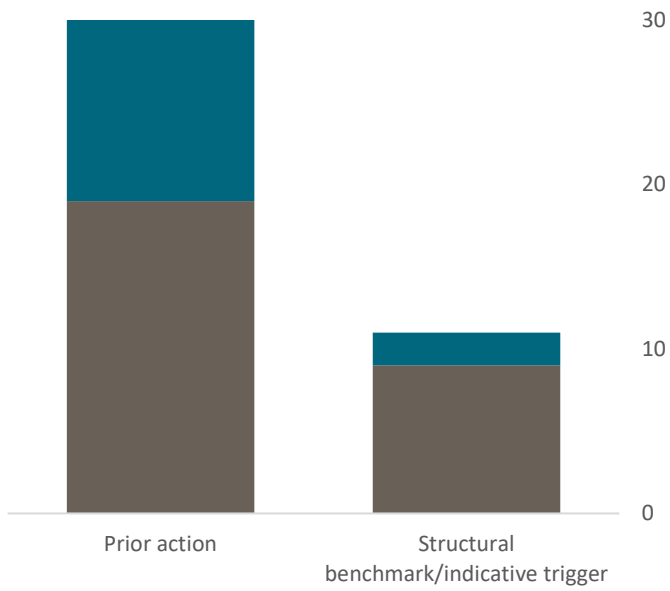


Figure 11b. Health Tax Commitments in IMF and World Bank Supported Programs by Associated Conditionality, 2017-2020



Source: IMF and World Bank Program Reports

Box 6 illustrates prior actions on health taxes in World Bank and IMF-supported programs.

Box 6. Prior Actions on Health Taxes in Recent IMF and World Bank Programs

The inclusion of a prior action in an IMF program ensures that the program has the necessary foundation for success.[62] If it is subsequently discovered that a prior action was mis-reported as completed, the IMF may legally require that monies disbursed be repaid or that the country takes corrective actions.

The following IMF programs included prior actions which raised pro-health taxes since 2018:

- Burkina Faso, 2018 – unify excise rates on tobacco and raise rates.
- Ukraine, 2018 – raise excises on tobacco by 9 percent in 2019 budget.
- Central African Republic, 2018 – revise budget to adjust spending for non-implementation of tobacco excise increase.
- Moldova, 2019 – raise excise on tobacco and limit duty free sales of alcohol.
- Pakistan, 2019 – raise excise and expand base for tobacco and introduce an excise on carbonated and uncarbonated drinks, juices and syrups.
- Sri Lanka, 2019 – raise excises and customs duty on alcohol and tobacco.

Prior actions in World Bank Development Policy Loans since 2018 which are required to be implemented as a disbursement trigger:

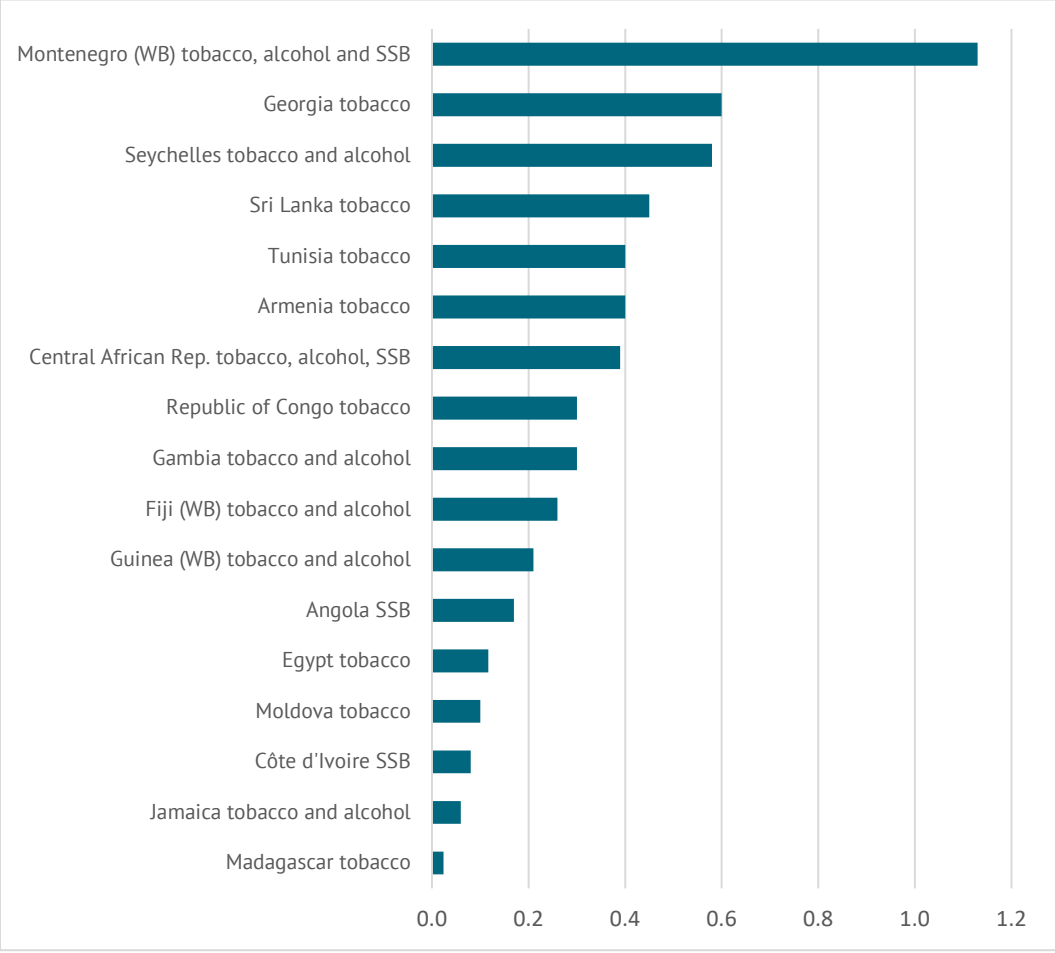
- Benin, 2019 – increase excise taxes on tobacco, alcoholic beverages, and energy drinks.
- Fiji, 2018 – increase excise taxes on tobacco and alcoholic beverages.
- Moldova, 2020 – increase excise taxes on tobacco.
- North Macedonia, 2019 – introduce excise on e-cigarettes and heated tobacco.
- Paraguay, 2020 – raise maximum tax rate on tobacco, alcohol and sugar.
- Philippines, 2019 – increase excises on tobacco to finance Universal Health Care Law.
- Samoa, 2018 – approve the Alcohol Control Bill.

Source: IMF Staff Reports from www.imf.org and World Bank Publications https://documents.worldbank.org/en/publication/documents-reports/documentlist

In the programs we reviewed, many health tax actions are not quantified in terms of rates or projected yields, particularly if the action is included in a World Bank program or part of a larger package of measures. Measures that are quantified are widely dispersed in terms of yield from near zero to over 1 percent of GDP (Figure 12), although with two important caveats: (i) these represent projected rather than actual yields, and (ii) we do not know whether the actions were implemented as intended. All of the 10-largest health tax packages include measures on tobacco while only five also include alcohol. This suggests that alcohol is somewhat neglected as a health tax measure relative to tobacco given its comparable impact on both health and revenue potential.

Figure 12. Quantified health tax yields in IMF and World Bank supported programs, 2017-2020

(% of GDP)



Notes: Includes all actions during period; SSB refers to sugar-sweetened beverages or non-alcoholic beverages.
Source: IMF and World Bank program documents.

The regular usage of health tax actions in both IMF- and World Bank-supported programs, especially as prior actions, confirms their perceived value in helping to close fiscal gaps, while also supporting healthier populations. An IMF study of 55 episodes where tax revenues rise by at least 0.5 percent of GDP per year for three years found that increases in excise taxes are the most common tax policy instrument accounting for one quarter of all tax policy actions.[63]

Nonetheless, questions have been raised on the effectiveness of IMF and World Bank conditionality. Evaluation studies find that country ownership by a strong economic policymaking team is critical for the effective implementation of conditionality and to sustain reforms at the country and sectoral levels.[64] Empirical research shows that IMF programs tend to have a positive effect on tax revenues and especially where revenue conditionality applies and where revenue ratios are below average.[65]

How could IMF and World Bank health tax conditionality be more effective?

It would appear that in most cases health taxes are viewed as low-hanging fruit whose use does not require much justification. Few IMF- or World Bank-supported programs devote much, if any, attention to the impact of health taxes on health or income distribution and poverty which could support effective implementation. It is also rare for tax policy actions to be accompanied by actions to strengthen enforcement and help to ensure that tax increases are passed on to higher prices and lower consumption. More broadly, there is almost no discussion of where health tax rates are in relation to optimal taxes from either a fiscal or a health perspective.

There are, however, a few welcome examples of thorough results-based approaches to health taxes in recent IFI programs, notably by the World Bank:

- In Montenegro, the 2017 World Bank Development Policy Loan set a prior action on health taxes that envisaged a more than two-fold increase in specific tobacco excises and alcohol excises, and a five-fold increase in sugary beverage excises. [66] Increases were stepped over three years and anticipated to increase revenues by 1.13 percent of GDP (well above the benchmarks discussed in this note). Increases were guided by European Union norms. A poverty and social impact analysis was undertaken and used to define measures to mitigate the slight adverse impact of indirect tax increases on poverty by increasing child allowances. However, implementation fell short of these ambitious plans and the project was dropped.

- In the Philippines, the 2019 Development Policy Loan set a prior action on raising tobacco excises in steps over three years, and discussed the poverty impact, noting the offsetting health benefits that would occur over the medium term. [67]

Concluding recommendations

While few finance ministers will relish the task of raising taxes during a pandemic, some, including Indonesia, India, and Chile, have already taken steps to generate revenue to meet pressing Covid-19 spending needs using health taxes. [68,69, 70]

Health and finance policymakers and IFIs should envision a full package of health taxes as a means to close revenue gaps and create fiscal space in the time of Covid-19 while also supporting population health. Beyond Covid-19, many low- and middle-income countries still have stubbornly low revenue collections that hold back growth enhancing investments in support of countries sustainable development goals.[71]

Both the **IMF and World Bank** could build on their track record in **tobacco, alcoholic and sugary beverage taxes** by generalizing recent efforts across more countries:

- The **World Bank** has significant expertise in designing and implementing health taxes, yet actions on health taxes are relatively rare in Development Policy Loans amounting to only 11 countries in the last three years. As part of its Covid-19 response, there is scope for the World Bank to:
    - significantly expand results-oriented actions on health taxes in World Bank programs, especially Development Policy Financing, and including poverty and impact assessments, by leveraging the Bank's expertise in macro-fiscal and health policies in its lending operations in LMICs and using conditionality in support of country commitments to help overcome political obstacles;
    - analyze and track progress on the full set of health taxes and their impact on welfare, consumption and revenues, systematizing lessons learned that can be shared across countries.
- The **IMF** incorporates health tax increases in many of its financial programs as a budget gap-filling measure. At the same time, the IMF has not explicitly acknowledged the importance of tobacco, alcohol and sugary beverage taxes as a fiscal policy tool, nor has the organization consistently viewed these taxes using the same lens as that used to examine and advance fuel taxes. For the IMF there is scope to:
    - acknowledge the macro-criticality of health taxes on tobacco, alcoholic and sugary beverages alongside fuel taxes; for example, in the context of a policy paper approved by the IMF Executive Board;[72]
    - expand their use in financial programs, especially upcoming medium-term programs helping to fill fiscal gaps arising from Covid-19 shocks given short-term revenue potential and corrective efficiency (in reducing externalities);
    - expand and publish technical assistance on health taxes, where a recent study on Chilean excise taxes provides a helpful outline,[73] while also using World Bank and WHO expertise to help design health tax reforms and assess their impact on health, poverty, and society, systematizing lessons learned that can be shared across countries.

- Looking forward, domestic revenue mobilization can be framed within a **Medium-Term Revenue Strategy (MTRS).**[74] Credible commitments to increases in health taxes can help build confidence in fiscal policies and improve access to short-term financing. Although experience so far is limited,[75] the World Bank and the IMF should consider using the MTRS as a vehicle for promoting health taxes where countries express an interest. This could also include neglected areas such as tax expenditures (tax breaks) for tobacco and alcohol producers and duty-free sales.

- Finally, there are other international institutions that make important contributions to health taxes promotion. These include the World Health Organization, which has a mandate to work on tobacco, alcoholic and sugary beverage taxation from the World Health Assembly, the United Nations Development Program, and Regional Development Banks. The IMF, World Bank, UN and the OECD work together on tax issues in the **Platform for Collaboration on Tax** (PCT).[76] So far, the PCT has not focused on health taxes and there is a clear opportunity for the member institutions to jointly promote health taxes in their work and to develop PCT guidance on health tax implementation bringing together complementary work in each of the four institutions.

Appendix 1. New proposals to fill fiscal gaps

The pandemic has led to more thinking on new tools to raise revenue including wealth taxes [77, 78], excess profits taxes,[79] taxation of businesses without a physical presence and global corporate minimum taxes, [80] and digital taxes, such as digital services taxes.[81] The thrust of these proposals is to create a more progressive tax system by taxing activity that currently escapes the tax net by exploiting loopholes in domestic and international tax rules and/or targeting sectors that may have profited handsomely from the pandemic.

However, these tax proposals do not offer much over the near term for LMICs and compare poorly in terms of revenue yield and feasibility in comparison to existing tax instruments, including excise taxes on harmful products: "health taxes" or "sin taxes" (Table 1).

Table 1. Prospective tax instruments to fill fiscal gaps in the time of Covid-19

Instrument	Estimated Prospective Annual Yield (percent of GDP)		Applicability to LMICs
Wealth tax (1 percent rate on top 1 percent with evasion) 1/	US	0.63-1.07	Low
	EU	0.48	Low
Excess profits tax and minimum tax (OECD Pillar I and II proposal)2/	LMICs	0.06-0.08	Intermediate
Digital services taxes3/	World	0.13-0.25	Intermediate
Excises taxes4/	LMICs	0.72-1.60	High
o/w tobacco	LMICs	0.24	
alcohol	LMICs	0.35	
SSBs	LMICs	0.04	

Notes: 1/ Assumes 1 percent tax on wealth of top 1 percent on base above threshold with an evasion rate of 15-50 percent in US and 47.7 percent in EU (sources: Saez and Zucman 2019 and Landais, Saez and Zucman 2020).

2/ Source OECD, Tax Proposals for Digitalization of the Economy, 2020, slide 20. Includes impact of pillar I (non-routine profits) and pillar II minimum corporate tax and reduced profit shifting as percent of corporate income tax receipts for low and middle countries (4 and 3 percent increases respectively). Corporate income tax receipts averages for low- and middle-income countries are for 2017 for 78 LMICs sourced from ICTD / UNU-WIDER Government Revenue Dataset 2020.

3/ Applies a tax rate of 3-6 percent on global trade in value added in information industries in 2015. Source OECD "Trade in Value Added (TiVA): Principal Indicators" https://www.oecd.org/sti/ind/measuring-trade-in-value-added.htm#access and IMF "World Economic Outlook", April 2020.

4/ Range of excise/GDP increase for top quintile of 53 LMICs where excise/GDP ratio increased during 2014-17 ignoring outliers. Tobacco yield is average revenue increase for 59 LMICs from raising taxes toward 70

percent of retail price with price increase capped at 50 percent with price elasticity of demand of -0.5 and no change in tax compliance relative to latest year excise/GDP ratio. Alcohol yield is from raising tax/GDP receipts from 25th to 75th percentile of 50 countries using 2015 data from WHO. SSB yield is average of SSB tax receipts to GDP for Mexico (0.067), South Africa (0.04), Hungary Public Health Product Tax (0.04) and Zambia projected yield for new SSB tax (0.02).

Wealth taxes are principally aimed at high-net-worth individuals in OECD countries (e.g. top percentile or 0.1 percentile of the income distribution) and depending on design can raise significant revenues. However, most of these high-net-worth individuals do not live in LMICs and are not under the tax jurisdiction of poorer countries (only 7 percent of billionaires live in LMICs excluding China, India and Russia).[82] Excess profits taxes are aimed at corporations in the same countries, particularly the United States, especially where profits have soared during the pandemic, e.g. Amazon, Gilead, and Zoom. Ongoing OECD discussions on reforms of international taxes to address base erosion and profit shifting (OECD Inclusive Framework) suggest that even if the proposals under consideration can get international support, the revenue impact would be around a 4 percent increase in corporate taxes in most low- and middle-income countries, equivalent to less than 0.1 percent of GDP in most cases. While some LMICs have introduced digital services taxes, e.g. Kenya, Nigeria, Tunisia, and Zimbabwe,[83] most are waiting for the outcome of multilateral OECD-G20 discussions before implementing such taxes unilaterally, and revenue yields to date have typically been low (less than a quarter of one percent of GDP).

Appendix 2. Methods to derive benchmark revenue yield for tobacco, alcohol, and sugary beverage excises

Tobacco

Tobacco tax revenue (excise, VAT/sales tax and import duties) in local currency for the latest available year is obtained from the WHO Global Health Observatory https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4602 and expressed as a share of GDP for latest available year of tax data using local currency GDP obtained from the IMF World Economic Outlook database https://www.imf.org/en/Publications/WEO/weo-database/2020/October/download-entire-database

The price of a 20 cigarette pack of the most sold brand for 2018 and the share of taxes in retail price is obtained from WHO Global Health Observatory https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/gho-tobacco-control-raise-taxes-on-tobacco

An estimate of taxed consumption is derived by dividing tax revenue collections by tax per pack.

We calculate the revenue yield from raising tax per pack to 70 percent of retail price with a cap on the change in price including tax of percent adjusting for the reduction of consumption with a price elasticity of demand of -0.50 for 59 countries. We assume tax compliance is unchanged from base year. We exclude: 11 low- and middle-income countries where tax per pack is greater than 70 percent of retail price; 2 countries where tax to GDP yield data are implausibly high (Namibia and Sao Tome and Principe); 4 countries with no GDP data (3 micro states and Somalia); 4 countries with no tax as share of retail price data; 70 countries that have no revenue collection data and 37 high income countries.

Change in tax revenue calculated as:

eqn (1)= $Q(t+1).P(t+1).Share\ (t+1) - Q\ (t).P(t).Share(t)$. such that $Share(t+1) \leq .70$ and $P(t+1)/(P(t) \leq 1.5$. where Q= taxable consumption, P= unit price and Share= tax as a share of unit price;

eqn (2) $Q(t+1) = Q(t)\ (1+ P(t+1)/P(t).e\ )$ where e is price elasticity of demand assumed to =-0.5.

Then Substituting (2) into (1) gives change in tax revenue as:

$Q(t).(1+ P(t+1)/P(t).e\ ).\ P(t+1).Share\ (t+1) - Q\ (t).P(t).Share(t)$.

The benchmark of 0.24 percent of GDP is the average increase in tax revenue capping price increase at 50 percent and tax as a percent of retail price at 70 percent.

Alcoholic beverages

Excise tax collections on alcoholic beverages in United States dollars are obtained from the WHO Global Health Observatory https://www.who.int/data/gho/indicator-metadata-registry/imr-details/2316 and expressed as a share of US dollar GDP obtained from IMF World Economic Outlook database for latest available year of excise tax data which is available for 50 low and middle countries).

In the absence of data on taxes as a percent of retail price by type of alcoholic drink (beer, wine, spirits) we calculate the distribution of alcohol excise as a share of GDP across 10th, 25th, 50th, 75th and 90th percentiles. We derive the benchmark for alcohol excises by considering increase in revenue moving from different percentiles as shown in the matrix below. Due to limited data we include high-income countries in this exercise.

Matrix of Increase of Alcohol Excise Collections as a percent of GDP moving across percentiles, 2015

	Percentile to:			
Percentile from:	25th	50th	75th	90th
10th	0.06	0.19	0.41	0.81
25th		0.12	0.35	0.75
50th			0.23	0.62
75th				0.39

Sugar-sweetened beverages

Unless otherwise specified country revenue data are from: Luc Louis Hagenaarsa, Patrick Paulus Theodoor Jeurissena, Niek Sieds Klazingab, 2017, "The taxation of unhealthy energy-dense foods (EDFs) and sugar-sweetened beverages (SSBs): An overview of patterns observed in the policy content and policy context of 13 case studies", Health Policy 121 (2017) pp 887–894).

Mexico's SSB introduced in 2014 raised Peso 12 billion in 2017 equivalent to 0.38 percent of revenues and 0.067 percent of GDP;

In South Africa, a tax on sugary beverages raised revenues of US$140 million in its first year, approximately 0.15 percent of South Africa's total tax revenue for FY19 and about 0.04 percent of GDP;

In Hungary, a public health product tax (PHPT) (effective September 2011) which applies to sugary beverages as well as the salt, sugar, and caffeine content of various categories of pre-packaged, ready- to-eat foods is raising approximately $50 million per year (also 0.04 percent of GDP). (World Bank, 2020, op. cit.)

In 2014 Chile modified the tax regime on non-alcoholic beverages to introduce a differentiated rate depending on the sugar content of the drink. The rate structure is 18 percent on beverages with high sugar content and 10 percent on those with a lower sugar content. Tax revenue from was 0.07 percent of GDP with two thirds of revenue from sugary drinks taxed at 18 percent (Brys et al, 2020).

Saudi Arabia, Qatar, Oman, UAE and Bahrein have recently introduced health taxes that increased the price of soda by 50 percent and the price of energy drinks by 100 percent. While no data on revenue mobilization is yet available it could reasonably be expected to be significantly higher than in Mexico, South Africa, Chile or Hungary given the significantly higher rates.

Appendix 3. Fiscal responses to Covid-19 in selected LMICs

Country	Summary of Measures	Fiscal package size in Percent of GDP 1/	Direct Spending on health Percent of GDP
Afghanistan	In 2020, the authorities envisage up to 2.9 percent of GDP for pandemic-related spending, with about 15 percent directed to health.	2.9	0.4
Brazil	Budget announced 12 percent of GDP in measures and 8.3 percent increase in primary deficit. No total for health.	8.3	n.a.
China	An estimated RMB 4.6 trillion (or 4.5 percent of GDP) of discretionary fiscal measures have been announced. Key measures include: (i) increased spending on epidemic prevention and control, (ii) production of medical equipment, (iii) accelerated disbursement of unemployment insurance and extension to migrant workers, (iv) tax relief and waived social security contributions, and (v) public investment.	4.5	n.a.
Côte d'Ivoire	The government adopted an emergency health response plan of 96 billion CFAF (0.3 % of GDP). It will (i) provide free care for those with the infection and equipping intensive care units; (ii) strengthen epidemiological and biological surveillance; (iii) reinforce capacities of pharmaceutical industries and financing research on the virus.	n.a.	0.3
India	Direct spending of 1.7 percent of GDP and tax relief 0.3 percent of GDP. 0.1 percent of GDP on health infrastructure	2.0	0.1
Indonesia	Three packages of assistance total cost of 4.4 percent of GDP	4.4	n.a.
Mexico	Overall, the above-the-line fiscal measures amount to 0.2 percent of GDP in health spending and 0.5 percent of GDP to support households and firms.	0.7	0.2
Nigeria	Covid-19 Intervention Fund (0.3 percent GDP), Nigeria CDC, testing kits and support for Lagos State (0.6 percent of GDP)	n.a.	0.9
Pakistan	A relief package worth PKR 1.2 trillion was announced by the federal government	3.2	n.a.
Philippines	The government launched a PHP 595.6 billion fiscal package (about 3.1 percent of 2019 GDP) for vulnerable individuals and groups, which includes over PHP 54 billion on Covid-19-related medical response (0.3 percent of 2019 GDP);	3.1	0.3

Notes: 1/ Estimate of the above the line impact on overall fiscal deficit. i.e. excludes below the line financing operations.
Source: IMF Covid-19 Policy Tracker https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

Endnotes

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