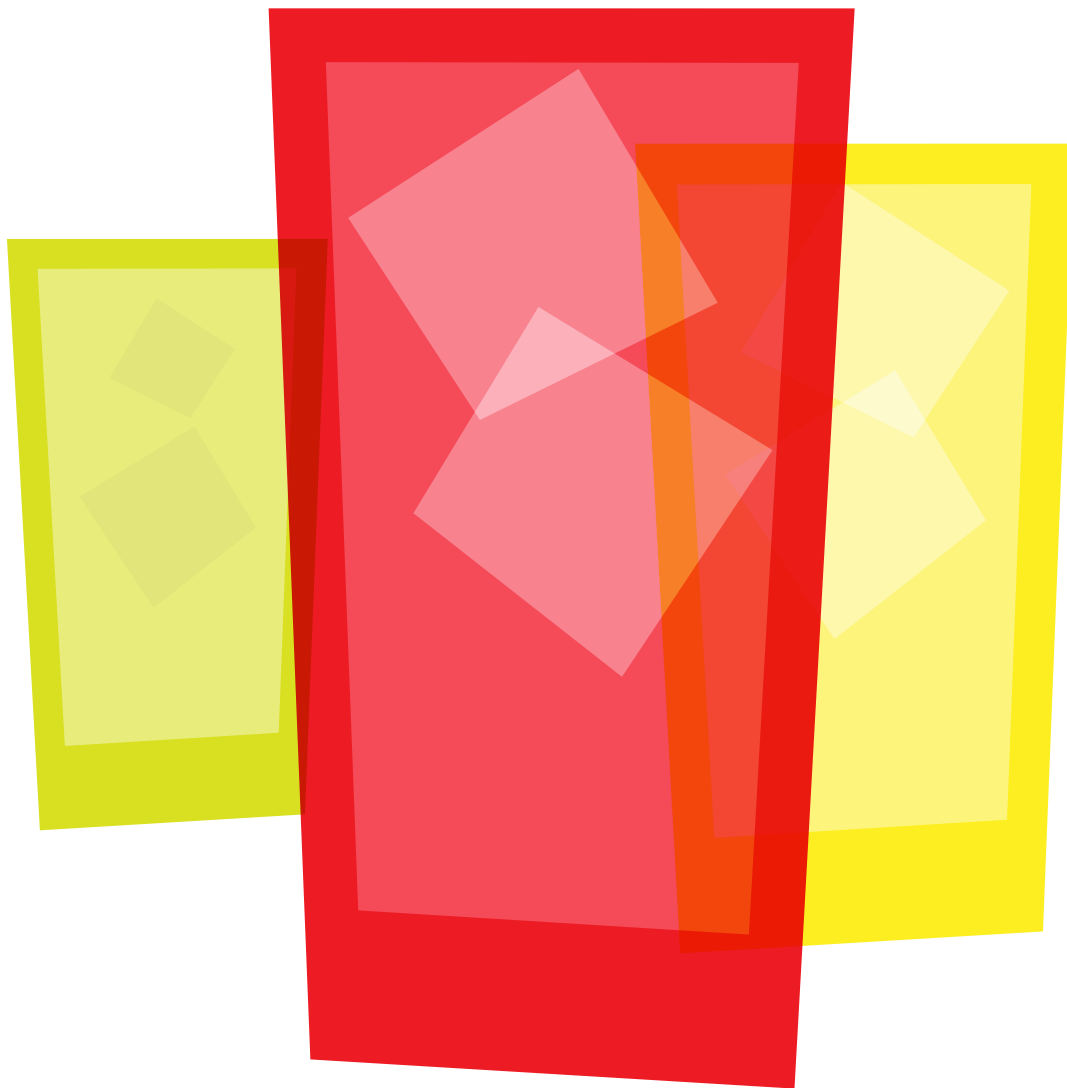


Action for health taxes from policy development to implementation

Making the case for sugar-sweetened beverages taxes



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Action for health taxes from policy development to implementation: making the case for sugar-sweetened beverages taxes

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1

Introduction

1.1. Background

Introduction

1.1. Background

Changes to the global food environment has meant, amongst other things, that cheap food and beverages with high levels of saturated fat, salt and sugar are increasingly accessible, including in low- and middle-income countries (LMICs).^{1,2} Sugar-sweetened beverages (SSBs), defined by World Health Organization (WHO) as all types of beverages containing free sugars, are of particular concern to policymakers as excess sugar consumption – particularly in beverage form, where excess caloric intake due to sugar is not digested in the same way compared with food – is associated with an increased risk of a range of non-communicable diseases (NCDs) including dental caries, obesity, type 2 diabetes, hypertension and coronary heart disease.^{3–8} SSB consumption is linked to overweight and obesity. Higher-than-optimal BMI causes an estimated 5 million deaths from NCDs.^{9–12} Despite the risks, as well as widespread recommendations to limit intake of excess sugar by health authorities, consumption of SSBs is on the rise in many countries.^{13,14} This trend is driven by heavy marketing and corporate interests in expanding to new market segments, particularly in LMICs.^{14–16}

Ensuring a healthy food environment and tackling the drivers of poor diet – including limiting SSB consumption – is a large and complex problem that requires a coordinated policy approach, beyond relying on individual behaviour change alone.¹⁷ SSB taxes are a compelling policy option with a growing evidence base. Taxes levied on SSBs create a price differential meaning that SSBs are less affordable and are thus consumed less, leading to improved population health outcomes.¹² SSB taxes can be a win-win-win (triple win) strategy: a win for public health (reducing consumption and averting health-care costs), a win for government revenue (increasing revenue) and a win for health equity (reducing health inequality).^{2,3,7–11,84}

Reducing sugar consumption through effective taxation on SSBs is recommended by the World Health Organization as a key intervention to prevent and control the burden of NCDs.¹⁸ SSB taxes have been introduced in over 40 jurisdictions worldwide, and more than 108 countries have levied taxes on unhealthy food and beverages.¹⁹ As a relatively new policy instrument, there are a range of lessons, considerations, and associated challenges in implementing or strengthening SSB taxes.

This document supports policymakers and other stakeholders to implement SSB taxes more effectively, with a focus on the political economy of SSB taxation and on how policy processes are shaped at a national level. It is the fourth in a series of resources that provide a practical overview of approaches to support national stakeholders to develop, strengthen, and implement fiscal policies for health. It provides a step-by-step approach to demonstrate how the Health Tax Action Framework can be applied to SSB taxes.

2

The case for SSB taxes

2.1. The current situation

2.2. Understanding SSB products

2.3. Why tax SSBs?

The case for SSB taxes

2.1. The current situation

In many settings globally, SSBs account for the largest proportion of free sugar consumption of any food or beverage type^{3,20} Average global SSB consumption was estimated to be 137.2 mL per person/day amongst adults aged 20 and older in 2010.²¹ Adolescents aged 12-15 years in LMICs consume sodas on average 1.4 times per day.²² While overall SSB consumption is decreasing in some settings, such as North America and Australasia, they are increasing in others, including Latin America and Sub-Saharan Africa.²³

Consumption levels vary greatly across geographic locations, gender, age and socioeconomic status.²¹ Consumption in 2010 varies from 47 mL per person/day in East Asia to 450mL per person/day in the Caribbean.²¹ In high- and upper middle income countries, SSB consumption tends to be highest amongst those with lower education and socioeconomic status,^{24–28} while in lower-middle income or low income countries it is higher amongst those with higher socioeconomic status (e.g. Indonesia,²⁹ Philippines³⁰). At all age levels and across different country income groups, women tend to consume less SSB servings/day than men.²¹ Particular populations such as Black households in the US²⁸ and Indigenous communities in rural Canada³¹ demonstrate particularly high levels of SSB consumption.

SSB consumption is associated with increased risk of obesity, type 2 diabetes, hypertension, dental caries, and coronary heart disease.^{3–8} Globally in 2010, up to 184,000 deaths/year were attributable to SSB consumption, including 133,000 deaths/year from diabetes, 45,000 deaths/year from cardiovascular disease, and 6,450 deaths/year from cancer.³² Over 70% of deaths are estimated to occur in middle income countries.³² A study suggested that in 2012 Mexico is heavily impacted by SSB consumption: in 2012, 6.9% of all deaths were attributable to SSBs, equating to around 405 deaths/million adults.^{32,33} Globally, up to 8.5 million DALYs are linked to SSB intake.³²

2.2. Understanding SSB products

The WHO defines SSBs as “all types of beverages containing free sugars, and these include carbonated or non-carbonated soft drinks, fruit/vegetable juices and drinks, liquid and powder concentrates, flavoured water, energy and sports drinks, ready-to-drink tea, ready-to-drink coffee and flavoured milk drinks.”¹⁸ Free sugars are both sugars naturally present in food products or beverages as well as sugars that are added to foods and drinks by the manufacturer, cook or consumer (Box 1). SSBs can be categorised as ready-to-drink (RTD) beverages (defined as beverages sold in packages or containers which can be consumed immediately), ready-to-reconstitute beverages (defined as products sold for household use which are intended to be used to make a beverage), and fresh-made beverages (defined as beverages which are not sold in packages or containers but are made immediately prior to consumption).

Heterogeneity in the composition and categorization of SSBs has meant there have been challenges in developing a standardised definition suitable for SSB taxation. Notably, product composition affects the degree to which certain beverage categories can be targeted by a tax. For example, from a practical tax-administration perspective, it is challenging to target fresh-made SSB consumption. To avoid this issue, some jurisdictions specify that the tax applies to manufactured or pre-packaged SSBs. Given the variety of SSBs available, it is important to assess the extent to which different types of beverages contribute to total sugar and caloric consumption patterns within a particular setting. Local dietary data (preferably consumption data, rather than sales data which may underestimate non-RTD beverages) can be used to develop an understanding of underlying SSB consumption patterns. It is important that taxes cover as many sources of beverage-derived free sugar as possible so that they maximise the potential for sugar reduction and do not incentivize consumers to substitute to high-sugar untaxed beverages.²³

Box 1.**Differentiating between added sugars and free sugars**

Current World Health Organization (WHO) guidance is based on free sugar intake and recommends that adults and children should limit free sugar consumption to not more than 10% of total caloric intake, with further benefits from reductions to 5%.³⁴ There is a distinction between added sugars and free sugars. Added sugars are caloric sweeteners introduced into a food or beverage by the manufacturer, cook or consumer. Free sugars include added sugars, but also include “sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.”³⁴ For tax purposes, SSBs may be defined on the basis of added sugars, but some beverages may still contain free sugars. For example, while 100% fruit juices have no added sugars, they contain free sugars (i.e. “sugars naturally present in... fruit juices”).³⁴ In comparison, unsweetened milk contains lactose (sometimes referred to as ‘milk sugar’), but lactose is not included in the definition of free sugars and unsweetened milk contains neither added sugar nor free sugars. For purposes of SSB taxation, WHO recommends all beverages containing free sugars are subject to an SSB tax.

2.3. Why tax SSBs?

SSB taxes can be a win-win-win (triple win) strategy: a win for public health (reducing consumption and averting health-care costs), a win for government revenue (increasing revenue) and a win for health equity (reducing health inequality) (Table 1).^{7,8–11,84} SSBs are an attractive target for taxation because of the health risks associated with their consumption, their limited nutritive value, and the ability to identify SSB products (from a tax revenue authority's perspective) more easily than other food products and the rise in their consumption in many countries (Box 2).

2.3.1. Offsetting the costs of SSB consumption

Like other health taxes, SSB taxes may be used to account for the full costs to individuals and society from excess SSB consumption. Individuals do not tend to account for the full cost (either to society, themselves or both) of current SSB consumption. SSB consumption is associated with both a social cost (e.g. healthcare spending) and an individual future cost (e.g. ill health), neither of which is reflected in the price a consumer pays for an SSB. SSB taxes can be used to correct for this by increasing the price of SSBs to offset these social costs (i.e. externalities) and future individual costs (i.e. internalities).^{4–7}

2.3.2. Improved health

SSB taxes reduce consumption of SSBs and this has the potential to translate into substantial health gains.^{12,35} A tax-induced price increase of 20% could, according to simulations, lead to 24 million years of life gained (YLG) over 50 years worldwide, while a 50% increase in prices was estimated to lead to 60 million YLGs worldwide.³⁶ In absolute numbers, the majority of these gains would accrue in middle income countries, consistent with the relatively high consumption in these settings. Simulation studies also suggest that health benefits accrue to low-income groups as they tend to decrease their consumption of SSBs proportionally more in response to SSB tax increases.^{37,38} SSB taxes, depending on how they are designed, may also encourage product reformulation, leading to lower sugar content. For example, manufacturers in the United Kingdom of Great Britain and Northern Ireland responded to SSB taxes through widespread product reformulation that reduced sugar levels by 45 million kg of sugar per year.^{39–42}

2.3.3 Reduced spending for households and governments

Improvements in health from SSB taxes would also reduce future healthcare spending for both governments and households.⁴³ Simulation studies demonstrate that the greatest reductions in out-of-pocket spending tend to be amongst low-income groups^{44,45} (except in settings with highly subsidised healthcare such as South Africa⁴⁶ and the Philippines³⁰). Given the projected increases in healthcare spending associated with the NCD-related burden of disease, opportunities to reduce future health spending will be increasingly important.^{2,47}

2.3.4 Raising government revenue

SSB taxes provide an additional source of revenue, particularly at a time when many governments face budget deficits related to COVID-19 and other financial challenges. Global estimates of the revenue potential of SSB taxes indicate they could result in hundreds of billions of dollars worldwide in additional annual revenue. For example, a one-time tax increase resulting in a 20% price increase is estimated to generate USD 724 billion over 50 years worldwide, and one-time tax-induced price increase of 50% would generate USD 952 billion over the same period.³⁶ The revenue potential of SSB taxes is lower than other health taxes because of differences in product value and price elasticity (i.e. consumers respond to price changes in SSBs more than tobacco and alcohol). Revenues from SSB taxes may be earmarked for specific purposes, or they may contribute to a general fund (see Section 5.3.1 for a further discussion on earmarking).⁴⁸

Box 2.**Nutritional evidence for SSBs and why they are an attractive target for taxation**

People who consume SSBs are less likely to compensate for this caloric intake, with the net result that they consume a greater number of calories than they otherwise would have consumed if the same number of calories had been consumed in solid form. Second, because SSBs contain high levels of rapidly absorbable carbohydrates (e.g. sucrose, high-fructose corn syrup) and are often consumed in high volumes, their consumption may increase dietary glycaemic load and lead to insulin resistance, elevating diabetes risk.⁴⁹ Third, in many settings SSBs account for the largest proportion of free sugar consumption of any food or beverage type.^{3,20}

WHO recommends that both adults and children should reduce their daily intake of free sugars to less than 10% of their total energy intake.³⁴ Assuming a standardised 2000 kcal/day diet (for adults), the WHO recommendation entails consuming no more than 50g of free sugar/day in total. A single 500ml regular carbonated soda typically contains more than 50g of sugar, exceeding this recommendation before other sources of free sugar consumption are taken into account. Fourth, since the majority of SSBs are comprised almost entirely of sugar and water (with a variety of flavourings), they provide very limited nutritive value. The extent to which a limited number of other beverages containing free sugars (e.g. sweetened milks or juices) provide nutritive value is a consideration when deciding whether to include or exclude these products from taxation (see Section 5.2.2 below for a more detailed discussion).

While there are many factors which contribute to increased rates of obesity and NCDs, there is a particularly strong argument for governments to target SSBs given the unique physiological impacts they have on energy imbalance and glycaemic load and their very high contribution to excessive free sugar intake.

Table 1. Rationale for SSB taxation and related evidence¹

	Outcomes	Summary of findings	Key references
Improved health	Reduced SSB consumption	SSB consumption decreases following the introduction of an SSB tax.	12,35,50
	Improved health (morbidity and mortality)	Simulations demonstrate medium- to long-term improvements (due to reductions in rates of obesity, diabetes, stroke, heart attacks and associated deaths).	36,50–53
	Improved health equity	The largest gains in health are estimated to accrue to the lower-income sub-groups, except in cases where SSB consumption was greater amongst high SES households before tax introduction.	30,37,46,54,55
Additional revenue	Revenue generation	Revenue increases have been consistently estimated in models, and subsequently observed in evaluations of existing SSB taxes in a range of settings.	36,46,50,56,57
	Increased spending on health promotion/social welfare	Revenues can be invested in health-promoting or other community development projects, as has been done in some US cities.	58
Healthcare savings	Healthcare savings to government	Cost-effectiveness studies estimate healthcare cost savings due to NCDs averted in settings including the US, Philippines, South Africa, Australia and Mexico.	9,30,46,52–55,59,60
	Lower out-of-pocket (OOP) spending	Simulation studies demonstrate lower OOP due to reduced health burden.	44,46

1. These references do not represent an exhaustive list; nationally relevant evidence should be sought where possible.

3

Applying
the health tax
action framework
to SSB taxation

Applying the health tax action framework to SSB taxation

In *Action for Health Taxes: From Policy Development to Implementation*, a step-wise framework was introduced to guide users through the policy process and expand on the factors that support the success of health taxes. These steps can be grouped into three main areas: understanding the broader policy environment, developing effective policy content, and advocating to ensure the tax is prioritised (Figure 1).

In the following sections, the Health Taxes Action Framework will be applied to SSB taxation, beginning by focusing in more detail on understanding the national policy context for SSB taxation, and then discussing technical tax design issues and advocacy/engagement strategies.

Figure 1. Health Tax Action Framework



Source: Authors

4

The policy environment

4.1. Policy context

4.2. Policy actors and stakeholders

4.3. Legal and regulatory analysis

4.4. Policy objectives and framing the tax

The policy environment

4.1. Policy context

Developing a clear understanding of the policy context is a key part of efforts to introduce or amend SSB taxation. A number of case studies have captured detailed information on the policy processes around the introduction (or failed introduction) of SSB taxes, and provide models for understanding the political economy around SSB taxation.^{5,61–67} Key enabling factors for SSB taxes include the availability of local evidence, effective stakeholder engagement, the framing and messaging of the tax, and broader political momentum.^{61,62} These are summarised by the Multiple Streams Approach (MSA), which was introduced in Action for Health Taxes: From Policy Development to Implementation. MSA was introduced to help explain the political economy of why certain policies come to be seen as an ‘idea whose time has come’ and has been developed and championed by SSB tax researchers and advocates.⁶⁸ Two examples of how the political environment shaped the success and failure of SSB taxes are briefly summarised in Box 3. More detailed case studies are presented Health Taxes: What Works?

Box 3.

Reflecting on the future of SSB taxes

Colombia

In 2016, the government of Colombia failed to introduce a tax on sugar-sweetened beverages (see Health Taxes: What Works? for more details).

Briefly, an SSB tax was put forth as a policy solution to address the budget deficit, alongside a tobacco tax. Political commitment galvanised around a tobacco tax (which was ultimately passed), whereas the proposed 20% SSB tax did not move forward. The lack of firm political commitment to an SSB tax early on may have encouraged SSB industry actors to lobby intensely against the proposal. Key SSB industry players had strong links with large media organisations and were able to block civil society efforts to raise awareness about the health risks of SSBs. Despite high public support for an SSB tax (70%), bi-partisan opposition to the tax was achieved and the tax was defeated, highlighting the relative influence of the SSB industry and related conglomerates.⁶⁴ An SSB tax was subsequently passed in Colombia in 2022.

South Africa

The government of South Africa successfully passed an excise tax on SSBs in 2017 (see Health Taxes: What Works? for more details). A comprehensive analysis of the policy process has been published by Kruger et al. (2021).⁶⁹

The SSB tax in South Africa was framed as a response to the problem of rising NCDs. As early as 2013, taxes on unhealthy foods were identified as policy solutions in several national strategic documents. Following slow growth in GDP, there was a need to raise additional revenue. Given the inclusion of an SSB tax in national strategic documents around health, the possibility of an SSB tax was seen as consistent with other goals within the government. A tax proposal was introduced in 2016, but the subsequent policy development process was long and protracted, in part due to industry-driven delays.

A coalition of policy entrepreneurs produced a strong messaging campaign to strengthen public and political support around the tax. It became clear that there was political support for the introduction of a tax. However, the opposition influenced the policy design, with concessions made around the rate of the tax, an exemption threshold and a narrowing of the definition of taxable products. Despite substantial industry opposition, the government of South Africa was successful in implementing an SSB tax on 1 April 2018.⁷⁰

4.1.1. Trade and regional issues

Under trade liberalisation, tariffs (i.e. taxes applied to specific imported goods) have been substantially reduced, both on SSBs and on other types of products.⁷¹ Under international trade agreements governments are generally obliged to reduce and eventually abolish tariffs (customs duties). There may also be limitations, or harmonisation requirements, on taxes and pricing measures under regional trade agreements or customs agreements. Investment agreements may also constrain regulatory and fiscal policy in certain ways to protect foreign investments, for example to prevent direct or indirect expropriation of investments (which may be very broadly defined) or to ensure fair and equitable treatment or a stable regulatory environment.

However, trade and investment agreements generally include exceptions allowing governments to regulate to protect public health (e.g. Article XX(b) of the WTO General Agreement on Tariffs and Trade) which can include implementation of taxes necessary to protect human health.

There may also be provisions in regional agreements committing states party to the agreement to collaborate to protect public health or on NCD prevention which provides further support for public health measures. Trade and investment agreements also allow regulatory space for governments to fulfil other commitments under international law, including commitments under international human rights treaties to protect, respect and fulfil rights to food, health and rights of children.

To strengthen the government's position against potential legal challenges, among other things SSB taxes should be non-discriminatory (i.e. applied on both imported and locally manufactured products of a similar nature), and clearly implemented with a health-protecting rationale. More information about the legal and regulatory environment is provided below.

4.2. Policy actors and stakeholders

The introduction of an SSB tax requires leadership from the Ministry of Finance or equivalent ministry and input from other sectors, including those related to commerce and trade, agriculture, and labour. Civil society organisations (CSOs) and academic research groups can also provide key support. Stakeholder analyses introduced in Toolbox 2 in Action for Health Taxes: From Policy Development to Implementation can help identify relevant actors and their relative influence and power.

A comprehensive stakeholder analysis was conducted around SSB taxation across seven sub-Saharan African countries, highlighting the major actors likely to be influential across settings: Ministries of Finance, Health, Agriculture, and Education, as well as the beverage industry.⁶⁵ In most settings, the Ministry of Health (MoH) is likely to be a strong advocate of SSB taxation.

Where Ministries of Finance (MoF) perceive SSB taxes as aligned with their goals, they represent a powerful advocate for policy passage. If SSB taxes are seen as a potential way to address budget deficits, they are more likely to garner MoF support, whereas if industry arguments about potential job losses and economic productivity risks gain traction, support may waiver. While several evaluations have found no long-term impact on employment, SSB industry actors may misrepresent this evidence, and/or directly threaten to disinvest in countries by moving manufacturing plants.

SSB tax advocates should be prepared to address these threats and communicate with MoF officials to pre-empt these fears from arising. Addressing industry tactics will be expanded on in Section 6.3 below.

Ministries of Agriculture may also be important stakeholders, with support likely to vary based on local agricultural patterns and Ministry priorities. For example, in settings in which sugar is a key crop, an SSB tax may be viewed as a threat to small farmers - an argument which is often amplified by industry actors.^{73–75} However, Ministries of Agriculture may also be supportive of SSB taxation when the production of health food is viewed as a key part of national food security and agricultural development plans.⁷⁶ Other ministries, such as the ministry of education, may also play important roles, and should be considered in comprehensive stakeholder analyses.

Outside of government, CSOs and academic centres may play an important role, and the formation of pro-tax coalitions has been a key factor in successful policy passage in several settings. CSOs with a focus on NCD prevention are likely to be strategic advocates.^{77–82}

Finally, the SSB industry itself is a very powerful group including, for example, SSB manufacturers, distributors and sugar farmers and refiners. Experiences in a number of countries have highlighted that the SSB industry, or front-groups, will adopt tactics similar to those used by the tobacco industry in an effort to defeat or dilute proposed SSB tax policies.^{83,84} Some of these strategies include presenting misleading arguments and attempting to sway public opinion and policymakers, blocking civil society attempts to promote messaging campaigns, and even directly threatening individuals and organisations seen to be advocating for these taxes.^{64,73,76,85,86} Section 6.3 summarises common industry arguments and evidence-based responses.

4.3. Legal and regulatory analysis

In addition to the tax design elements discussed below, a review of the legal and regulatory environment is an important first step to identify existing taxes and other price policies applicable to SSBs, and define the mechanisms and legal instruments through which an SSB tax can best be implemented. A recent analysis of the legal feasibility of SSB taxation across seven sub-Saharan African countries provides an example of this type of assessment.⁸⁷ Developing policy or policy amendments informed by a legal environment assessment will increase the likelihood of successfully producing policy change, as well as strengthening the government's position against the threat of legal action by industry.⁸⁸

4.3.1. Domestic legal framework

Legal instruments applying taxes to non-alcoholic beverages are likely to be in place but may not be designed with a health objective. As discussed above, many countries may have existing excise tax instruments in place which include SSBs but do not differentiate between SSBs and non-SSBs and often simply adopt Harmonized System customs codes.^{87,89} In some settings SSBs receive VAT exemptions, and removing these exemptions would provide an opportunity to move towards greater policy coherence.⁸⁷ It is important to consider how taxes are applied to all SSBs across different categories (including fruit and vegetable juices—including whether sugar sweetened or not, in concentrated or natural form, produced locally or imported, milk-based beverages, cereal-based beverages and pre-prepared tea and coffee beverages etc), as these products may attract different tax treatment for a variety of reasons, including health objectives and perceptions of healthfulness, the evidence for which may require review.

It is important to assess the government's specific authority (legislative mandate) to levy an excise tax on SSBs. In most jurisdictions, excise taxes are applied under a specific law. Any existing excise tax law(s) should be reviewed and the scope, mechanism, and process for amending such laws must be clarified. It is important to understand how taxes on non-alcoholic beverages, or other taxes with a public health objective (e.g. tobacco or alcohol), have previously been set in the country, for example through enactment of legislation by Parliament, amendment of excise tax law schedules as part of the annual budget processes or by executive order/decreed. Lessons may be drawn from previous domestic experiences, including which approaches might be most effective or which to avoid. The National Constitution would generally provide the government with taxation powers and the right and/or duty to protect public health and may also guarantee fundamental rights to health or food, or the rights of children, supporting the right of government to implement an SSB tax with a public health objective. However, it is important to be aware of any limitations on government taxation powers and how the Courts have balanced these rights and government duty to protect public health with other fundamental rights, for example the right to trade or run a business.

The legal infrastructure for regulation of food and non-alcoholic beverages should also be reviewed, in particular requirements for food (and more specifically nutrient) labelling and related monitoring provisions, which are necessary to support monitoring and enforcement of SSB taxation and may need to be strengthened. If food and nutrient labelling is not currently mandated, enacting or amending legislation or implementing regulations or standards requiring nutrient declarations on pre-packaged food and non-alcoholic beverage products may be an important part of enabling SSB taxation supporting monitoring and enforcement of the tax.

4.3.2. Regional and international legal framework

It is also important to understand a government's obligations under international law which are applicable to SSB taxes, particularly international trade agreements (WTO, other multilateral, or bilateral agreements), regional trade agreements or customs unions to which the state is a party and international investment agreements, whether standalone or in investment chapters of free trade agreements. Section 4.1.1 outlines trade and regional issues in more depth.

Under international trade agreements governments are generally obliged to reduce and eventually abolish tariffs (customs duties). As mentioned above, non-tariff measures such as domestic taxes must be non-discriminatory. There may also be limitations, or harmonization requirements, on taxes and pricing measures under regional trade agreements or customs agreements. Investment agreements may also constrain regulatory and fiscal policy in certain ways to protect foreign investments, for example to prevent direct or indirect expropriation of investments (which may be very broadly defined) or to ensure fair and equitable treatment or a stable regulatory environment.

However, trade and investment agreements generally include exceptions allowing governments to regulate to protect public health (e.g. Article XX(b) of the WTO General Agreement on Tariffs and Trade) which can include implementation of taxes necessary to protect human health.

There may also be provisions in regional agreements committing states party to the agreement to collaborate to protect public health or on NCD prevention which provides further support for public health measures. Trade and investment agreements also allow regulatory space for governments to fulfil other commitments under international law, including commitments under international human rights treaties to protect, respect and fulfil rights to food, health and rights of children.

4.3.3. Possible grounds for legal challenge

While there are limits on the extent to which it is possible to generalise about the legal issues associated with SSB tax in different jurisdictions, it is also possible to anticipate particular types of legal challenges as it is common for industry to claim that health taxes are or will be unlawful.

To be in the strongest position possible against potential legal challenges, SSB tax policy should be:

- Aligned with the scope and terms of any applicable exceptions in key trade or investment agreements to which the State is a party.
- Implemented in a manner consistent with trade commitments, including that taxes are:
 - Non-discriminatory (applied equally to imported and locally manufactured products of a similar nature),
 - Not more trade restrictive than necessary to protect health, including that tax distinctions between different product categories are justifiable by reference to a government's objective.
- Based on and supported by evidence, both of the public health risk and of the likely contribution of the tax to addressing that risk.
- Ideally, applied as part of a comprehensive framework of measures to promote healthy diets, prevent NCDs, and/or address overweight and obesity, in children or in the general population (as appropriate to the stated objectives of the tax);
- Linked to and invoking commitments to protect public health, rights to health and food, and children's rights, under the Constitution and international treaties and/or regional agreements;
- Implemented in accordance with domestic and international procedural requirements such as domestic requirements for public comment or consultation, or notification of new or amended taxes under trade or customs agreements.

4.4. Policy objectives and framing the tax

The extent to which SSB taxation has been framed for health reasons varies widely. In some countries, SSB taxation has been introduced with an explicit health aim (e.g. the Health Promotion Levy in South Africa and the Soft Drinks Industry Levy in the United Kingdom, both of which encourage reformulation). Clear regulatory objectives identifying a domestic public health issue(s) based on evidence (local and international) and supporting a tax on SSBs as an effective and cost-effective measure in response to the identified legitimate public health issue(s) should maximise the effectiveness of the tax and also strengthen the government position against potential legal challenges.

In some settings, SSB taxes have been successfully introduced as a way to finance important social programs (e.g. the Philadelphia SSB tax in the US), with health messages contributing towards the end of the debate rather than throughout.⁹⁰ Despite these differences in framing, the underlying need for revenue – either to make up for a budget shortfall or to fund new programs – has consistently been a factor in the creation of a policy window around SSB taxation.

Another important factor has been the length of time until the next election cycle, with newly elected politicians more likely to enact taxes and politicians facing imminent elections less likely to do so.^{72,91,92}

However, even this pattern is context-dependent and subject to a variety of national political economy factors. For example, the 2012 elections in France dampened the political feasibility of increasing broad-based taxes but – combined with budgetary pressures and other national factors – opened a political window for introducing a product-specific tax, leading to the announcement of a €3.58 cent/L excise tax on SSBs in 2011.⁹³

SSB taxes will almost certainly face strong industry opposition, and successful passage depends on countering industry efforts to undermine or weaken SSB taxation efforts. Industry opposition and lobbying strategies will be outlined in more detail in Section 6.3 below.

5

Policy content

5.1. Evidence base

5.2. Tax design

5.3. Administration and public financial management

5.4. Monitoring and evaluation

Policy content

5.1. Evidence base

5.1.1. SSB consumption patterns

Understanding baseline SSB consumption patterns will help identify the ways in which SSB taxes may impact subsequent tax design and advocacy efforts. Given the variation in consumption between and within countries outlined in Section 2 above, where possible it is important to identify country-specific analyses to provide the strongest evidence for policymaking.

Targeting SSB consumption through taxation may be especially important in settings with high SSB consumption (such as Latin America and the Caribbean), settings in which SSB consumption is high in specific sub-groups of the population (for example Black households and Indigenous communities^{51,54}), and settings in which SSB consumption is rising (such as Eastern Europe, North Africa and Middle East and Sub-Saharan Africa).²³

5.1.2. Mechanisms of impact

SSB taxes change intake and impact health in several ways:

- **Increasing the price of SSBs and dampening demand.**

SSB taxes have been consistently shown to increase the price of SSBs, and these price increases are associated with decreases in SSB sales.^{12,94} This is the main mechanism through which SSB taxes are intended to improve population health, and the primary mechanism most simulation studies have assessed. Different tax designs, baseline consumption patterns, and market dynamics can impact the extent to which taxes are passed on to consumers (the 'pass-through rate'). These factors can also impact industry decisions to spread out tax-induced price changes across non-taxed beverages, to absorb taxes, or to over-shift taxes (by increasing prices by more than the tax).⁹⁵

The extent to which consumers respond to these price changes (the price elasticity of demand) also varies, with differences often observed by socioeconomic status, baseline SSB consumption, age, etc. However, on average, a 10% increase SSB taxes has been associated with a 10–16% decrease in SSB purchases.^{12,116} Any tax-induced price changes should also be interpreted in the context of

affordability. As average income increases over time, SSBs become relatively more affordable even if SSB prices remain stable.^{77,96,97} Affordability measures use an estimate of national income (e.g. gross national income per capita, gross domestic product per capita, etc.) to estimate the proportion of income needed to purchase a standardised amount of SSBs throughout the year (e.g. 100L of Coca-Cola). Based on an analysis of 82 countries, SSBs became more affordable in all but three countries from 1990 to 2016.⁷⁷ SSBs have become affordable at a faster rate in LMICs (an average change of 8.76% per year) compared to HICs (an average change of 1.96% per year).⁷⁷

- **Changing public perceptions of SSBs.**

The introduction of an SSB tax may signal to consumers that SSBs are associated with health risks.^{78,98,99} Signalling effects may be strongest in settings in which 1) there is a substantial health-related public debate around the introduction of an SSB tax, 2) citizens vote on SSB taxation (e.g. in several US cities), and/or 3) SSB taxes are introduced with an explicit health framing. In addition to conveying information to consumers, SSB taxes may contribute to shifting social norms around SSB consumption.

- **Incentivising a range of industry reactions.**

The ways in which industry responds to the introduction of a tax (aside from price changes) may influence dietary intake. Some tax designs (for example, tiered taxes and taxes based on sugar content) create an incentive for SSB manufacturers to reformulate to reduce the amount of tax-liable sugar in their products, or to change product sizes.

Regardless of tax design, SSB manufacturers may also respond to an SSB tax by changing or tailoring marketing efforts to counter any messages about the risk associated with these products.⁹⁸ They may also introduce new products, for example at a lower price point to counteract the price impact of an SSB tax, or in smaller sizes.⁹⁸ Finally, on a larger scale, transnational SSB companies may respond to SSB taxes by focusing on targeting new economies and creating additional demand in other settings.

While some of these responses may support health goals (such as reformulation, the introduction of smaller sizes), others may actively counter health goals (SSB marketing, or the introduction of lower-cost, high-sugar products). Understanding and anticipating some of these responses may enable policymakers to design SSB taxes in ways which maximise their effectiveness, and also to consider additional policy options (such as marketing restrictions, front of pack labelling), which may work synergistically alongside SSB taxes.

5.1.3. Reviewing existing policies

Understanding the existing policy context helps identify promising ways to strengthen existing legislation or introduce new legislation. In countries without an SSB tax, there is an opportunity to build on lessons and experiences from other countries and introduce a new tax building on current best practice. In countries with existing SSB taxes, there are opportunities to strengthen the health impact of these taxes by amending their design, increasing the tax rate, or increasing the policy coherence around which products are taxed.

There are a variety of SSB tax policies globally, with certain types performing better from a health perspective than others (Section 5.2 on Tax Design provides greater detail on types of SSB taxes). In Latin America and the Caribbean, 21 of 33 countries apply excise taxes to SSBs but tax structures varied substantially, and some taxes had not been updated in over ten years.⁸⁹ In addition to identifying the structure and relevant legislation, it is helpful to assess the design of existing taxes, including whether they are also applied on non-SSBs (e.g. bottled water), whether they are comprehensively applied on SSBs (e.g. on powders, concentrates and syrups used to reconstitute SSBs; on energy drinks which are sometimes addressed differently; and on sweetened milk-based drinks), whether a uniform or tiered rate is used, etc.

5.2. Tax design

Tax policies can be designed to incentivize changes in the consumption trends of harmful products such as SSBs. However, these policies can differ significantly from setting to setting, including the products taxed, type of excise system and at what level the applicable rates are set. Deciding how to tax SSBs must involve consideration of the interplay of administrative capacity and the stated objective of the tax. There are several key dimensions to consider in the design of SSB taxes: the type of excise tax (e.g. ad-valorem, specific, or mixed), the tax structure (e.g. uniform vs. tiered), the taxable products, the tax base and the tax rate.

The technical aspects of SSB tax policy and administration are outlined in great depth in the WHO Manual on sugar-sweetened beverage taxation policies to promote healthy diets; this should be referenced by national policymakers where possible. Understanding the technical nuances in tax design along with advantages and disadvantages may facilitate more effective engagement with finance authorities during the decision-making process of SSB tax design.

5.2.1. Tax type and structure

Excise taxes are the recommended tax type for health taxation. Other types of consumption taxes may fail to increase the relative price of SSBs (value-added taxes typically do not target SSBs specifically and are applied to a much broader basket of goods); incentivize domestic production (import taxes may increase local SSB manufacture); be vulnerable to international trade litigation (import taxes may be seen as discriminatory); or be less visible or salient to the consumer (sales taxes are often not included in the shelf price of products reducing their impact). The different types of consumption taxes are outlined in Table 2.

There are several types of excise tax. Specific excise taxes with automatic annual adjustments for inflation are the preferred tax design for SSBs. However, there are advantages and disadvantages to each of these types of excise tax, outlined in Table 3. If an ad valorem structure is used, in which the tax rate is based on the final retail sale price of the SSB product, the choice of what point to assess the product's value is crucial. Even with a pass-through rate of 100%, an ad valorem tax applied to producer price will result in a price change that is lower than one applied to the retail price.¹⁰⁰

SSB taxes may also be uniform or tiered. With a uniform tax structure, a single rate is applied across all products and may be easier to administer. With tiered taxes, tiers are defined based on beverage type or sugar concentration, and different rates are applied to each tier.

Table 4 outlines the advantages and disadvantages of uniform or tiered structures.

Table 2. Advantages and disadvantages of different consumption tax approaches to SSB tax

Tax type	Definition	Advantages	Disadvantages
Value added tax (VAT)	A percentage of value added at every stage of production/ distribution and ultimately paid by the consumer at point of purchase.	<ul style="list-style-type: none"> Usually reflected in shelf price (unlike most sales taxes) 	<ul style="list-style-type: none"> Tends to be applied generally across a broad base of products Challenging or potentially inefficient to vary VAT rates by product type High administrative burden to change
Import tax	Only applied on imported goods.	<ul style="list-style-type: none"> Less pushback from domestic companies 	<ul style="list-style-type: none"> Misses locally SSBs and incentivizes increased local production Risk of violating international trade agreements
Sales tax	A percentage of the product's value paid by consumers at point of purchase.	<ul style="list-style-type: none"> May be less politically challenging to introduce Can be used in settings in which other types of taxes are not feasible (e.g. some US cities) 	<ul style="list-style-type: none"> Less likely to be reflected in shelf price and therefore less likely to impact consumer behaviour (lower salience)
Excise tax	Applied on selected goods and usually collected directly from manufacturers or distributors.	<ul style="list-style-type: none"> Reflected in shelf price Ease of administration (fewer companies to collect tax from, which may also reduce tax evasion) Designed to target specific products 	<ul style="list-style-type: none"> May be more politically challenging to implement

Table 3. Advantages and disadvantages of different SSB excise tax types (specific and ad valorem excise taxes)

Tax type	Definition	Advantages	Disadvantages
Specific excise tax	Based on a fixed tax amount per unit volume or sugar content.	<ul style="list-style-type: none"> • Reduces price dispersion (i.e. range of prices) 	<ul style="list-style-type: none"> • Smaller impact on prices of most expensive SSBs (e.g. energy drinks) • May erode in relative value over time due to inflation
Volume based specific excise tax	Based on a fixed tax amount per unit volume.	<ul style="list-style-type: none"> • Ease of administration (volume of sales data readily available) • Produces more stable revenue 	<ul style="list-style-type: none"> • Does not differentiate between high- and low-sugar SSBs
Sugar based specific excise tax	Based on a fixed tax amount per unit of sugar content.	<ul style="list-style-type: none"> • Differentiates between high- and low-sugar SSBs • May incentivise consumers to substitute to lower-sugar SSBs • May incentivise companies to reformulate 	<ul style="list-style-type: none"> • More challenging administratively (sugar content data not readily available) • Requires additional monitoring
Ad valorem excise tax	Based on a percentage of the value of the good.	<ul style="list-style-type: none"> • Does not require adjustment for inflation • Leads to proportionate price changes in most expensive types of products (e.g. energy drinks) • Administrative ease 	<ul style="list-style-type: none"> • May incentivise brand down-switching • May produce less stable revenue • Industry may evade tax by strategically reporting lower producer costs

Table 4. Advantages and disadvantages of different sugar-sweetened beverage (SSB) tax structures (uniform, tiered)

Tax type	Definition	Advantages	Disadvantages
Uniform	Same rate applied across products.	<ul style="list-style-type: none"> • Administrative ease • Consistent with trend towards simplified tax systems 	<ul style="list-style-type: none"> • Does not differentiate between high- and low-sugar SSBs (except when based on sugar content) • Does not incentivise consumers to substitute to lower-sugar SSBs • Does not incentivise companies to reformulate
Tiered (by sugar content)	Various rates applied based on sugar concentration.	<ul style="list-style-type: none"> • Differentiates between high- and low-sugar SSBs • May incentivise consumers to substitute to lower-sugar SSBs • May incentivise companies to reformulate 	<ul style="list-style-type: none"> • More challenging administratively (sugar content data not readily available) • Requires monitoring and audits • Incentivises reformulation to just under thresholds
Tiered (by product type)	Various rates applied based on product types.	<ul style="list-style-type: none"> • May address price variation between product types • May gain political support if some SSBs are perceived as more threatening 	<ul style="list-style-type: none"> • Does not differentiate between high- and low-sugar SSBs within product categories • Does not incentivise companies to reformulate

5.2.2. Tax base

Another aspect of the tax design process involves specifying which products are subject to the tax. It is important that an SSB tax, at a minimum, includes ready-to-drink SSBs and does not include bottled water or other healthy non-SSB alternatives (Box 4). Where this is not the case, existing SSB taxes can be amended to improve their health effectiveness.²⁵

A narrowly defined tax (i.e. a tax applied to a limited number of SSBs) may encourage consumers to substitute towards untaxed products. This may undermine some of the potential health benefits of an SSB tax, particularly if untaxed products are still high in free sugars.

For example, in Barbados the initial definition of taxable SSB products did not capture some important sources of SSB consumption such as a local syrup used to reconstitute SSBs at home, and was later amended.²⁵ On the other hand, many countries have excise taxes which include SSBs but may be quite broad and include non-SSBs such as bottled water.^{81,87,89} Rwanda, as well as certain countries in Latin America and the Caribbean, have been found to have existing excise taxes which could be amended to exclude bottled water from excisable products to create a price differential between SSBs and healthy non-SSBs alternatives.^{81,89}

To maximise any potential signalling effect of a tax, the introduction of a tax should be complemented with awareness raising messaging around the health risks of SSB consumption. Depending on local SSB consumption patterns, it may be useful to clarify to the public what constitutes an SSB (e.g. sugar-sweetened juice drinks are often perceived as healthy alternatives to carbonated sodas, despite often equally high sugar content).⁹⁸

Box 4.

Healthier substitutions

A health-promoting tax should create an incentive for consumers to substitute from high-sugar beverages to low- or unsweetened beverages. Tap water is preferred when the environmental as well as health impacts of various beverages options are taken into account (e.g. the environmental impacts of bottled water, dairy farming, etc.) However, from a health perspective substitution to milk and bottled water would also improve nutritional quality while also providing the beverage industry with viable alternative products to sell, reducing the cost to industry of these policies.

Safe drinking water

An ideal substitution from a combined health and environmental perspective would be to tap water, provided there is ready access to safe drinking water.⁸⁰ In settings in which safe drinking water is not readily available, the provision of safe drinking water must be a priority, alongside efforts to introduce an SSB tax. For example, in Mexico an SSB tax was announced alongside a commitment to fund additional drinking fountains in schools.

Fruit juice

There is considerable debate about the inclusion or exclusion of 100% fruit juice and sweetened milk-based drinks in definitions of taxable SSBs. According to the WHO definition of free sugars, 100% fruit juice is a source of free sugars (but not added sugars). However, few SSB taxes have been designed to include fruit juice.

Non sugar-sweetened beverages

Non-sugar sweetened beverages are also subject to ongoing discussion.^{82,101}
WHO recommends against the use of non-sugar sweeteners.

5.2.3. Tax rate

Globally, current tax rates range from very small (<5%) to substantial (e.g. 50–100%). For example, the Gulf Cooperation Council, made up of six Arab Gulf states, levies a 50% tax on carbonated drinks and a 100% tax on energy drinks. Fiscal policies that lead to at least a 20% increase in the retail price of sugary drinks result in approximately proportional reductions in the consumption of the taxed products.¹

For countries with existing SSB taxes, increasing the tax rate is one way to increase the potential health impact of a tax. In most countries, rates of SSB taxation are far below comparable rates of tobacco taxation. As with other excise taxes, a one-time large increase in price is likely to have a bigger impact on consumption than a number of small, graduated increases over time.

To realise the potential benefits of an SSB tax, it is important that implementation details are conveyed clearly (e.g. who pays the tax, what products it is applied on, and how the tax liabilities are calculated, etc.) and enacted uniformly.

5.3. Public financial management and tax administration

Public financial management is the set of principles, strategies, practices, and tools, as well as behaviours and norms, that together create an environment of accountable, transparent, responsible administration and management of public sector funds. Three prominent related considerations in public financial management of health taxes are: compliance, enforcement, and national administrative capacity. Compliance refers to “taxpayers’ decision to comply with tax laws and regulations by paying tax timely and accurately”¹⁰² whereas enforcement represents systematic procedures to ensure compliance, including the provision of penalties for non-compliance or tax evasion.¹⁰²

From the outset, the implementation of SSB taxes should be aligned with national tax system capacities – the “ability of a state to implement and monitor taxation, build effective structures, train staff, and offer effective fiscal services and monitoring systems for tax transaction[s]” – to increase the likelihood of compliance and enforcement.¹⁰³ Decisions around earmarking tax revenues also represent a large focus for SSBs and other health taxes and will be discussed further below.

5.3.1. Earmarking SSB tax revenues

An additional consideration around SSB tax design is whether to earmark the revenue. Earmarking means using some or all of the revenue from a tax and directing towards a specific budgetary expense.¹⁰⁴ On the one hand, earmarking represents a political promise to the public about how the money will be spent; on the other hand, earmarking can signal an internal mechanism for revenue protection. Countries with existing SSB taxes have taken diverse approaches (Box 5). Earmarking could be useful from a political economy perspective as the tax will be more accepted by the public if it’s used to fund a specific program, for example in the health sector. Ultimately, decisions around whether and how to earmark SSB tax revenue depend on country context, including political economy, budgeting laws and practices, degree of prioritisation, and other national factors.

Box 5.

Choosing to earmark or not? Country examples

Some countries with SSB taxes have elected not to earmark revenue (e.g. Denmark, Finland, Fiji, Samoa, Nauru, Barbados).⁶⁶ Directing tax revenue into a general fund maximises government flexibility and may be the most efficient option from a budget allocation perspective.

Governments may prefer to avoid earmarking and use revenue to contribute to a general consolidated fund, and, in some cases, governments are not legally mandated to earmark specific tax revenues. However, in countries yet to introduce an SSB tax, public support may be lower for SSB taxes in the absence of earmarking.

Other countries have used a form of soft earmarking. For example, Mexico and South Africa did not formally earmark SSB tax revenue but publicly committed to dedicating revenues towards specific projects, such as investments in water fountains in Mexico and health promotion in South Africa. Other subnational SSB taxes do not use formal earmarking, but were introduced

alongside community advisory boards tasked with disbursing funds to programs that were in line with community priorities and values (e.g. Berkeley). These so-called ‘soft’ earmarking practices may help make SSB taxes more politically acceptable, without the risk of introducing inefficiencies through a more rigid budgeting allocation (e.g. ‘hard’ earmarking).⁴⁸

Countries such as the United Kingdom, France and French Polynesia have used hard earmarking. Again, this type of earmarking may increase the public acceptability of a new or increased tax. However, given the challenges in predicting revenue from certain types of SSB tax designs (e.g. ad valorem taxes tend to produce less stable revenue than specific taxes), linking SSB tax revenue with pre-specified programs may lead to a shortfall in program budgets and inefficiencies in resource allocation. Also, earmarking does not guarantee increased revenue for a specific program, because funds previously used for that program may be redirected elsewhere leading to a minimal or even negative net change.⁴⁸

5.4. Monitoring and evaluation

The SSB tax evidence base is growing as more and more countries introduce them. Monitoring and evaluation remains important to generate local evidence and to assess as yet unanswered questions around SSB taxation.¹⁰⁵ Monitoring and evaluating should be planned alongside the introduction of an SSB tax. In settings in which sort or hard earmarking are used, a proportion of the revenue from an SSB tax can be dedicated to these evaluation efforts.

In an increasing number of settings, industry stakeholders have successfully lobbied for the repeal of SSB taxes after short periods.^{106,107} Evaluations can help policymakers identify ways to strengthen existing taxes and evidence from evaluations can be used to counter efforts to repeal SSB taxes.⁷⁵ These evaluations should be high-quality and free from industry influence.

Finally, efforts have been made to develop a standardised SSB tax share indicator, similar to that used to monitor tobacco taxation.^{108,109} A recent WHO report assessed taxes applied to SSBs and compared taxes and prices for the first time at the global level. It describes and qualitatively compares their design and provides the first global estimation of standardized metrics to compare SSB tax.^{109a}

A simple tax share indicator represents an estimate of the proportion of the final retail price is attributable to all taxes, and SSB excise taxes in particular. Such a measure (or suite of measures, to account for different types of SSBs) would be a useful way to monitor tax-derived changes in prices over time and between settings.

6

Political advocacy

6.1. Cross-sectoral alignment

6.2. Public engagement

6.3. Managing industry opposition

Political advocacy

6.1. Cross-sectoral alignment

Several sectors have a stake in SSB taxation, and their interests and concerns are particularly relevant to government ministries of finance, health, agriculture and others. Coordination between ministries does not always happen in practice, nor does it appear to be a prerequisite for successfully SSB tax passage.^{75,110} However, without Ministry of Finance buy-in and firm commitment, SSB taxes are unlikely to move ahead, and without Ministry of Health support, key tax design decisions may not align fully with public health priorities.

Even when both ministries are aligned, where the introduction of a tax is subject to a legislative process (rather than being introduced, for example by a Minister of Finance directly) the political negotiations required for passage may lead to compromises in tax design (e.g. lowering tax rates, broadening taxable products to include non-SSBs, or exclude particular types of SSBs).^{69,73,91,93,110–112}

6.2. Public engagement

Engaging the public around the health risks and rationale for an SSB tax may increase public support and political feasibility around an SSB tax. For example, in Mexico pro-tax advocates formed a strong coalition and conducted a media campaign and other public engagement activities to highlight the links between SSB consumption and diabetes and other NCDs.⁷² In South Africa a pro-tax media campaign was also carried out, with high coverage and message recall.¹¹³

There are examples of countries which have successfully introduced SSB taxes without significant public engagement – these tend to be countries in which a Minister of Finance or equivalent has introduced an SSB tax as part of the broader budget, sometimes to the surprise of health advocates. At the same time, high levels of public support do not ensure legislative success. For example, despite receiving 70% support in public opinion polling, the proposed SSB tax in Colombia did not progress as a result of intense industry lobbying.⁶⁴ In Australia, despite multiple studies showing public support for SSB taxation efforts have thus far stalled.^{114–115}

6.3. Managing industry opposition

Anticipating the arguments industry actors often use can enable advocates to pre-empt them and prepare effective and evidence-based responses.⁸³ Common industry arguments and potential evidence-based responses are summarised in chapter 6 of the WHO manual on sugar-sweetened beverage taxation policies to promote healthy diets.

Reference list

1. World Health Organization. Fiscal policies for diet and prevention of noncommunicable diseases [Internet]. [cited 2023 Jan 19]. Available from: <https://www.who.int/publications/item/9789241511247>
2. Bloom D, Cafiero E, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, Fathima S, et al. The Global Economic Burden of Non-communicable Diseases. Geneva: World Economic Forum; 2011.
3. Sánchez-Pimienta TG, Batis C, Lutter CK, Rivera JA. Sugar-Sweetened Beverages Are the Main Sources of Added Sugar Intake in the Mexican Population. *J Nutr*. 2016 Sep;146(9):1888S – 96S.
4. Allcott H, Lockwood BB, Taubinsky D. Should We Tax Sugar-Sweetened Beverages? An Overview of Theory and Evidence. *J Econ Perspect*. 2019 Aug;33(3):202–27.
5. Thow AM, Downs SM, Mayes C, Trevena H, Waqanivalu T, Cawley J. Fiscal policy to improve diets and prevent noncommunicable diseases: from recommendations to action. *Bull World Health Organ*. 2018 Mar 1;96(3):201–10.
6. Heise TL, Katikireddi SV, Pega F, Gartlehner G, Fenton C, Griebler U, et al. Taxation of sugar-sweetened beverages for reducing their consumption and preventing obesity or other adverse health outcomes. *Cochrane Libr* [Internet]. 2016 Aug 17; Available from: <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD012319/abstract>
7. World Health Organization. Taxes on sugary drinks - why do it? Geneva: World Health Organization; no date. Available from: <https://apps.who.int/iris/bitstream/handle/10665/260253/WHO-NMH-PND-16.5Rev.1-eng.pdf>
8. Bloomberg MR, Summers LH. The task force on fiscal policy for health. Health taxes to save lives: employing effective excise taxes on tobacco, alcohol, and Sugary beverages. New York: Bloomberg Philanthropies, 2019.
9. Veerman JL, Sacks G, Antonopoulos N, Martin J. The Impact of a Tax on Sugar-Sweetened Beverages on Health and Health Care Costs: A Modelling Study. *PLoS One*. 2016 Apr 13;11(4):e0151460.
10. Bertram M, Banatvala N, Kulikov A, Belausteguigoitia I, Sandoval R, Hennis A, et al. Using economic evidence to support policy decisions to fund interventions for non-communicable diseases. *BMJ*. 2019 May 20;365:l1648.
11. Cawley J. An economy of scales: A selective review of obesity's economic causes, consequences, and solutions. *J Health Econ*. 2015 Sep;43:244–68.
12. Teng AM, Jones AC, Mizdrak A, Signal L, Genç M, Wilson N. Impact of sugar-sweetened beverage taxes on purchases and dietary intake: Systematic review and meta-analysis. *Obes Rev*. 2019 Sep;20(9):1187–204.
13. Basu S, McKee M, Galea G, Stuckler D. Relationship of soft drink consumption to global overweight, obesity, and diabetes: a cross-national analysis of 75 countries. *Am J Public Health*. 2013 Nov;103(11):2071–7.
14. WHO technical staff. Reducing consumption of sugar-sweetened beverages to reduce the risk of unhealthy weight gain in adults. Biological, behavioural and contextual rationale [Internet]. WHO; 2014. Available from: <https://www.who.int/tools/elena/bbc/ssbs-adult-weight>
15. Glaberson H. PepsiCo and Coca-Cola's profit aided by growth in emerging markets [Internet]. beveragedaily.com. William Reed Ltd; 2011 [cited 2023 Jan 19]. Available from: <https://www.beveragedaily.com/Article/2011/07/21/PepsiCo-and-Coca-Cola-s-profit-aided-by-growth-in-emerging-markets>
16. Global Soft Drinks [Internet]. 2018 [cited 2023 Jan 19]. Available from: http://market-publishers.com/report/consumers_goods/food_beverage/global_soft_drinks.html
17. Public Health England. Sugar

- reduction: the evidence for action. London; Public Health England; 2015. Available from: <https://www.gov.uk/government/publications/sugar-reduction-from-evidence-into-action>
18. World Health Organization. Global action plan for the prevention and control of NCDs 2013–2020 [Internet]. World Health Organization; 2013 [cited 2023 Jan 19]. Available from: <https://www.who.int/publications/i/item/9789241506236>
 19. WHO. Global prices and taxes on sugar-sweetened and other non-alcoholic beverages. Global Health Observatory. <https://www.who.int/data/gho/data/themes/topics/taxes-on-non-alcoholic-beverages>
 20. Huth PJ, Fulgoni VL, Keast DR, Park K, Auestad N. Major food sources of calories, added sugars, and saturated fat and their contribution to essential nutrient intakes in the U.S. diet: data from the national health and nutrition examination survey (2003–2006). *Nutr J*. 2013 Aug 8;12(1):116.
 21. Singh GM, Micha R, Khatibzadeh S, Shi P, Lim S, Andrews KG, et al. Global, Regional, and National Consumption of Sugar-Sweetened Beverages, Fruit Juices, and Milk: A Systematic Assessment of Beverage Intake in 187 Countries. *PLoS One*. 2015 Aug 5;10(8):e0124845.
 22. Yang L, Bovet P, Liu Y, Zhao M, Ma C, Liang Y, et al. Consumption of Carbonated Soft Drinks Among Young Adolescents Aged 12 to 15 Years in 53 Low- and Middle-Income Countries. *Am J Public Health*. 2017 Jul;107(7):1095–100.
 23. Popkin BM, Hawkes C. Sweetening of the global diet, particularly beverages: patterns, trends, and policy responses. *Lancet Diabetes Endocrinol*. 2016 Feb;4(2):174–86.
 24. Desbouys L, Méjean C, De Henauw S, Castetbon K. Socio-economic and cultural disparities in diet among adolescents and young adults: a systematic review. *Public Health Nutr*. 2020 Apr;23(5):843–60.
 25. Alvarado M, Harris R, Rose A, Unwin N, Hambleton I, Imamura F, et al. Using nutritional survey data to inform the design of sugar-sweetened beverage taxes in low-resource contexts: a cross-sectional analysis based on data from an adult Caribbean population [Internet]. Vol. 10, *BMJ Open*. 2020. p. e035981. Available from: <http://dx.doi.org/10.1136/bmjopen-2019-035981>
 26. López-Olmedo N, Popkin BM, Taillie LS. The Socioeconomic Disparities in Intakes and Purchases of Less-Healthy Foods and Beverages Have Changed over Time in Urban Mexico. *J Nutr*. 2018 Jan 1;148(1):109–16.
 27. Stacey N, Edoaka I, Hofman K, Swart EC, Popkin B, Ng SW. Changes in beverage purchases following the announcement and implementation of South Africa's Health Promotion Levy: an observational study. *Lancet Planet Health*. 2021 Apr;5(4):e200–8.
 28. Lacko AM, Maselko J, Popkin B, Ng SW. Socio-economic and racial/ethnic disparities in the nutritional quality of packaged food purchases in the USA, 2008–2018. *Public Health Nutr*. 2021 Dec;24(17):5730–42.
 29. Bourke EJ, Veerman JL. The potential impact of taxing sugar drinks on health inequality in Indonesia. *BMJ Glob Health*. 2018 Nov 26;3(6):e000923.
 30. Saxena A, Koon AD, Lagrada-Rombaua L, Angeles-Agdeppa I, Johns B, Capanzana M. Modelling the impact of a tax on sweetened beverages in the Philippines: an extended cost-effectiveness analysis. *Bull World Health Organ*. 2019 Feb 1;97(2):97–107.
 31. Riediger ND, Bombak AE. Sugar-sweetened beverages as the new tobacco: examining a proposed tax policy through a Canadian social justice lens. *CMAJ*. 2018 Mar 19;190(11):E327–30.
 32. Singh GM, Micha R, Khatibzadeh S, Lim S, Ezzati M, Mozaffarian D, et al. Estimated Global, Regional, and National Disease Burdens Related to Sugar-Sweetened Beverage Consumption in 2010. *Circulation*. 2015 Aug 25;132(8):639–66.
 33. Braverman-Bronstein A, Camacho-García-Formentí D, Zepe-da-Tello R, Cudhea F, Singh GM, Mozaffarian D, et al. Mortality attributable to sugar sweetened beverages consumption in Mexico: an update. *Int J Obes*. 2020 Jun;44(6):1341–9.
 34. World Health Organization. Guideline: Sugars Intake for Adults and Children. World Health Organization; 2015.
 35. Redondo M, Hernández-Aguado I, Lumbreras B. The impact of the tax on sweetened beverages: a systematic review. *Am J Clin Nutr*. 2018 Sep 11;108(3):548–63.

36. Summan A, Stacey N, Birckmayer J, Blecher E, Chaloupka FJ, Laxminarayan R. The potential global gains in health and revenue from increased taxation of tobacco, alcohol and sugar-sweetened beverages: a modelling analysis. *BMJ Glob Health*. 2020 Mar 29;5(3):e002143.
37. Jain V, Crosby L, Baker P, Chalkidou K. Distributional equity as a consideration in economic and modelling evaluations of health taxes: A systematic review. *Health Policy*. 2020 Sep;124(9):919–31.
38. Breeze PR, Thomas C, Squires H, Brennan A, Greaves C, Diggle P, et al. Cost-effectiveness of population-based, community, workplace and individual policies for diabetes prevention in the UK. *Diabet Med*. 2017 Aug;34(8):1136–44.
39. Obesity Evidence Hub. Countries that have implemented taxes on sugar-sweetened beverages (SSBs) [Internet]. [cited 2023 Jan 29]. Available from: <https://www.obesityevidencehub.org.au/collections/prevention/countries-that-have-implemented-taxes-on-sugar-sweetened-beverages-ssbs>
40. Her Majesty's Treasury. Soft Drinks Industry Levy comes into effect [Internet]. *GOV.UK*. 2018 [cited 2023 Jan 29]. Available from: <https://www.gov.uk/government/news/soft-drinks-industry-levy-comes-into-effect>
41. Pell D, Penney TL, Mytton O, Briggs A, Cummins S, Rayner M, et al. Anticipatory changes in British household purchases of soft drinks associated with the announcement of the Soft Drinks Industry Levy: A controlled interrupted time series analysis. *PLoS Med*. 2020 Nov;17(11):e1003269.
42. Scarborough P, Adhikari V, Harrington RA, Elhussein A, Briggs A, Rayner M, et al. Impact of the announcement and implementation of the UK Soft Drinks Industry Levy on sugar content, price, product size and number of available soft drinks in the UK, 2015–19: A controlled interrupted time series analysis. *PLoS Med*. 2020 Feb;17(2):e1003025.
43. Gortmaker SL, Wang YC, Long MW, Giles CM, Ward ZJ, Barrett JL, et al. Three Interventions That Reduce Childhood Obesity Are Projected To Save More Than They Cost To Implement. *Health Aff*. 2015 Nov;34(11):1932–9.
44. Lal A, Mantilla-Herrera AM, Veerman L, Backholer K, Sacks G, Moodie M, et al. Modelled health benefits of a sugar-sweetened beverage tax across different socioeconomic groups in Australia: A cost-effectiveness and equity analysis [Internet]. Vol. 14, *PLOS Medicine*. 2017. p. e1002326. Available from: <http://dx.doi.org/10.1371/journal.pmed.1002326>
45. Schwendicke F, Thomson WM, Broadbent JM, Stolpe M. Effects of Taxing Sugar-Sweetened Beverages on Caries and Treatment Costs. *J Dent Res*. 2016 Nov;95(12):1327–32.
46. Saxena A, Stacey N, Puech PDR, Mudara C, Hofman K, Verguet S. The distributional impact of taxing sugar-sweetened beverages: findings from an extended cost-effectiveness analysis in South Africa. *BMJ Glob Health*. 2019 Aug 21;4(4):e001317.
47. Nishtar S, Niinistö S, Sirisena M, Vázquez T, Skvortsova V, Rubinstein A, et al. Time to deliver: report of the WHO Independent High-Level Commission on NCDs [Internet]. Vol. 392, *The Lancet*. 2018. p. 245–52. Available from: [http://dx.doi.org/10.1016/s0140-6736\(18\)31258-3](http://dx.doi.org/10.1016/s0140-6736(18)31258-3)
48. Ozer C, Bloom D, Martinez Valle A, Banzon E, Mandeville K, Paul J, et al. Health earmarks and health taxes. 2020 Dec [cited 2023 Jan 29]; Available from: <https://openknowledge.worldbank.org/handle/10986/34947>
49. Malik VS, Popkin BM, Bray GA, Després JP, Willett WC, Hu FB. Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes [Internet]. Vol. 33, *Diabetes Care*. 2010. p. 2477–83. Available from: <http://dx.doi.org/10.2337/dc10-1079>
50. Miracolo A, Sophiea M, Mills M, Kanavos P. Sin taxes and their effect on consumption, revenue generation and health improvement: a systematic literature review in Latin America. *Health Policy Plan*. 2021 Jun 3;36(5):790–810.
51. Park H, Yu S. Policy review: Implication of tax on sugar-sweetened beverages for reducing obesity and improving heart health. *Health Policy and Technology*. 2019 Mar 1;8(1):92–5.
52. Sánchez-Romero LM, Penko J, Coxson PG, Fernández A, Mason A, Moran AE, et al. Projected Impact of Mexico's Sugar-Sweetened Beverage Tax Policy on Diabetes and Cardiovascular Disease: A Modeling Study [Internet]. Vol. 13, *PLOS Medicine*. 2016. p. e1002158. Available from: <http://dx.doi.org/10.1371/journal.pmed.1002158>
53. Basto-Abreu A, Barrientos-Gutiérrez T, Vidaña-Pérez

- D, Arantxa Colchero M, Hernández-F. M, Hernández-Ávila M, et al. Cost-Effectiveness Of The Sugar-Sweetened Beverage Excise Tax In Mexico [Internet]. Vol. 38, Health Affairs. 2019. p. 1824–31. Available from: <http://dx.doi.org/10.1377/hlthaff.2018.05469>
54. Du M, Griecci CF, Kim DD, Cudhea F, Ruan M, Eom H, et al. Cost-Effectiveness of a National Sugar-Sweetened Beverage Tax to Reduce Cancer Burdens and Disparities in the United States [Internet]. Vol. 4, JNCI Cancer Spectrum. 2020. Available from: <http://dx.doi.org/10.1093/jncics/pkaa073>
 55. Lee Y, Mozaffarian D, Sy S, Liu J, Wilde PE, Marklund M, et al. Health Impact and Cost-Effectiveness of Volume, Tiered, and Absolute Sugar Content Sugar-Sweetened Beverage Tax Policies in the United States [Internet]. Vol. 142, Circulation. 2020. p. 523–34. Available from: <http://dx.doi.org/10.1161/circulationaha.119.042956>
 56. Hangoma P, Bulawayo M, Chewe M, Stacey N, Downey L, Chalkidou K, et al. The potential health and revenue effects of a tax on sugar sweetened beverages in Zambia. *BMJ Glob Health* [Internet]. 2020 Apr;5(4). Available from: <http://dx.doi.org/10.1136/bmjgh-2019-001968>
 57. Mounsey S, Veerman L, Jan S, Thow AM. The macroeconomic impacts of diet-related fiscal policy for NCD prevention: A systematic review [Internet]. Vol. 37, Economics & Human Biology. 2020. p. 100854. Available from: <http://dx.doi.org/10.1016/j.ehb.2020.100854>
 58. Asada Y, Pipito AA, Chiqui JF, Taher S, Powell LM. Oakland's Sugar-Sweetened Beverage Tax: Honoring the "Spirit" of the Ordinance Toward Equitable Implementation [Internet]. Vol. 5, Health Equity. 2021. p. 35–41. Available from: <http://dx.doi.org/10.1089/heq.2020.0079>
 59. Long MW, Polacsek M, Bruno P, Giles CM, Ward ZJ, Craddock AL, et al. Cost-Effectiveness Analysis and Stakeholder Evaluation of 2 Obesity Prevention Policies in Maine, US [Internet]. Vol. 51, Journal of Nutrition Education and Behavior. 2019. p. 1177–87. Available from: <http://dx.doi.org/10.1016/j.jneb.2019.07.005>
 60. Sowa PM, Marcin Sowa P, Keller E, Stormon N, Lalloo R, Ford PJ. The impact of a sugar-sweetened beverages tax on oral health and costs of dental care in Australia [Internet]. Vol. 29, European Journal of Public Health. 2019. p. 173–7. Available from: <http://dx.doi.org/10.1093/eurpub/cky087>
 61. World Cancer Research Fund International. Building momentum: lessons on implementing evidence-informed nutrition policy [Internet]. WCRF International. 2020 [cited 2023 Jan 29]. Available from: <http://www.wcrf.org/buildingmomentum>
 62. Practice [Internet]. Johns Hopkins Bloomberg School of Public Health. [cited 2023 Jan 29]. Available from: <http://www.jhsph.edu/departments/health-behavior-and-society/public-health-practice/practice-highlights/advocating-for-sugar-sweetened-beverage-tax.html>
 63. Health Caribbean Coalition. The Implementation of Taxation on Sugar-Sweetened Beverages by the Government of Barbados [Internet]. 2016. Available from: <http://www.healthy-caribbean.org/wp-content/uploads/2016/07/HCC-SSB-Brief-2016.pdf>
 64. Carriedo A, Koon AD, Encarnación LM, Lee K, Smith R, Walls H. The political economy of sugar-sweetened beverage taxation in Latin America: lessons from Mexico, Chile and Colombia [Internet]. Vol. 17, Globalization and Health. 2021. Available from: <http://dx.doi.org/10.1186/s12992-020-00656-2>
 65. Thow AM, Erzse A, Asiki G, Ruhara CM, Ahaibwe G, Ngoma T, et al. Study design: policy landscape analysis for sugar-sweetened beverage taxation in seven sub-Saharan African countries [Internet]. Vol. 14, Global Health Action. 2021. Available from: <http://dx.doi.org/10.1080/16549716.2020.1856469>
 66. Hagenaars LL, Jeurissen PPT, Klazinga NS. 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 [Internet]. Vol. 121, Health Policy. 2017. p. 887–94. Available from: <http://dx.doi.org/10.1016/j.healthpol.2017.06.011>
 67. Alsukait R, Bleich S, Wilde P, Singh G, Foltá S. Sugary drink excise tax policy process and implementation: Case study from Saudi Arabia. *Food Policy*. 2020 Jan;90(101789):101789.
 68. Kingdon JW. Agendas, alternatives, and public policies, update edition, with an epilogue

- on health care. 2nd ed. Upper Saddle River, NJ: Pearson; 2010. 304 p.
69. Kruger P, Karim SA, Tugendhaft A, Goldstein S. An Analysis of the Adoption and Implementation of A Sugar-Sweetened Beverage Tax in South Africa: A Multiple Streams Approach [Internet]. Vol. 7, Health Systems & Reform. 2021. Available from: <http://dx.doi.org/10.1080/23288604.2021.1969721>
 70. Cullinan K, Majija L, Cotter T, Kotov A, Mullin S, Murukutla N. Lessons From South Africa's Campaign for a Tax on Sugary Beverages. Vital Strategies; 2020. Available from: https://www.researchgate.net/profile/Nandita-Murukutla/publication/354658519_Lessons_From_South_Africa's_Campaign_for_a_Tax_on_Sugary_Beverages/
 71. Thow AM, Heywood P, Leeder S, Burns L. The global context for public health nutrition taxation [Internet]. Vol. 14, Public Health Nutrition. 2011. p. 176–86. Available from: <http://dx.doi.org/10.1017/s1368980010002053>
 72. James E, Lajous M, Reich MR. The Politics of Taxes for Health: An Analysis of the Passage of the Sugar-Sweetened Beverage Tax in Mexico [Internet]. Vol. 6, Health Systems & Reform. 2020. p. e1669122. Available from: <http://dx.doi.org/10.1080/23288604.2019.1669122>
 73. Karim SA, Kruger P, Hofman K. Industry strategies in the parliamentary process of adopting a sugar-sweetened beverage tax in South Africa: a systematic mapping [Internet]. Vol. 16, Globalization and Health. 2020. Available from: <http://dx.doi.org/10.1186/s12992-020-00647-3>
 74. Kaltenbrun TA, du Plessis LM, Drimie S. A qualitative analysis of perceptions of various stakeholders on nutrition-sensitive agricultural interventions, including the taxation on sugar-sweetened beverages (SSBs), to improve overall health and nutrition in South Africa. BMC Public Health. 2020 Sep 3;20(1):1342.
 75. Fraser A. Mexico's "Sugar Tax": Space, Markets, Resistance. Ann Assoc Am Geogr. 2018 Nov 2;108(6):1700–14.
 76. Thow AM, Abdool Karim S, Mukanu MM, Ahaibwe G, Wanjohi M, Gaogane L, et al. The political economy of sugar-sweetened beverage taxation: an analysis from seven countries in sub-Saharan Africa. Glob Health Action. 2021 Jan 1;14(1):1909267.
 77. Blecher E, Liber AC, Drope JM, Nguyen B, Stoklosa M. Global Trends in the Affordability of Sugar-Sweetened Beverages, 1990–2016 [Internet]. Vol. 14, Preventing Chronic Disease. 2017. Available from: <http://dx.doi.org/10.5888/pcd14.160406>
 78. Álvarez-Sánchez C, Contento I, Jiménez-Aguilar A, Koch P, Gray HL, Guerra LA, et al. Does the Mexican sugar-sweetened beverage tax have a signaling effect? ENSANUT 2016. PLoS One. 2018 Aug 22;13(8):e0199337.
 79. Powell LM, Andreyeva T, Isgor Z. Distribution of sugar-sweetened beverage sales volume by sugar content in the United States: implications for tiered taxation and tax revenue. J Public Health Policy. 2020 Jun;41(2):125–38.
 80. Hassfurter K. Progress on drinking water, sanitation and hygiene [Internet]. UNICEF DATA. 2017 [cited 2023 Mar 3]. Available from: <https://data.unicef.org/resources/progress-drinking-water-sanitation-hygiene-2017-update-sdg-baselines/>
 81. Ruhara CM, Karim SA, Erzse A, Thow AM, Ntirampeba S, Hofman KJ. Strengthening prevention of nutrition-related non-communicable diseases through sugar-sweetened beverages tax in Rwanda: a policy landscape analysis [Internet]. Vol. 14, Global Health Action. 2021. Available from: <http://dx.doi.org/10.1080/16549716.2021.1883911>
 82. Borges MC, Louzada ML, de Sá TH, Lavery AA, Parra DC, Garzillo JMF, et al. Artificially Sweetened Beverages and the Response to the Global Obesity Crisis. PLoS Med. 2017 Jan;14(1):e1002195.
 83. Vital Strategies. "fool me twice" - an NCD advocacy report [Internet]. Vital Strategies. 2017 [cited 2023 Mar 3]. Available from: <https://www.vitalstrategies.org/resources/fool-twice-ncd-advocacy-report/>
 84. WHO manual on sugar-sweetened beverage taxation policies to promote healthy diets. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/9789240056299>
 85. Fooks GJ, Williams S, Box G, Sacks G. Corporations' use and misuse of evidence to influence health policy: a case study of sugar-sweetened beverage taxation. Global Health. 2019 Sep 25;15(1):56.

86. Ojeda E, Torres C, Carriedo Á, Mialon M, Parekh N, Orozco E. The influence of the sugar-sweetened beverage industry on public policies in Mexico. *Int J Public Health*. 2020 Sep;65(7):1037–44.
87. Karim SA, Erzse A, Thow AM, Amukugo HJ, Ruhara C, Ahaibwe G, et al. The legal feasibility of adopting a sugar-sweetened beverage tax in seven sub-Saharan African countries [Internet]. Vol. 14, *Global Health Action*. 2021. Available from: <http://dx.doi.org/10.1080/16549716.2021.1884358>
88. George A. Not so sweet refrain: sugar-sweetened beverage taxes, industry opposition and harnessing the lessons learned from tobacco control legal challenges. *Health Econ Policy Law*. 2019 Oct;14(4):509–35.
89. Sandoval RC, Roche M, Belausteguigoitia I, Alvarado M, Galicia L, Gomes FS, et al. Excise taxes on sugar-sweetened beverages in Latin America and the Caribbean [Internet]. Vol. 21, *Revista Panamericana de Salud Pública*. 2021. p. 1. Available from: <http://dx.doi.org/10.26633/rpsp.2020.21>
90. Purtle J, Langellier B, Lê-Scherban F. A Case Study of the Philadelphia Sugar-Sweetened Beverage Tax Policymaking Process: Implications for Policy Development and Advocacy. *J Public Health Manag Pract*. 2018 Jan/Feb;24(1):4–8.
91. Dommarco JR, de Cosío TG, García-Chávez C, Colchero M. The Role of Public Nutrition Research Organizations in the Construction, Implementation and Evaluation of Evidence-Based Nutrition Policy: Two National Experiences in Mexico [Internet]. Vol. 11, *Nutrients*. 2019. p. 594. Available from: <http://dx.doi.org/10.3390/nu11030594>
92. Kane RM, Malik VS. Understanding beverage taxation: Perspective on the Philadelphia Beverage Tax's novel approach. *J Public Health Res*. 2019 Mar 11;8(1):1466.
93. Le Bodo Y, Etilé F, Gagnon F, De Wals P. Conditions influencing the adoption of a soda tax for public health: Analysis of the French case (2005–2012). *Food Policy*. 2019 Oct 1;88:101765.
94. Cawley J, Thow AM, Wen K, Frisvold D. The Economics of Taxes on Sugar-Sweetened Beverages: A Review of the Effects on Prices, Sales, Cross-Border Shopping, and Consumption. *Annu Rev Nutr*. 2019 Aug 21;39:317–38.
95. Stacey N, Mudara C, Ng SW, van Walbeek C, Hofman K, Edoka I. Sugar-based beverage taxes and beverage prices: Evidence from South Africa's Health Promotion Levy. *Soc Sci Med*. 2019 Oct;238:112465.
96. Ferretti F, Mariani M. Sugar-sweetened beverage affordability and the prevalence of overweight and obesity in a cross section of countries. *Global Health*. 2019 Apr 18;15(1):30.
97. Paraje G, Pincheira P. Affordability of beer and soft drinks in 15 Latin American countries. *Acessibilidade a cervejas e refrigerantes em 15 países da América Latina*. *Rev Panam Salud Publica*. 2018 Jul 6;42:e49.
98. Alvarado M, Penney TL, Unwin N, Murphy MM, Adams J. Evidence of a health risk “signalling effect” following the introduction of a sugar-sweetened beverage tax [Internet]. Vol. 102, *Food Policy*. 2021. p. 102104. Available from: <http://dx.doi.org/10.1016/j.foodpol.2021.102104>
99. Cornelsen L, Quaife M, Lagarde M, Smith RD. Framing and signalling effects of taxes on sugary drinks: A discrete choice experiment among households in Great Britain. *Health Econ*. 2020 Oct;29(10):1132–47.
100. World Health Organization. WHO report on the global tobacco epidemic, 2017: monitoring tobacco use and prevention policies [Internet]. [cited 2023 Mar 3]. Available from: <https://www.who.int/publications/i/item/9789241512824>
101. World cancer research fund [Internet]. [cited 2023 Mar 3]. Available from: https://policydatabase.wcrf.org/level_one?page=nourishing-level-one
102. Stantcheva, S. Tax Enforcement. Harvard University. Spring 2019
103. Forberger S, Reisch L, Meshkovska B, Lobczowska K, Scheller DA, Wendt J, et al. Sugar-sweetened beverage tax implementation processes: results of a scoping review. *Health Res Policy Syst*. 2022 Mar 24;20(1):33.
104. Ozer C, Bloom D, Martinez Valle A, Banzon E, Mandeville K, Paul J, et al. Health earmarks and health taxes : What do we know? 2020 [cited 2023 Mar 3].
105. Cornelsen L, Smith RD. Viewpoint: Soda taxes – Four questions economists need to address [Internet]. Vol. 74, *Food Policy*. 2018. p. 138–42. Available from: <http://dx.doi.org/10.1016/j.foodpol.2017.12.003>
106. Chriqui JF, Sansone CN, Powell LM. The Sweetened Beverage

- Tax in Cook County, Illinois: Lessons From a Failed Effort. *Am J Public Health*. 2020 Jul;110(7):1009–16.
107. Rojas C, Wang EY. Do Taxes for Soda and Sugary Drinks Work? Scanner Data Evidence from Berkeley and Washington [Internet]. SSRN Electronic Journal. Available from: <http://dx.doi.org/10.2139/ssrn.3041989>
 108. Roche M, Alvarado M, Sandoval RC, Gomes F da S, Paraje G. Comparing taxes as a percentage of sugar-sweetened beverage prices in Latin America and the Caribbean. *Lancet Reg Health Am*. 2022 Jul;11:None.
 109. World Bank. Taxes on Sugar-Sweetened Beverages [Internet]. 2020. Available from: <http://dx.doi.org/10.1596/33969>
 - 109a. Global report on the use of sugar-sweetened beverage taxes, 2023. Geneva: World Health Organization; 2023. Available from: <https://iris.who.int/bitstream/handle/10665/374530/9789240084995-eng.pdf?sequence=1>
 110. Carriedo A, Lock K, Hawkins B. Policy Process And Non-State Actors' Influence On The 2014 Mexican Soda Tax. *Health Policy Plan*. 2020 Oct 1;35(8):941–52.
 111. Fuster M, Burrowes S, Cuadrado C, Velasco Bernal A, Lewis S, McCarthy B, et al. Understanding policy change for obesity prevention: learning from sugar-sweetened beverages taxes in Mexico and Chile. *Health Promot Int*. 2021 Mar 12;36(1):155–64.
 112. Snowdon W, Thow AM. Trade policy and obesity prevention: challenges and innovation in the Pacific Islands [Internet]. Vol. 14, *Obesity Reviews*. 2013. p. 150–8. Available from: <http://dx.doi.org/10.1111/obr.12090>
 113. Murukutla N, Cotter T, Wang S, Cullinan K, Gaston F, Kotov A, et al. Results of a Mass Media Campaign in South Africa to Promote a Sugary Drinks Tax. *Nutrients* [Internet]. 2020 Jun 23;12(6). Available from: <http://dx.doi.org/10.3390/nu12061878>
 114. Moretto N, Kendall E, Whitty J, Byrnes J, Hills AP, Gordon L, et al. Yes, the government should tax soft drinks: findings from a citizens' jury in Australia. *Int J Environ Res Public Health*. 2014 Feb 27;11(3):2456–71.
 115. Comans T, Moretto N, Byrnes J. Public Preferences for the Use of Taxation and Labelling Policy Measures to Combat Obesity in Young Children in Australia. *Int J Environ Res Public Health* [Internet]. 2017 Mar 21;14(3). Available from: <http://dx.doi.org/10.3390/ijerph14030324>
 116. Andreyeva T, Marple K, Marinello S et al. Outcomes following taxation of sugar-sweetened beverages: a systematic review and meta-analysis. *JAMA Network Open*. 2022;5(6):e2215276. doi:10.1001/jamanetworkopen.2022.15276. Available from: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2792842>

