

# Sugar-Sweetened Beverage Taxation – Industry Arguments

## Counter Messages and Evidence

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*This SSB tax evidence sheet contains common opposition arguments against SSB taxation and effective counterarguments backed by the latest research.*

Taxing sugar-sweetened beverages (SSBs) is an effective, evidence-based public health response against rising rates of obesity, diabetes, and heart disease. To date, at least 46 countries, cities, and regions have instituted SSB taxes.<sup>1</sup> SSB taxes decrease SSB consumption and encourage consumers to make healthier beverage choices, which can help to reduce obesity risk and subsequent risk of developing diet-related noncommunicable diseases (NCDs). SSBs impact geographies at a population level, encouraging behavior change through this policy intervention. Countries looking to address growing rates of obesity, type 2 diabetes and heart disease should strongly consider SSB taxes as part of a package of comprehensive healthy food policies. Using [fact sheets provided by the Global Food Research Program at the University of North Carolina, Chapel Hill](#) combined with additional analysis, this document attempts to lay out many industry arguments regarding SSB taxation in one document.

## SSB Taxes: An Overview

SSB taxes are most frequently implemented as a type of excise tax – a tax applied to a specific product and levied on producers or distributors. Excise taxes help to incentivize behavior change because they can have a direct impact on the price of the product. These taxes also reduce administrative burden because rather than being collected from many different retailers, they can be collected directly from a smaller number of producers or distributors. Excise taxes can be applied as a specific tax, an ad valorem tax, or a mix of the two. A specific tax is a fixed amount of tax applied per unit volume, or it may be based on product characteristics, such as sugar content. South Africa and the United Kingdom have specific SSB taxes based on the sugar content of beverages. Ad valorem taxes are value-based taxes. They are applied as a percentage of the total value of the product, such as 20% of a beverage’s retail price. [1] The World Health

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<sup>1</sup> USA (8 local), Canada (Newfoundland Labrador), Bermuda, Mexico, Dominica, Barbados, Panama, Ecuador, Peru, Chile, Norway, Finland, Latvia, United Kingdom, Ireland, Belgium, France, Hungary, Spain (Catalonia), Portugal, St. Helena, Morocco, Mauritius, Seychelles, South Africa, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman, India, Thailand, Malaysia, Maldives, Philippines, Brunei, Cook Islands, Fiji, Palau, French Polynesia, Kiribati, Nauru, Samoa, Tonga, Vanuatu. Source: Popkin, B. M., & Ng, S. W. (2021). Sugar-sweetened beverage taxes: Lessons to date and the future of taxation. *Plos Medicine*, 18(1), e1003412.

Organization (WHO) recommends SSB excise taxes, whether as a specific tax or ad valorem tax, raise SSB prices by at least 20% to have the greatest impact. [2 3]

#### **KEY MESSAGES on SSB TAXES:**

- Sugar consumption is a major contributor to the globally rising rates of obesity and diet related NCDs. Liquid forms of sugars found in sugar-sweetened beverages are particularly harmful to the body. Liquid sugars are less satisfying to the body and have no added nutritional value. When we consume these beverages, we may feel full, but we do not subsequently reduce the amount of food we eat, so total calorie intake increases.
- SSB taxes are an effective public health policy to reduce excess sugar consumption and over time will reduce the burden of obesity and NCDs.
- SSB taxes curb the consumption of sugary drinks and can lead people to choose healthier alternatives.
- Growing evidence from countries with SSB taxes shows that these policies, contrary to industry arguments, do not lower wages, reduce employment, or have any negative impact on the economy.

#### **INDUSTRY ARGUMENTS AGAINST SSB TAXES & EVIDENCE TO COUNTER CLAIMS:**

**Industry claim #1: There is no evidence to demonstrate that SSB taxes will reduce obesity or diet-related NCDs.**

**Industry claim #2: SSB taxes unfairly target the beverage and sugar industries even though many other foods are high in sugar and contribute to obesity.**

**Industry claim #3: Individuals – not governments – should be responsible for their health, including deciding what to eat/drink.**

**Industry claim #4: SSB taxes disproportionately harm poor people.**

**Industry claim #5: SSB taxes will harm the economy and cause job losses.**

**Industry claim #6: SSB taxes give money to ineffective and corrupt government agencies.**

**Industry claim #1: There is no evidence to demonstrate that SSB taxes will reduce obesity or diet-related NCDs.**

*The beverage industry claims:*

- “SSB taxes are not the solution to obesity or type 2 diabetes. Obesity and diabetes rates are not falling in countries where consumption of carbonated soft drinks and fruit drinks have declined.”

*The evidence says:*

- Taxes on SSBs have decreased consumption where policies have been enacted.
- The two major causes of obesity and related health issues are drinking SSBs and consuming excess sugar.

**Counter Messages:**

- Numerous studies show that decreasing consumption of SSBs reduces the risk of obesity, type 2 diabetes, heart disease, and tooth decay.
- SSB taxes impact people at the population level which increases their impact.
- SSB taxes are a fairly recent policy intervention. As of today, researchers have found that SSB taxes in various geographies have led to reduced purchasing of taxed products compared to expected trends (see Table 1). These policies will need to be in place for several years, and adjust for inflation and market trends, in order to reveal reductions in obesity rates and diet-related NCDs.
- Ideally, countries will implement a package of evidence-based healthy food policies (as opposed to a single policy approach), as done in Chile, to reduce the burden of obesity and diet-related NCDs.

**Counter Evidence:**

- **Overconsumption of sugar, especially SSBs, is a major cause of obesity, diabetes and heart disease.** [4 5]
  - Drinking SSBs, regardless of other behaviors, can lead to weight gain, overweight and obesity. There is a clear link between increased SSB consumption and increased caloric intake. Decreasing SSB consumption can reduce the prevalence of obesity and diet-related diseases. Intake of calories from sugary drinks is not compensated for by an equivalent reduction in calories from other foods. When we drink sodas and other sugary drinks, we may feel full, but we do not subsequently reduce the amount of food we eat, so total calorie intake increases. [6-15]
  - Sugars in drinks alter the body’s metabolism, affecting insulin, cholesterol, and metabolites that cause high blood pressure and inflammation. These changes to the body increase the risk of type 2 diabetes, cardiovascular disease, tooth decay, metabolic syndrome, and liver disease. [16-22]
  - Reduced SSB consumption can lower risk factors for cancer. Overweight and obesity are risk factors for 13 of the 15 major types of cancer. [7 17 20 23]

- A cohort study found that consuming two or more glasses per day of soft drinks was associated with a 17% higher risk of death, compared to consumption of less than two glasses per day. One to two glasses of sugar-sweetened soft drinks per day was associated with a 59% higher risk of death from digestive diseases. [24] *More details can be found here: [English](#)*
- **SSB taxes have proven to reduce sugar consumption.**
  - Three years following the implementation of Mexico's sugary drink tax, consumption declined particularly among moderate (1 serving/week) and high consumers (1 serving/day) of SSBs. [25] *More details can be found here: [English](#), [Spanish](#), [Portuguese](#)*
  - Almost one year after Philadelphia's (Pennsylvania, US) implementation of a 1.5 cents per ounce beverage tax, daily consumption of added sugar decreased 22% (15 grams) for children who had consumed about one regular soda daily prior to the tax. Adult consumption of added sugar decreased by approximately 6 grams per day. [26] Philadelphia's SSB tax was also found to reduce the odds of daily regular soda consumption by 40%. [27]
  - A few months following the implementation of Berkeley's (California, US) 1 cent per ounce SSB tax, low-income adults reported a 21% decline in their consumption of SSBs, and an increase in water consumption. Three years after the tax was implemented, consumption was reduced by about a half-drink per day, while water consumption increased by a full drink per day. [28-30] *More details can be found here: [English](#)*
  - An analysis of Seattle's (Washington, US) 1.75 cent per ounce SSB tax found that implementation of the tax led to a small substitution to sweet snacks, such as candy or confections. Calories of sweets sold increased by 4% two years after implementation. This small increase does not offset the larger reductions in sales of SSBs following the tax's implementation (for more information on the reduction in sales, see Table 1). [31]
- **SSB taxes are effective in reducing consumption of SSBs.**
  - A study of low, medium, and high SSB consumers in South Africa found that the SSB tax led to reduced consumption of SSBs among all participants in the year following implementation. [32] *More details can be found here: [English](#)*
  - Two years following the implementation of Thailand's sugar content based SSB tax of 14%, average daily SSB consumption declined by 2.8%. Consumption of carbonated beverages decreased the most, with a 17.7% reduction in average daily consumption. [33 34]
  - Preliminary evaluations of the impact of Mauritius' SSB tax (implemented in 2013 at 10.5% and raised to 21% in 2016) on youth (aged 12 to 17) SSB consumption found that by 2017, the tax reduced the probability that boys will consume any SSBs by 11%. [35]
- **See Appendix Table 1, which outlines the latest evidence on several evaluated country and city level SSB taxes' impact on sales and provides information about the tax rate and structure.**

- A meta-analysis of studies from areas with SSB taxes found that they witnessed a significant reduction in beverage purchases and dietary intake compared to areas without SSB taxes. [36]
- **SSB taxes save lives and save money.**
  - A modeling study estimating the impact of Mexico’s one peso per liter tax on sugary beverages found that Mexico will save almost US\$ 4.00 in healthcare spending for every dollar spent on the tax’s implementation. The study also estimates that over 10 years the SSB tax will lead to over 200,000 fewer cases of obesity and 61,000 fewer cases of type 2 diabetes. Doubling the tax would almost double the cost savings and health impact of this policy. [37] *More details can be found here: [English](#)*
  - The impact of reduced SSB consumption on oral health is one of the first health benefits that can be observed because of SSB taxes. Mexico’s tax has also been estimated to yield immediate reductions in the number of individuals having experienced dental caries (decayed, missing or filled teeth) with a significant decline within the first quarter after the tax was implemented. [38]
  - A modeling study of 11%, 20% and 25% SSB taxes in Thailand found that SSB taxes would lead to reductions in weight and obesity prevalence. The implementation of 11%, 20%, and 25% taxes led to average weight reductions of 0.5 kg, 0.9 kg, and 1.1 kg, and reductions in obesity prevalence of 1.7%, 3.8%, and 4.9%, respectively, in three years. [39]
  - A modeling study of the UK’s SSB tax found that the tax could result in over 19,000 fewer cases of type 2 diabetes per year, and nearly 270,000 fewer decayed, missing, or filled teeth annually. [40]

**Industry claim #2: SSB taxes unfairly target the beverage and sugar industries even though many other foods are high in sugar and contribute to obesity.**

<i>The beverage industry claims:</i>	<i>The evidence says:</i>
<ul style="list-style-type: none"> <li>● “It is shortsighted to target SSBs because all calories are equal.”</li> <li>● “SSBs account for just a portion of calories in the average person’s diet. Obesity is caused by many factors.”</li> </ul>	<ul style="list-style-type: none"> <li>● SSBs promote excess calorie intake which can lead to obesity and type 2 diabetes.</li> <li>● SSBs provide calories your body doesn’t need in a way that is actively harmful to your health.</li> </ul>

**Counter Messages:**

- SSBs are one of the largest contributors of added sugar to diets.

- While some foods might be high in sugar, SSBs are particularly easy to overconsume because they don't make the body feel full and can actually create cravings for more food and drinks.

### Counter Evidence:

- **SSBs are a major contributor of increased calorie intake and, in most countries, is the leading source of added sugar in diets.**
  - Globally, between 1980 and 2008, obesity prevalence rose from 4.8% to 9.8% in men and from 7.9% to 13.8% in women. Increased availability and consumption of ultra-processed foods, including SSBs, is a major driver in the global obesity epidemic. [6 41]
  - In most low- and middle-income countries, daily calories per person from SSBs are increasing. [42]
    - SSB intake in the Latin American region is increasing, and on average, Latin Americans consume very high levels of added sugar, in some cases, more than triple the amount recommended by the WHO. Beverages are the largest source of sugar in the diets of most children, adolescents, and young adults in the region. In the Caribbean and Central America, average daily SSB consumption is particularly high, with 1.9 and 1.6 average daily 8-ounce servings per adult, compared with 0.6 globally. [43-45]
  - The World Health Organization and World Cancer Research Fund recommend that individuals should consume no more than 10% (and ideally less than 5%) of their total calories from added sugar. For an average 2,000 calorie diet, this is 12.5 teaspoons of sugar. On average, a single 335 ml can of soft drink contains around 40g of added sugars, or around 10 teaspoons. [46 47]
    - Based off the global average daily SSB consumption (4.8 ounces per person per day), adults are consuming half of the maximum sugar intake just from SSBs.<sup>2</sup> [45]
- **Calories from liquid sugars are less satisfying and promote excess calorie consumption.**
  - SSBs have no nutritional value. In fact, compared to calories from solid food, liquid calories found in SSBs are less satisfying and won't lead to the same feeling of fullness compared to eating an equal number of solid food calories. Liquid calories from SSBs are often referred to as "empty calories" because they lack nutritional value. Liquid sugars, such as those found in SSBs, are also less satisfying to the body than solid sugars. A comparison study assessing the intake of liquid (soda) versus solid sugars (jellybeans) concluded that consumption of liquid sugars led to a higher overall intake of calories than consumption of sugary foods. [48-50]

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<sup>2</sup> In the Caribbean, where average daily SSB consumption is 1.9 servings, adults are consuming almost 20 teaspoons of sugar per day just from SSBs. In Central America, where average daily SSB consumption is 1.6 servings, adults are consuming over 16 teaspoons on sugar per day just from SSBs. (Singh et al., 2015)

- Liquid sugars found in SSBs are particularly harmful to the body. The liver absorbs liquid sugar more quickly (compared to solid sugars). This alters the body’s metabolism, affecting insulin, cholesterol, and metabolites that cause high blood pressure and inflammation. This can increase risk of type 2 diabetes, cardiovascular disease, tooth decay, and liver disease. [17 18 48 51]

**Industry claim #3: Individuals – not governments – should be responsible for their health, including deciding what to eat/drink.**

<i>The beverage industry claims:</i>	<i>The evidence says:</i>
<ul style="list-style-type: none"> <li>● “Individuals are responsible for their own dietary choices.”</li> <li>● “Weight control is an issue of ‘calories in and calories out.’ Lack of physical activity and bad diets are more to blame than SSBs.”</li> <li>● “Governments should limit their responsibility to educating consumers about proper nutrition and stop interfering with consumer choices.”</li> <li>● “Taxes force everyone to bear the burden of people who make bad decisions and consume too many SSBs.”</li> </ul>	<ul style="list-style-type: none"> <li>● Taxes will not prevent consumers from purchasing SSBs but can decrease the amount and frequency that are purchased.</li> <li>● Governments can promote healthy behaviors by implementing policies that help the population to make the healthy choice the default choice.</li> <li>● The public have shown support for government action through sugary drink taxes, marketing regulations and easy to understand labels.</li> <li>● SSBs provide a high concentration of easily consumed sugar and calories difficult to offset by exercise.</li> </ul>

**Counter Messages:**

- A tax on sugary drinks, which makes sugary drinks more expensive, has been shown to cut consumption of these drinks. Consumers will still have the freedom to choose to buy and consume sugary drinks.
- If people choose to buy fewer sugary drinks, they can spend their savings on other goods and services.
- People with type 2 diabetes and other diet-related diseases lose time and face health and financial impacts. SSB taxes can reduce the burden placed on individuals, families, institutions, and countries.
- While exercise is important component of a healthy lifestyle, overwhelming scientific evidence shows that reducing calorie intake is the most effective way to limit weight gain and encourage weight loss.



- Did you know? It would take 16 minutes of running or one mile of walking to burn the calories from a 8 oz (237ml) can of regular soft drink, or 40 minutes of running and 2.5 miles of walking to offset the average intake of a 20 oz (591 ml) soft drink. [52]
- SSB taxes reduce SSB consumption while incentivizing consumers to consume water (or other healthier alternatives).

### Counter Evidence:

- **SSB taxes change/promote healthier behaviors by encouraging the purchase and consumption of healthier beverages, such as water.**
  - Mexico's SSB tax increased purchases of untaxed beverages by 4% in the first year of the tax, primarily driven by increased purchases of bottled water. Mexico's SSB tax also led to an 11% increase in the purchase of healthier beverages (such as water) among high purchasers of SSBs (households who purchased more than 150.3ml per capita per day of SSBs prior to the implementation of the SSB tax). [53 54] *More details can be found here: [English](#)*
  - Implementation of a 10% tax on SSBs in Barbados led to a 4.3% decrease in weekly SSB sales at a grocery store chain, while sales of non-SSBs (including bottled water, coconut water, juices, and unsweetened milk) increased by 5.2%. Bottled water sales increased by an average of 7.5%. [55]
  - One year after implementation of South Africa's SSB tax, purchases of non-taxed beverages increased by 10%, compared to trends prior to the announcement of the tax. [56] *More details can be found here: [English](#), [Spanish](#), [Portuguese](#)*
  - A modeling study found that in Chile, a price increase of 10% for soft drinks was associated with a 6.3% increase in the consumption of water, indicating that a tax on soft drinks could lead to increases in substitutions for healthier beverages. [57]
  - Within months of the implementation of Berkeley's (California, US) 1 cent per ounce SSB tax, low-income adults reported a 21% decline in their consumption of SSBs, and an increase in water consumption. In the following year, sales of water increased by 15.6%; three years after implementation, consumption of SSBs was reduced by about a half-drink per day, while water consumption increased by a full drink per day. [28-30] *More details can be found here: [English](#)*
  - Tonga's SSB tax led to significant increases in local manufacturing of bottled water. The value of bottled water manufacturing increased by 143%. [58]
- **Changes to diet, rather than physical activity, are more effective at weight loss and reducing risks for NCDs.**
  - Industry actors often try to shift the blame for obesity and NCDs to lack of physical activity rather than diet and their unhealthy products, despite clear evidence of the link between unhealthy foods and drinks, obesity, and NCDs. [59-65] For example:
    - In email exchanges between a vice president of Coca-Cola and several prominent public health figures (all of whom had received funding from the



company) leading up to the Coca-Cola-sponsored 2012 and 2014 International Congresses of Physical Activity and Public Health, Coca-Cola deliberated with public health researchers on what topics to present at the Congresses and pushed for topics focusing on the role of physical activity in NCD prevention, despite also declaring that they had no role in the deliberations about the agenda and topic areas of the Congresses. [59]

- There have been numerous examples of industry in countries around the world pushing for a greater emphasis on physical activity as the solution to NCDs. In South Africa, industry actors, such as the Beverage Association of South Africa and Nestlé South Africa, have partnered with departments in the national government, including the Department of Basic Education, to promote physical activity and physical education programs as the solutions to rising rates of NCDs. Throughout Latin America and the Caribbean, companies such as Coca-Cola, PepsiCo, Nutresa, and Postobón have launched physical activity programs to educate about healthy lifestyles, while also promoting their own products. [60 62 66]
- Multiple systematic reviews exploring the impact of diet and exercise on weight loss have found that calorie reduction is more effective than exercise in reducing body weight. [67-69]
- **Studies have found considerable support for SSB taxes from individuals.**
  - A survey of adults in the United Kingdom found high level of support for the UK SSB tax. 70% of respondents supported the tax, and 71% believed it would be effective. [70]
  - A survey of one thousand adults in Quebec, Canada found that 60% of adults supported the implementation of a SSB tax. [71]
  - A survey of over two thousands adults in Australia found over half of respondents (55%) supported taxing SSBs to help prevent overweight and obesity in the population. [72]
  - A survey of nearly 400 adults in Saudi Arabia found that of surveyed adults who consumed soft drinks, over half (56%) supported an SSB tax.[73]
  - Support for SSB taxes increases when tax revenues are allocated for health promotion programs.
    - A survey of nearly 20,000 adults in the United States, United Kingdom, Canada, Mexico, and Australia found that support for SSB taxes increased by 9% if the revenues from the tax were earmarked to be spent on subsidizing healthy foods. [74]
    - Studies in Canada and Australia found that support for SSB taxes increased by 17% when revenues were reinvested into programs to fight obesity. In Australia, 77% of respondents supported SSB tax revenue being earmarked to fund obesity prevention programs. [71 75]

## Industry claim #4: SSB taxes disproportionately harm poor people.

### *The beverage industry claims:*

- “Taxes on SSBs disproportionately hurt low-income people.”
- “Poorer communities are more likely to rely on SSBs as a cheap energy source”

### *The evidence says:*

- SSB taxes benefit low-income populations by encouraging reduction of SSB consumption.
- Low-income individuals are disproportionately impacted by health conditions linked to overconsumption of SSBs.

### Counter Messages:

- Obesity and type 2 diabetes are more prevalent in low-income populations compared to high income populations.
- Type 2 diabetes and heart disease are costly for families both economically and as a long-term health burden. These costs include loss of productivity, reduction of quality of life, and the need for caregiving resources.
- Lower-income consumers are more responsive to price increases and are more likely to reduce consumption of SSBs than higher income consumers. They can then use the money they save from reducing their SSB purchases in other ways. The benefits of reducing SSB consumption among lower-income populations outweigh costs these populations may face as a result of the tax.

### Counter Evidence:

- **SSB consumption is highest among low-income populations. Low-income populations are also disproportionately impacted by overweight, obesity, and diet-related NCDs.** [76 77]
  - In many countries, lower-income households consume more SSBs, so they suffer more from obesity, diabetes, and other diet-related illnesses. [78-82]
  - The costs of diet-related diseases (treatment costs, loss in productivity, loss of quality of life, family members providing care) are also a heavier burden on lower-income households compared to higher-income households. [83] Moreover lower income households have the highest prevalence of untreated and poorly treated NCDs. [84]
  - Lower-income consumers are more price-responsive, meaning SSB taxes are particularly effective at reducing purchasing and consumption among these groups. [36 85]
  - The beverage industry aggressively markets its products in low-income areas, which contributes to this population’s high levels of consumption. [81 86-88]
- **SSB taxes have progressive health benefits.**

- A systematic review of the effects of an SSB price increase on purchases and consumption found that, for a 20% SSB tax, lower-income households would pay between 0.1% to 1% of their annual household income in SSB taxes (equating to less than US\$ 20 per year) compared to higher-income households paying between 0.03% to 0.6% of their annual household income (or around US\$ 15-17 per year). [89]
- In Brazil, a 10% increase in the price of SSBs was estimated to reduce calories consumed from SSBs by 10% among the poor and by 6.3% among the non-poor. [82 90]
- A study of Mexico’s SSB tax found the low-SES group had the greatest reductions in SSB purchasing. This group also increased their consumption of untaxed (healthier) beverages by 13% two years after the tax’s implementation. [53] *More details can be found here: [English](#)*
- Another study of Mexico’s tax found purchases of unhealthy beverages by low-income households in Mexico reduced more dramatically than purchases by medium- and high-income households. [91]
- Decreases in soft drink beverage expenditures were greater in low-income households compared to high-income households, following Tonga’s SSB tax. [92]
- Before the announcement of South Africa’s SSB tax, lower socioeconomic status households purchased more taxed sugar-sweetened carbonates than higher socioeconomic status households. After the implementation of the tax, lower socioeconomic households experienced larger reductions in purchases. Lower socioeconomic status households purchased on average 8.2 fewer grams of sugar per person per day after the tax’s implementation, compared to a reduction of 2.1 grams for higher socioeconomic status households. [56] *More details can be found here: [English](#), [Spanish](#), [Portuguese](#)*
- A modelling study of the impact of a 20% SSB tax in Australia found that the lowest income populations experience the greatest health gains and highest healthcare costs savings. [93]

**Industry claim #5: SSB taxes will harm the economy and cause job losses.**

<i>The beverage industry claims:</i>	<i>The evidence says:</i>
<ul style="list-style-type: none"> <li>● “Taxes on SSBs will have an adverse economic impact.”</li> <li>● “Taxes will eliminate jobs—in food retail, beverage manufacturing, and in the sugar industry—and in turn hurt struggling families.”</li> </ul>	<ul style="list-style-type: none"> <li>● SSB taxes have not led to job losses. SSBs remain a major profit generator for the beverage industry.</li> <li>● SSB consumption increases the risk of chronic diseases that are a huge burden to taxpayers supporting national health systems.</li> </ul>

### Counter Messages:

- SSB taxes reduce purchases of sugary beverages but have not proven to reduce untaxed beverage purchases or revenues, especially since purchases of healthier beverages, like water, increase when SSBs are taxed.
- There has been no documented link between SSB taxes and job losses in the beverage industry.

### Counter Evidence:

- **Studies from the US, Mexico, and UK have found no significant job losses for the beverage manufacturing or the food retail industry or other negative economic impacts following SSB taxes.** [94]
  - In Berkeley (California, US), food retail store revenues have not declined after the SSB tax, and employment in the food sector increased 7% between July 2014 and June 2016, 15 months following the tax's implementation. [29 95]
  - San Francisco (California, US) saw no impacts on employment in the overall economy, private sector, beverage manufacturing, supermarkets and other grocery stores, convenience stores, or limited-service restaurants two years following the implementation of an SSB tax. [96]
  - Evaluations of Philadelphia's (Pennsylvania, US) SSB tax one and 2.5 years after implementation found no statistically significant changes to unemployment claims for supermarkets, soft drink manufacturers, and other relevant industries following the implementation of the SSB tax, compared to neighboring counties without SSB taxes. [97 98] *More details can be found here: [English](#).*
  - An analysis of the impact of the SSB and nonessential food taxes in Mexico found no decrease in total employment, employment in commercial stores, or national unemployment after the implementation. [99]
  - A simulation of the impact of an SSB tax between 20% and 50% in Brazil found that the tax would increase gross domestic product by between R\$ 2.4 billion (US\$ 460 million) and R\$ 3.8 billion (US\$ 736 million), and would generate between 69,000 and 200,000 jobs, depending on the tax rate. [100]
  - A simulation model of the impact of a 20% SSB tax in Illinois and California found that the implementation of the tax would result in a net employment gain in both states. [94]
  - Despite decreasing the number of high-in sugar beverages sold in the UK, the UK's SSB tax was not associated with a long-term negative impact on the stock valuation of UK beverage manufacturers. [101 102] *More details can be found here: [English](#), [Spanish](#), [Portuguese](#).*

- A systematic review of 11 studies analyzing the economic impact of diet-related fiscal policies (primarily SSB taxes) found no robust evidence for a negative economic impact from the implementation of these policies. [103]
- A study on the impact of a set of Chilean laws that produced a 24.7% reduction in SSB purchases found no reduction in employment or wages paid to manufacturers. [104]
- **SSB consumption contributes to diet-related diseases that lead to productivity losses and pose a huge financial burden to national healthcare systems. SSB taxes can reduce consumption of SSBs and ultimately reduce risk for diet-related diseases, not only providing revenue for economies but also reducing healthcare costs.**
  - A 2018 study estimated that sugary drink consumption in Mexico led to a productivity loss of US\$ 1.4 billion. More than half of this productivity loss is due to premature death (from diet-related diseases). [105] *More details can be found here: [English](#)*
  - The average cost to the United States healthcare system of treating issues linked to SSB consumption is around 10 cents per 12-oz soft drink. [106] *More details can be found here: [English](#)*
  - A study in Australia projected that a 20% tax on SSBs would improve health outcomes and reduce healthcare costs by AU\$ 425 million (US\$ 329 million), and provide productivity gains in the paid (by AU\$ 751 million or US\$ 581 million) and unpaid sectors (by AU\$ 1172 million or US\$ 906 million) of the economy. [107]
  - A study modeling the impact of a 20% SSB tax in South Africa estimated the tax may avert 72,000 premature deaths and save over ZAR 5 billion (US\$ 330 million) in healthcare costs over 20 years. [108]
  - A study modelling the impact of a statewide SSB tax of US\$ 0.02 per ounce in California (US) estimated the tax would save US\$ 1.8 billion in health care costs over 10 years. [109]
- **Obesity and diet-related noncommunicable diseases negatively impact the economy by decreasing worker productivity and increasing job absenteeism. [82]**
  - A study from Mexico estimated productivity losses of US\$ 1.4 billion due to low worker productivity and premature mortality from SSB consumption. [82 105]
  - Studies from the US and other countries show obesity has a profound impact on worker productivity while at work (presenteeism) as well as absenteeism and pre-mature retirement. [110-114]
- **SSB taxes lead to greater sales of untaxed, healthier beverages. This offsets reductions in SSB revenues. Multiple geographies with SSB taxes have seen increases in total beverage sales and revenues for beverage manufacturers, despite decreases in SSB sales.**
  - While the UK SSB tax (2016) led to reductions in the total volume of sugar in beverages purchased per capita per day and in the mean sugar content per beverage, total UK beverage sales rose by 7% in the period from 2015 to 2018. [115] *More details can be found here: [English](#)*

- After the implementation of a SSB tax in France, revenues for beverage manufacturers increased despite a decline in sugary drink consumption. [116]
- Mexico's SSB tax increased purchases of untaxed beverages by 4%, primarily driven by increased purchases of bottled water. Mexico's SSB tax also led to an 11% increase in the purchase of healthier beverages (almost entirely bottled water) among high SSB purchasers (households who purchased more than 150.3ml per capita per day of SSBs prior to the implementation of the SSB tax). [53 54] *More details can be found here:* [English](#)
- In the year following implementation of Berkeley's (California, US) SSB tax, the sales of plain waters increased by 15.6%. [29]
- A modeling study measuring price elasticity found that in Chile, a price increase of 10% for soft drinks was associated with a 6.3% increase in the consumption of water, indicating that a tax on soft drinks could lead to increases in substitutions for healthier beverages. [57]
- Following implementation of a 10% SSB tax in Barbados, non-SSB sales (including bottled water, coconut water, juices, and unsweetened milk) rose by 5.2%, driven by a 7.5% increase in bottled water sales. [55] *More details can be found here:* [English](#)
- Tonga's SSB tax led to significant increases in local manufacturing of bottled water. The value of bottled water manufacturing increased by 143%. [58]
- **Evaluations of other healthy food policies have found no evidence of negative economic impacts as a result of the policies' implementation.**
  - A year and a half following implementation of Chile's Law of Food Labelling and Advertising, a package of evidence-based food policies, researchers found that the law did not negatively impact employment or wages. [117] *More details can be found here:* [English](#), [Spanish](#).
- **Preliminary studies have shown that SSB taxes will not have a disproportionate impact on small retailers.**
  - Estimates of the Philadelphia (Pennsylvania, US) tax's impact on SSB purchases at small stores, such as small grocery stores, gas stations, and convenience stores, and independent retailers were found to be near zero and not statistically significant. The greatest decreases in purchases were estimated to be at large grocery stores and warehouse clubs. [26]
  - In Berkeley, Oakland, and San Francisco (California, US), three cities with SSB taxes, over 100 retailers were evaluated on their perceptions of SSB taxes. When asked how the SSB tax has affected their business, the majority (70%) of both small and large retailers responded with "minimally or no effect." [118]

**Industry claim #6: SSB taxes give money to ineffective and corrupt government agencies.**

*The beverage industry claims:*

- “SSB taxes just line the pockets of wasteful, corrupt government agencies and officials.”

*The evidence says:*

- SSB taxes can provide critical resources for public health programs to combat accelerating health crises like obesity that impact all citizens.

**Counter Messages:**

- Revenues from taxed SSBs can be reinvested into programs to support healthy eating and other social needs.
- Investment in public health and education programs is necessary to reduce the enormous future costs of obesity and diet-related diseases.
- As economies work to recover from the COVID-19 pandemic, SSB taxes can generate much needed revenue for governments, in addition to improving public health.

**Counter Evidence:**

- **Revenues raised by SSB taxes can be reinvested into programs to improve public health, such as subsidizing drinking water infrastructure and healthy meals in schools or providing funding for health communications campaigns. [82]**
  - In the Philippines, significant portions of the revenues from taxes on alcohol, tobacco, and sugar-sweetened beverages are earmarked to provide funding for the country’s National Health Insurance subsidies and for health facility upgrades. This earmarking has provided a sustained and significant source of revenue, tripling resources for health in 5 years (2013 – 2018). [119]
  - Revenues from Thailand’s tax on tobacco and alcohol products are used for the Thai Health Promotion Foundation, which uses the revenues to fund programs dedicated to the prevention of tobacco use, unsafe alcohol use, and unsafe driving. [119]
  - Revenue from the UK’s SSB tax will be used to promote children’s health, including funding sport and physical education programs and school breakfast programs in schools. [120]
  - US\$ 2 million of Berkeley’s (California, US) SSB tax revenue has been allocated for programs designed to improve nutrition. [121]
  - In the United States, nearly all cities with SSB taxes have invested tax revenues in programs that explicitly benefit low-income and other marginalized populations. [122]
    - Of the over US\$ 133 million in SSB tax revenue collected between 2018 and 2021, 85% (US\$ 113 million) were used to support work and programs in communities that experience health inequities, discrimination, and exclusion. [123]



- In the United States, SSB taxes are also being used as a community engagement tool for those who are most impacted by the harmful health effects of SSBs and to counter the perception that these taxes unfairly impact lower-income communities.
  - For example, in San Francisco (California), the Shape UP coalition was launched to help mobilize community members to advocate for policy change. The coalition's work included exploring attitudes towards SSB regulations among the communities most affected by SSB intake and heavily targeted by beverage industry marketing. This enabled a community voice to be involved in policy deliberations, and highlighted not only the need for regulations to reduce SSB intake among this community, but also a need for greater availability of free, clean drinking water. This work supported the passage of San Francisco's SSB tax, led to the school district and multiple health care facilities in the region prohibiting the sale or distribution of SSBs, and led to a partnership with the San Francisco Public Utilities Commission to deploy new filtered tap water stations at public venues in low-income communities. [124]
- **SSB taxes have been used to fund essential programs.**
  - Seattle's (Washington, US) soda tax revenues are earmarked to support education and programs that promote healthy diets for low-income communities. [125 126]
  - Philadelphia's (Pennsylvania, US) sugary beverage tax supports pre-Kindergarten, community schools, and improvements to parks, recreation centers, and libraries. Between July 2017 and March 2020, this tax will raise US\$ 244.2 million in revenue, of which US\$ 93.3 million will go to pre-Kindergarten education and community schools. [97]
- **As economies work to recover from the COVID-19 pandemic, SSB taxes can generate much needed revenue for governments, in addition to improving public health.**
  - US\$ 5 million of revenue from Seattle's (Washington, US) SSB tax were used to provide supermarket vouchers to over 6,000 Seattle families in response to the COVID-19 crisis. [127]
  - US\$ 1.65 million in funds from San Francisco's (California, US) Sugary Drinks Distributor Tax were used to provide emergency food relief for people who are struggling to afford food due to COVID-19. [128]
  - In India, revenues from a duty on tobacco are earmarked for the National Disaster Response Fund. These funds have been used for medical supplies needed for COVID-19. [119]

**For more information on SSB taxes, please consult the following resources:**

- **Resources page from the Global Food Research Program at the University of North Carolina, Chapel Hill**
  - [Fact sheet: Why Tax Sugary Drinks?](#)
  - [Fact sheet: Taxation and Price of Sugary Drinks: Countering Industry Claims](#)

- **Resources created by the Pan American Health Organization**
  - [Sugar-sweetened beverage taxation in the Region of the Americas](#)
- **Research alerts created by the Food Policy Program at the Global Health Advocacy Incubator**
  - **Caribbean:**
    - SSB tax in Barbados reduced purchases of sugary beverages and increased purchases of non-SSBs ([English](#))
  - **Latin America:**
    - Comprehensive Chilean policy package significantly reduced purchases of sugary beverages ([English](#))
    - No negative economic impact from Chile's food policy law: jobs and wages not reduced ([English](#), [Spanish](#))
    - High consumers of sugar-sweetened beverages in Mexico reduced purchases of sugary beverages after implementation of tax ([English](#))
    - Productivity loss from diseases associated with sugary drink consumption in Mexico creates significant economic burden ([English](#))
    - Sugary drinks tax in Mexico helped reduce consumption of soft drinks after just 3 years ([English](#), [Spanish](#), [Portuguese](#))
    - Mexican tax on sugar-sweetened beverages is cost-effective and will improve health ([English](#))
  - **South Africa:**
    - South Africa's food industry deploys a variety of strategies to derail public health policies ([English](#), [Spanish](#), [Portuguese](#))
    - South African study shows first evidence of positive impact of sugary drinks tax on South Africans' dietary behaviors ([English](#))
    - South Africa's sugary drink tax successfully raises price of SSBs ([English](#))
    - Misleading evidence at heart of beverage industry arguments against SSB taxes ([English](#))
    - Industry used economic arguments and misused evidence during South Africa's sugary drinks tax policymaking process ([English](#))
    - New study indicates South Africa tax on sugary drinks is working ([English](#), [Spanish](#), [Portuguese](#))
  - **United Kingdom:**
    - UK tax on sugar-sweetened beverages accelerated reductions in overall sugar content ([English](#))
    - UK tax on sugary beverages decreased number of high-in-sugar beverages and did not hurt UK manufacturers' value in the stock market ([English](#), [Spanish](#), [Portuguese](#))
  - **United States:**
    - The societal benefit of taxes on SSBs ([English](#))

- One year later: Philadelphia, Pennsylvania Beverage Tax significantly reduced sales of sugary drinks ([English](#))
- Debunking employment claims one year after Philadelphia's beverage tax ([English](#))
- Reduction in SSB consumption sustained over 3 years after implementation of tax in Berkeley ([English](#))
- Seattle SSB tax significantly reduced purchases of SSBs ([English](#), [Spanish](#), [Portuguese](#))
- **Global:**
  - How the tobacco industry hooked kids on sugary drinks ([English](#))
  - High consumption of both 100% fruit juice and SSBs is associated with increased risk of death ([English](#))
  - Large study links high consumption of soft drinks with increased risk of death ([English](#))

Appendix

Table 1: Tax rate and effectiveness (reduced sales) by geography

Country/ geography	Tax rate and relevant details	Impact
Barbados	<ul style="list-style-type: none"> <li>• 10% tax on SSBs, including carbonated soft drinks, juice drinks, sports drinks, fruit juices</li> <li>• Excludes bottled waters, 100% juices, coconut water, unsweetened milk and powdered drink</li> <li>• Implemented in 2015</li> </ul>	<p>By October 2016, one year after implementation, the tax:</p> <ol style="list-style-type: none"> <li>1) Decreased weekly SSB grocery store sales by 4.3%</li> <li>2) Increased sales of non-SSBs by 5.2%. [55]</li> </ol>
Berkeley (California, United States)	<ul style="list-style-type: none"> <li>• 1 cent per ounce tax on beverages with caloric sweeteners</li> <li>• Excludes dairy drinks, diet sodas, fruit juice</li> <li>• Implemented in 2015</li> </ul>	<p>By 2016, one year following implementation, the volume of SSBs sold decreased by 10%. [29 30]</p>
Catalonia (Spain)	<p>Sugar-content based tax of:</p> <ul style="list-style-type: none"> <li>• 0.08 Euro per liter for SSBs containing 5-8 grams of sugar per 100ml</li> <li>• 0.12 Euro for SSBs containing more than 8g of sugar per 100ml</li> <li>• Includes soda drinks, fruit juices, sports drinks, teas and coffees, energetic drinks, sweetened milks, and flavored waters</li> <li>• Excludes natural fruit juices, fermented milk drinks, and drinkable yogurts</li> <li>• Implemented in 2017 [129 130]</li> </ul>	<p>Within the first year of implementation, the sale of taxed beverages decreased 7.7% at one major supermarket chain, representing 10% of the Catalan market share. [131]</p> <p>In 2019, two years after implementation, the tax reduced regular cola purchases by 12.1%. [130]</p>
Chile	<p>A tiered tax of:</p> <ul style="list-style-type: none"> <li>• 18% on SSBs containing at least 6.25 grams of sugar per 100ml</li> </ul>	<p>By the end of 2015, one year following the 3% tax increase (from 15% to 18%), the tax led to a:</p>

	<ul style="list-style-type: none"> <li>• 10% on SSBs with less than 6.25 grams of sugar per 100ml</li> <li>• Includes all non-alcoholic drinks with added sweeteners</li> <li>• Excludes 100% fruit juices and dairy-based beverages</li> <li>• These tax rates were implemented in October 2014, increasing the tax rate of SSBs containing high amounts of sugar by 3% (from 15% to 18%)</li> </ul>	<ol style="list-style-type: none"> <li>1) 3.4% decrease in the volume, and</li> <li>2) 4.0% decrease in calories of monthly households purchases of beverages containing at least 6.25 g of sugar per 100ml [132]</li> </ol>
Cook County (Illinois, United States)	<ul style="list-style-type: none"> <li>• 1 cent per ounce tax on SSBs and ASBs</li> <li>• Included sodas, sweetened teas and coffees, energy and sports drinks, and fruit drinks</li> <li>• Excluded 100% juices, milk, and milk substitutes</li> <li>• Implemented in August 2017 [133 134]</li> </ul>	<ol style="list-style-type: none"> <li>1) From its implementation in August 2017 to December 2017, the tax led to a 25.7% decrease in the volume of taxed beverages sold (including both SSB and ASB).</li> <li>2) Following the repeal of the tax in December 2017, volume sold returned to pre-tax levels. [134]</li> </ol>
Mexico	<ul style="list-style-type: none"> <li>• 1 peso per liter (~10% price increase) tax on all nonalcoholic beverages with added sugar</li> <li>• Excludes 100% juices and artificially sweetened beverages</li> <li>• Implemented in January 2014</li> </ul>	<ol style="list-style-type: none"> <li>1) Reduced purchases by 6% by the end of 2014, the first year of implementation [54]</li> <li>2) Reduced purchases by 10% by the end of 2015, 2 years after implementation [85]</li> <li>3) Sustained its impact and decreased purchases by another 2% during the third year of implementation [135]</li> </ol>
Philadelphia (Pennsylvania, United States)	<ul style="list-style-type: none"> <li>• 1.5 cents per ounce tax on sugar-sweetened and artificially sweetened beverages (ASBs)</li> <li>• Excludes products containing more than 50% milk and 100% fruit juices</li> </ul>	<ol style="list-style-type: none"> <li>1) By December 2017, one year following implementation, purchases of taxed beverages (both SSBs and ASBs) decreased by 38%. [136]</li> </ol>

	<ul style="list-style-type: none"> <li>Implemented in January 2017 [27 136]</li> </ul>	<p>2) Two years following implementation, taxed beverages purchased at independent stores in Philadelphia decreased by 42%. [137]</p>
Oakland (California, United States)	<ul style="list-style-type: none"> <li>1 cent per ounce on SSBs</li> <li>Excludes products with 25 calories or less per 12 ounces and milk products</li> <li>Implemented in July 2017</li> </ul>	<p>One year following implementation, volume of taxed SSBs sold decreased by 8%. [138]</p>
Saudi Arabia	<ul style="list-style-type: none"> <li>50% tax on carbonated beverages</li> <li>Includes any drink containing dissolved carbon dioxide gas</li> <li>100% tax on energy drinks</li> <li>Implemented in June 2017</li> </ul>	<p>By 2018, six months following implementation, the tax led to a 33% reduction in carbonated drink volume sales [139]</p>
Seattle (Washington, United States)	<ul style="list-style-type: none"> <li>1.75 cent per ounce tax on SSBs with at least 40 calories per 12 ounces</li> <li>Excludes diet sodas, milk products, 100% fruit juices, and powders and concentrates [140]</li> <li>Implemented in January 2018</li> </ul>	<p>In the first year of implementation, the volume sold of all taxed beverages fell by 22%. Sales of soda fell by 29%. [141]</p>
South Africa	<ul style="list-style-type: none"> <li>Sugar-content based tax of 2.21 cents ZAR for each gram of sugar in a beverage that contains over 4g sugar per 100mL.</li> <li>Excludes fruit juices</li> <li>Implemented in 2018</li> </ul>	<p>Compared to expected trends prior to the implementation of the tax, by March 2019, one year after implementation, there was a:</p> <ol style="list-style-type: none"> <li>51% reduction in sugar, a 52% reduction in calories;</li> <li>29% reduction in volume of beverages purchased per person per day after the tax was implemented. [56]</li> </ol> <p><i>More details on this study can be found here: <a href="#">English</a>, <a href="#">Spanish</a>, <a href="#">Portuguese</a></i></p>

<p>United Kingdom</p>	<p>Sugar-content based tax of:</p> <ul style="list-style-type: none"> <li>• £0.24 per liter for products containing more than 8g sugar per 100ml,</li> <li>• £0.18 per liter for 5-8g sugar per 100ml,</li> <li>• Products containing less than 5g of sugar per 100ml are exempt</li> <li>• Includes soft drinks and excludes fruit juices and milk-based drink</li> <li>• Implemented in 2018</li> </ul>	<p>By 2018, two years after the tax's announcement and months after its implementation:</p> <p>1) The volume of sales of soft drinks subject to the tax fell by 30%. [115]</p> <p><i>More details on this study can be found here: <a href="#">English</a></i></p>
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