# Critique on a Sugar Tax Policy

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**Abstract:** This article discusses the proposal and responses to sugar taxation, as well as techniques for reducing sugar-sweetened beverage (SSB) consumption. Leveraging the theory of changes, implementing a sugar tax is demonstrated to lower SSB consumption, particularly among low-income groups, so that improving public health. This interpretation is supported by evidence from Mexico, Chile, and the United Kingdom following the imposition of a sugar tax. This article also assesses unexpected outcomes in Berkeley and Mexico following the implementation of sugar taxes, providing insight into the efficacy of these policies. Future strategies to reducing the consumption of sugar have been proposed with a focus on the significance of public health measures other than taxation.

*Keywords:* Sugar Taxation, Sugar-Sweetened Beverages, Public Health Intervention, Policy Analysis

#### 1. Introduction

Sugar-sweetened beverages (SSBs) are drinks with caloric sweeteners [1] that may lead to various diseases and there is evidence suggests the necessity for upstream policy actions [2]. The issue of sugar consumption and its impact on public health has been a topic of significant debate in recent years. Sugar-sweetened beverages (SSBs) are known to contribute to various health issues such as obesity, type 2 diabetes, and cardiovascular disease. In response to this growing concern, many countries have implemented sugar tax policies as a means of reducing SSB consumption and improving public health outcomes. This paper aims to provide a comprehensive analysis of the proposal and responses to sugar taxation, as well as explore the effectiveness of these policies in different contexts. The paper will first discuss the theory of changes proposed by Hawkes et al., which suggests that the implementation of a sugar tax can lead to a decline in SSB consumption, particularly among low-income groups. This theory will be supported by evidence from countries such as Mexico, Chile, and the United Kingdom, where sugar taxes have been successfully implemented. The paper will also assess unexpected outcomes in Berkeley and Mexico following the introduction of sugar taxes, providing insight into the efficacy of these policies. Furthermore, the paper will examine the various arguments for and against sugar taxes, exploring their potential impact on consumer behavior, pricing strategies, and public health outcomes. By analyzing the experiences of different countries with sugar taxation, the paper aims to provide valuable insights into the effectiveness of these policies as a public health intervention.

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## 2. Summary

According to the theory of changes proposed by Hawkes, Corinna, et al., the implementation of sugar tax will result in a decline in SSBs consumption, especially among low-income groups. Therefore, the sugar tax will provide new vitality on public health. This report utilizes variations in SSB in Mexico, Chile and the UK following the enactment of sugar taxes as support. Then assesses the unexpected outcomes of Berkeley and Mexico's introduction of sugar taxes. Also, evaluates the effectiveness of sugar taxes while showing the author's concepts and suggestions.

## 3. Critique

## 3.1. Theory of Changes

Producers and distributors are forced to make decisions by an implemented sugar tax policy [3]: specifications remain unchanged while prices increase, or prices remain unchanged while specifications shrink. In either case, part of the impact of the policy is indirectly passed on through producers to consumers. Therefore, high prices tempt people to forgo the beverages they might otherwise choose which lowers the desire of parents (families) and teachers (schools) to buy sugary drinks. Caregivers and parents potentially exert a major impact on children's food preferences through the foods they offer, which may promote the formation of wholesome eating habits. Information like advertising, media and education can also affect consumer food preferences. As brand preferences can last over time and space, so the implementation of the sugar tax policy has altered the environment in which individuals acquire information and encouraged them to switch from costly sugary drinks to cheaper drinks with no/less added sugar. Therefore, the implementation of the sugar tax policy is particularly apparent and effective for individuals to change the long-term behavior on SSBs consumption. Sugar taxes influence the processes in the food system, such as production, processing, distribution and marketing, which result in higher costs for consumers, so people with low incomes are more likely to alter their purchasing habits in reaction to sugar taxes. In conclusion, sugar taxes directly raise the cost of consuming sugar-sweetened beverages, affecting the costs, presentation(choice architecture) and availability of SSBs, then indirectly encourage consumers to reassess and cut back on SSB consumption by looking for sugar-free or low-sugar substitutes. These modify their eating habits, improve BMI and health status, which then reinforce consumers' affirmation of their purchase behavior, triggering systemic dynamic positive feedback in the food system. As a result, manufacturers take steps to reduce their sugar content by reformulation, and thus to promote the development of the public health system.

## 3.2. Make the case for sugar taxes

High sugar consumption raises the risk of a number of diseases or health issues, including obesity, tooth decay, type 2 diabetes [4] and cardiovascular disease [1]. So SSB through taxing has been advocated as a public health intervention to lower calorie intake and population weight, address the rising burden of obesity and diabetes [5] as well as improve diets and prevent noncommunicable diseases [6].

## 3.3. Cases of implementing the sugar taxes

#### **3.3.1. Mexico**

The Mexican government placed the SSB tax on all sugar-added beverages in January 2014, which resulted in a 10% increase in shelf-price. A study used purchasing data to estimate that the levy caused an average 6.1% decrease in SSB consumption [7]. The evidence of Mexico indicates that taxes are

effective at reducing SSBs consumption and resulting in significant reductions in weight and diabetes [5].

#### 3.3.2. Chile

An observational study conducted by Nakamura et al. found that, although the tax incentive is relatively modest, there is evidence that purchasing of SSBs with higher sugar contents has decreased among upper socioeconomic segments of the population [8].

#### 3.3.3. The UK

The enactment of a sugar tax of the SSBs in 2018, having a banding structure [9]. The impact of the policy intervention is probably greatest on those who are segments classified as less affluent as they tend to be more sensitive to price and are limiting their expenditures of SSBs to a larger extent than more wealthy consumers [10].

## 3.4. Against the sugar taxes

## 3.4.1. Cases of Berkeley, California and Mexico

The demand curve in Berkeley would be more elastic if cross-border shopping could be used to avoid a city-level tax [11]. Although SSB sales decreased in Berkeley, they grew in the surrounding area, indicating that taxes can increase consumption outside of the taxed district where goods are less expensive [12].

Another factor is the passing-through of taxes on SSBs to retail prices. Berkeley merchants may pass on less of the tax to consumers out of a concern of losing sales. However, research conducted within Mexico compared pricing before and after the tax and found that it was overshifted — a 9% tax increased caloric beverage prices by 12% [13].

#### 3.5. Effectiveness

The consumer's substitution choices and consumption are affected by the decisions and actions of the producers and the government, which mutually determine the effectiveness of sugar taxes. Overwhelming data indicated that sugar taxes are an effective strategy for decreasing the general consumption of SSBs [14]. SSB taxation might be more effective at inducing behavioral changes in adults, according to accumulating data. Furthermore, sugar taxes are sometimes criticized as being regressive, disproportionately affecting low-income people, therefore consumers in lower socioeconomic brackets typically benefit more from SSB taxation in terms of their health [14].

#### 4. Conclusion

In conclusion, the implementation of sugar tax policies has shown promising results in reducing SSB consumption and improving public health outcomes in various countries. The SSB tax is anticipated to have two effects: to stimulate industry reformulation, thereby decreasing the amount of sugar in the beverages supply, and to motivate consumers to buy less of these drinks [12]. The theory of changes proposed by Hawkes et al. has provided a valuable framework for understanding how sugar taxes can influence consumer behavior and ultimately lead to healthier dietary choices as SSB consumers reported making fewer deliberate attempts to eat healthily than non-SSB consumers, which raises significant concerns about the efficacy of soft intervention strategies like depending solely on industry self-regulation [15].

Evidence from Mexico, Chile, and the United Kingdom supports the effectiveness of sugar taxes in reducing SSB consumption and addressing the growing burden of obesity and diabetes. While there are some challenges and criticisms associated with sugar taxes, such as potential cross-border shopping and passing through of taxes to retail prices, the overall impact of these policies on public health has been positive. Additionally, a sugar tax is merely one potential element of a public strategy to lower overall sugar consumption. Information which would encourage parents and individual consumers to choose more healthful beverages might come first. It need a front-of-pack labeling system for SSBs that is easily visible and understandable by consumers for all SSB kinds. Also, there should be more campaigns to educate children and their parents about the accumulated and possibly irreversible health hazards associated with consuming excessively sugar [4]. Moving forward, it is important to continue exploring alternative strategies for reducing sugar consumption and promoting healthy diets, while also considering the potential unintended consequences of sugar tax policies. By leveraging the lessons learned from different countries' experiences with sugar taxation, policymakers can develop more effective and sustainable interventions to improve public health outcomes and combat the global epidemic of diet-related diseases.

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