



**POLICY
BRIEF
#26**

Carbonated Beverages Industry in India: Tax Policy to Promote Growth, Innovation and Investment

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Carbonated Beverages Industry in India: Tax Policy to Promote Growth, Innovation and Investment
by Arpita Mukherjee, Eshana Mukherjee and Aryan Bisoi

Foreword

In recent years, the global conversation surrounding public health and nutrition has brought to light the pressing issue of dietary choices and their long-term impacts on well-being. One particular area of concern is the taxation of sugary beverages, a policy aimed at mitigating the health risks associated with excessive sugar consumption. There is no scientific basis in taxation of carbonated beverages.

The beverages industry in India has attracted over INR 50,000 crores of investment in recent years. The market size of the non-alcoholic, ready-to-drink segment is poised to breach the INR1.5 lakh crore mark by 2030. The combined value added by the industry from downstream and upstream activities is estimated at INR80,000 crores. With a huge chunk of the capital investment in the industry directed towards the creation and expansion of manufacturing and bottling facilities across various states in India in Tier 2 and Tier 3 cities, the industry employs tens of thousands and holds the potential to employ more. The sector is a key contributor to the 'sunrise' food processing industry and a backbone of the network of *kirana* shops and retailers in the country. An excessively high GST of 40 per cent is hurting the interests of employment, investment, and entrepreneurship in this sector.

This policy brief is an evidence-based report that delves into the critical issue of designing a robust sugar-based GST for the beverage sector. It presents the trends and growth in the sector in India; discusses global best practices in taxing sugar-sweetened beverages; examines the Indian tax regime in the light of such global best practices and suggests ways to address the twin objectives of limiting the intake of added sugars in beverages and optimising the tax revenue collection. A well-designed tax policy in this regard should be able to achieve positive health outcomes, incentivise product reformulations, and lead to an uptick in investment, jobs, and overall economic growth. As we jointly navigate the complexities of tax policy and public health policy, it is imperative to understand the nuances of beverage taxation and its effectiveness in combating health issues.

The distinction between carbonated and sugar-sweetened beverages is not merely academic; it has real-world implications for the efficacy of health interventions. Sugar in beverages is not the only reason for growing non-communicable diseases in India and taxes alone does not deter consumption, unless other options like low-sugar beverages are available. By focusing taxation on carbonated drinks, irrespective of their sugar content, policymakers may inadvertently miss the opportunity to address the root causes of the health issues, effectively.

This brief aims to shed light on the discrepancies between current taxation practices and their intended health outcomes. Through a comprehensive analysis of beverage consumption patterns, health impacts, and policy implications, it provides a compelling argument for revising taxation strategies to better align with public health objectives.

As we advance in our efforts to create a healthier society, it is crucial that our policies reflect the best available evidence and target the most significant contributors to health problems. By addressing the issues outlined in this policy brief, we can move towards more effective and equitable public health policies that truly address the root causes of obesity and related diseases, ultimately leading to a healthier future for all.

Dr John Joseph, IRS (Retd.)

Former Chairman, Central Board of Indirect Taxes and Customs (CBIC)
Strategic Advisor, Deepstrat, New Delhi

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This study is a follow-up on the study from our earlier studies titled “Contribution of Non-alcoholic Beverage Sector to Indian Economic Growth & Atmanirbhar Bharat” for the IBA and “Designing Fiscal Measures for Sugar Sweetened Beverages (SSBs) to meet SDGs in India” for the World Health Organization (WHO). We would like to thank all experts who participated in the discussions jointly organised by ICRIER and the WHO on November 23, 2023, in New Delhi, and shared their valuable inputs. The key findings of the study “Designing Fiscal Measures for Sugar Sweetened Beverages (SSBs) to meet SDGs in India” was presented to Tax Policy Research Unit (TPRU), under the Department of Revenue, Ministry of Finance, Government of India on November 30, 2023. We have attempted to address the queries and inputs from the consultation in this policy brief.

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Abstract

Carbonated soft drinks (CSDs) are a key component of the processed food and beverages industry. In 2023, over 44 per cent of the total worldwide revenue of beverages was generated by the CSD sector. The Indian CSD market is relatively small; it generated revenue worth USD18.25 billion in 2022, and lags behind when compared to the sector in many other developing countries such as Thailand or the Philippines. The potential of the CSDs sector to contribute to employment and investment in India remains largely unexplored.

Globally, high sugar carbonated beverages have come under policy scanner due to rising health-concerns related to consumption of sugar and the potential link to non-communicable diseases such as diabetes, obesity and cardiovascular diseases. With growing consumer awareness and an increasing number of countries implementing a layered-sugar tax on such beverages, there is a growing market for reformulated low-sugar beverages. However, in the case of India, all types of carbonated beverages – ranging from low-sugar and fruit-based and/or flavoured carbonated drinks to zero-sugar aerated water are taxed at 28 per cent GST plus a compensation cess of 12 per cent, which totals to a 40 per cent tax. The high taxes on low and zero-sugar CSDs products are not aligned with the recommendations of the World Health Organization (WHO) or health experts/nutritionists in India, who support the concept of a layered-sugar tax. Cross-country comparative data of more than 120 countries world-wide shows that India has one of the highest taxes for CSDs, and taxes are not linked to healthy options. India also has the highest number of diabetic cases. Yet, there is no policy discussion on linking taxes to healthy CSDs in the country. Therefore, despite government initiatives like ‘Make in India’ and ‘Aatmanirbhar Bharat’, the CSDs segment is not getting enough investments in innovative products. Due to this, start-ups are unable to scale-up, while the consumers are looking for imported products, which they will have access to as the country opens up the sector under trade agreements.

To help design a robust sugar-based GST for the CSDs sector using data and evidence, this policy brief presents the trends and growth in sales across different CSDs product sub-categories; presents global best practices in designing layered-sugar taxes and evaluates the Indian tax regime; examines the impact of the high GST and recommends a layered-sugar tax that can help increase government GST collections, limit the intake of added sugars in beverages/support positive health outcomes and incentivise product reformulations leading to the production of healthier beverages, more investment, job creation and the overall growth of the sector.

Keywords: *Carbonated Soft Drinks (CSDs); India; GST; NARTD Industry; Sugar-Based Taxes*

JEL classification: *H25; L66; M38.*

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List of Abbreviations

ASI	Annual Survey of Industries	ICRIER	Indian Council for Research on International Economic Relations
CAGR	Compounded Annual Growth Rate		
CBIC	Central Board of Indirect Taxes and Customs	IDA	Indian Dietetic Association
CFD	Carbonated Beverages of Fruit Drink	IMF	International Monetary Fund
CNNS	Comprehensive National Nutrition Survey	JECFA	Joint Expert Committee of Food Additives
CSD	Carbonated Soft Drink	MOFPI	Ministry of Food Processing Industries
CVD	Cardiovascular Disease	MoHFW	Ministry of Health and Family Welfare
DOAJ	Directory of Open Access Journals	MoWCD	Ministry of Women and Child Development
ECSIP	European Competitiveness and Sustainable Industrial Policy	MRSI	Market Research Society of India
EFTA	European Free Trade Agreement	NARTD	Non-Alcoholic Ready-To-Drink
FAO	Food and Agriculture Organization	NCD	Non-Communicable Disease
FOPNL	Front-of-Pack Nutrition Labelling	NLM	Nuts, Legumes and Millets
FSSAI	Food Safety and Standards Authority of India	PHE	Public Health England
FV	Fruit and Vegetable	PLI	Production Linked Incentives
GST	Goods and Services Tax	PPP	Purchasing Power Parity
HFCS	high fructose corn syrup	RBIL	Red Bull India Private Limited
IBA	Indian Beverage Association	RIL	Reliance Industries Limited
ICMR-INDIAB	Indian Council of Medical Research – India Diabetes	SDIL	Soft Drinks Industry Levy
ICMR-NIN	Indian Council of Medical Research – National Institute of Nutrition	SEC	Socio-Economic Classification
		SSB	Sugar Sweetened Beverage
		TEPA	Trade and Economic Partnership Agreement
		TPRU	Tax Policy Research Unit
		UAE	United Arab Emirates
		UK	United Kingdom
		USA	United States of America
		VAT	Value Added Tax
		WHO	World Health Organization

Table of Content

1. Introduction.....	1
1.1 Objective	5
1.2 Definition of Carbonated Beverages	5
1.3 Methodology and Data Sources.....	6
1.4 Layout.....	8
2. Carbonated Beverages and Taxes: India vis-à-vis Other Countries	8
2.1 Global Overview and Some Best Practices	10
2.2 India's Current Tax Structure.....	13
3. India's Carbonated Beverage Sector: An Overview	20
3.1 Contribution of Sector to the Indian Economy	20
3.2 Domestic Carbonated Beverages Market Trends.....	23
3.3 Consumption Trends by Socio-economic Classes	27
4. Recommendations and the Way Forward	29
References	32
Appendix A.....	40

List of Tables

Table 1.1: Top 10 Markets with Highest Select CSD Revenue in 2023	2
Table 1.3: Euromonitor Sub-Sub-categories According to the Recommended Sugar Content by WHO SEAR NPM 2017	7
Table 2.1: Non-Alcoholic Beverages and GST Rates: Some Examples	15
Table 3.1: Share of Carbonated Beverage Sub-categories Over the Years: Retail Sales Value	25
Table 3.2: Changes in Sugar Content of Beverages Over the Years	26
Table 3.3: CAGR (2012-13 to 2022-23) of Bottled Soft Drinks Sub-categories: SECs	27
Table 3.4: CAGR (2012-13 to 2022-23) of Bottled Soft Drinks Sub-categories: TCL	28
Table 3.5: CAGR (2012-13 to 2022-23) of Bottled Soft Drinks Sub-categories: VCL.....	28

List of Figures

Figure 2.1: Laffer Curve on Optimal Tax Rate.....	17
Figure 3.1: Retail Sales of Carbonated Beverages, Energy Drinks and Sports Drinks: 2011 to 2021	23
Figure 3.2: Volume of Per Capita Retail Sales of Carbonated Beverages with Sugar level more than 5.0 - 6.0 g per 100 g	25
Figure 4.1: Recommended GST Rates for Sweetened Beverages (including CSDs): Added Sugar-based Layered Tax.....	31

List of Boxes

Box 1.1: Limitations of Euromonitor and Kantar Dataset	8
Box 2.1: Type of Taxes: Excise v/s Sales Tax	9
Box 2.2: Sugar Tax in the United Kingdom: Soft Drinks Industry Levy	11
Box 2.3: Using Sugar Substitutes in SSBs?	12
Box 3.1: Beverage Companies and their Contribution to the Indian Economy	22

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1. Introduction

Carbonated beverages or carbonated soft drinks (CSDs) are a key component of the beverages and the non-alcoholic ready-to-drink (NARTD) industry, and have become an integral part of the processed food and beverage industry in recent years. In 2023, over 44 per cent of the total revenue of beverages was generated by soft drinks worldwide (Statista, 2024a). The global market revenue from CSDs increased by 7.1 per cent from 2022 to 2023, generating USD213 billion worth of revenue in 2023, with many multinational companies and regional and domestic players operating in this segment (Statista 2024a). With an estimated revenue of USD226 billion in 2024, the global market for CSDs, comprising of cola beverages, carbonated fruit beverages, carbonated lemonades and tonic water, is expected to grow at a compounded annual growth rate (CAGR) of 5.33 per cent from 2024 to 2028 (Statista, 2024b). The Indian CSDs market is relatively small. It generated revenue worth USD18.25 billion in 2022, and grew at a CAGR of 19.8 per cent between 2017 and 2022 (Research and Markets, 2023).

Within CSDs, the variety of products manufactured and available in India is lower than in other developing countries, especially if one looks at fruit-based carbonated drinks or fortified carbonated drinks. Countries like Thailand and the Philippines, through the right tax policies, have been able to set up a variety of CSDs manufacturing and exports and move towards low-sugar healthier product options.

India is one of the largest global producers of fruits (such as mango, banana, guava, papaya, sapota, pomegranate, and lime) and sugar,¹ which in some cases are used in the CSD category. It has the potential to be used in greater capacity, if the right policies promote their uses in CSDs. However, the country is not among the top global manufacturers of CSDs, and the processing of CSD products in the country is much below its potential. The varieties are also much fewer than is available in other developing countries such as Thailand or the Philippines. While the Indian consumer wants to experiment with different products such as low-sugar CSDs or fruit-based CSDs, and start-ups are trying to come up with new products, investment, product varieties and innovation is much lower in CSDs in India. Thus, India lags behind several other developing countries in terms of the revenue generated by the CSD market (as seen in Table 1.1). Consequently, the sector's potential to attract investment and create jobs, especially in Tier 2 and 3 cities, remains unexplored.

¹ Source: <https://www.investindia.gov.in/sector/food-processing> (last accessed on February 20, 2024).

This is primarily because of treatment of this sector as a high tax revenue earner previously by the states through their state excise and now by the Goods and Services Tax (GST) Council, which has recommended a high tax and cess on CSDs. While the mature markets for CSDs are mostly developed countries such as the United States of America (USA), the United Kingdom (UK), Japan and Germany (for example, see Table 1.1) (Mukherjee et al., 2023), developing countries such as China and India are fast-growing markets, given their large population and rising per capita income levels. Countries like Thailand and the Philippines have been able to set up a variety of CSDs manufacturing and exports by adopting the right tax policies and move towards low-sugar healthier product options. In India, while consumers have started exploring different product varieties and are keen to explore low and zero-added sugar options, and the industry is interested in reformulating its products, scaling-up of start-ups and product reformulation and innovation is increasingly becoming difficult due to high taxes, which is at 40 per cent (GST of 28 per cent and a cess of 12 per cent) as of July 2024. The high taxes on low and zero-sugar CSDs products are not aligned with the recommendations of the World Health Organization (WHO) or health experts/nutritionists in the country, who support the concept of taxing CSDs in different layers proportionate to their sugar content. Globally, over 120 countries have come up with such layered tax policies for CSDs to encourage product reformulation and support the production of healthier CSDs.

Low calorie CSDs are currently taxed at 28 per cent and have an additional 12 per cent compensation cess leading to a total tax burden of 40 per cent. On the other hand, sugar is subsidised. So, the GST regime is not aligned with the objectives of improving health outcomes.

Table 1.1: Top 10 Markets with Highest Select CSD Revenue in 2023

Value in USD Billion

Rank	Country	Revenue
1	United States	51.3
2	China	14.4
3	Nigeria	14.0
4	Mexico	11.0
5	United Kingdom	9.6
6	Japan	8.1
7	Germany	7.2
8	Brazil	6.4
9	France	5.7
10	Iran	4.6
21	India	2.1

Source: Statista (2024b).

Note: Statista (2024b) only includes Cola beverages, Lemonades; Tonic Water.

Several studies, globally and in India (for example see Malik and Hu, 2022; Veit, et al., 2022; Varghese et al., 2023; Mukherjee et. al., 2023; WHO, 2023a, 2023b) have shown that excess consumption of sugars is one of the many confounding factors associated with non-

communicable diseases (NCDs) like diabetes, obesity, and cardiovascular diseases (CVDs), pointing to the need to focus on effective interventions to reduce the intake of sugar from the diet, including appropriate fiscal measures to incentivise reformulations focused on delivering healthier options of beverages to the consumers (World Bank, 2020). WHO's Strategic Action Plan (2015), informed by global guidance, advocates several population-based strategies to reduce the obesogenic environment and promote healthy diets and recommends fiscal measures such as graded taxation on sugar-sweetened beverages (SSBs)² or subsidies linked to reformulated and healthy products or subsidising the consumption of such products to name a few. Thus, most studies linking fiscal measures to positive health outcomes propose a layered-sugar tax on CSDs.

At the same time, consumers, globally and in India, are shifting towards low-sugar and no-added sugar varieties of beverages. The CSD market is also changing from its traditional high sugar carbonated beverages to low-sugar and fruit-based and/or flavoured carbonated drinks to zero-sugar aerated water, catering to changes in consumers' choice for healthier options and government policies like layered-sugar-based taxes. Producers, across the globe, are reformulating their products to meet consumer demand, and these are supported through government policies and both fiscal and non-fiscal incentives. In India too, producers are re-examining their product portfolios and coming up with products like zero-calorie, low/no sugar content (Mukherjee et al., 2022). However, despite government initiatives like 'Make in India' and "Aatmanirbhar Bharat", the CSD segment is unable to reach its potential in terms of scale expansion due to barriers such as the high tax brackets and compensation cess under the GST regime, implemented since 2017.

Currently, carbonated or aerated beverages are placed in the highest GST slab of 28 per cent with a compensation cess of 12 per cent, irrespective of their sugar or fruit content. Before GST was implemented, the Subramanian Committee released a report in 2015 titled 'Revenue Neutral Rate and Structure of Rates for the Goods and Services Tax (GST)', which recommended a demerit rate to be fixed at 40 per cent (centre plus states). The report recommended that aerated beverages be taxed at 40 per cent as it was deemed to be a sin/demerit good along with luxury cars, paan masala, tobacco and tobacco products. Another reason for imposing a high rate on aerated beverages is that in the pre-GST regime, aerated beverages were a high tax commodity attracting a state tax rate of approximately 40 per cent. It was reduced to 28 per cent with the implementation of GST (the highest GST slab). To compensate for the revenue loss to states, the committee advocated the implementation of a compensation cess of 12 per cent on select products, including aerated/carbonated beverages (Subramanian Committee, 2015). The high tax of 40 per cent, irrespective of sugar content, is making it difficult for innovative firms to come up with low-sugar varieties and scale up and existing firms to invest in product reformulation.

² SSBs are all types of beverages containing free and added sugars, and these include carbonated or non-carbonated beverages, 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.

The cross-country comparative data on SSB taxes collated by the World Bank³ shows that India has one of the highest tax rates for CSDs at a total tax rate of 40 per cent as of 2023. Over 90 per cent of countries that tax SSBs have a lower tax rate than India (see Table A1 in Appendix A for some examples). Along with one of the highest tax rates, for an internationally comparable brand of sugar-sweetened carbonated drink, India also has a higher purchasing power parity (PPP) at USD 1.96, compared to other countries. The value-added tax/sales tax as a percentage of the price of an internationally comparable brand is also higher in India at almost 22 per cent (WHO, 2023c).

In India, due to a large informal sector of 80 per cent for CSDs, there is a huge tax revenue leakage.

Studies have also shown that, as of 2017, some Middle-East countries like Bahrain, Oman and the United Arab Emirates (UAE) introduced a higher tax rate of 50 per cent or higher on CSDs, which in certain instances led to a drop in sales of 60 per cent for some product categories. Accordingly, these countries are now contemplating a reform of their tax model towards the UK's Soft Drinks Industry Levy (SDIL) system (WHO, 2023b). Thus, high tax rates may not lead to high tax revenue collection. Further, in the case of India, there is a large informal market for CSDs, as large as 80 per cent (according to industry estimates), which does not pay taxes.

Focusing on the institutional and governing structure for tax policymaking in India, the GST Council under the Ministry of Finance is the nodal agency for recommending GST rates. It takes inputs from other government agencies such as the Ministry of Food Processing Industries (MOFPI) and the Ministry of Health and Family Welfare (MoHFW). The Food Safety and Standards Authority of India (FSSAI) under the MoHFW is responsible for designing food product standards and promoting nutrition and healthy food consumption. The FSSAI is the nodal agency to decide on energy, sugar and other nutrients. It is also the nodal agency for front-of-the-pack nutrition labelling. Government bodies, like the Indian Council of Medical Research – National Institute of Nutrition (ICMR-NIN), the Ministry of Women and Child Development (MoWCD), are responsible for ensuring nutrition and promoting a healthy diet. The recent Dietary Guidelines for Indians by ICMR-NIN (2024) suggests that sugar should account for less than 5 per cent of an adult's total energy intake per day or 25g/day. However, unlike other countries, key stakeholders like the WHO, FSSAI and ICMR-NIN may not have strongly proposed the concept of the layered-sugar taxes on CSDs to the GST Council and/or the GST Council may not have taken their views into account, while designing the GST rates in India.

Having a layered-sugar tax for CSDs is a necessity in a country like India, which has one of the highest numbers of diabetic patients in the world. A study by the Indian Council of Medical Research-India Diabetes (ICMR-INDIAB, 2023) found that in 2021, an estimated 101 million people in India were diabetic while an estimated 136 million people were pre-diabetic. The number of diabetic people increased by 44 per cent from 70 million in 2019 to 101 million in

³ Source: <https://datacatalog.worldbank.org/search/dataset/0063310> (last accessed on April 1, 2024).

2021. The International Diabetics Federations' India Diabetes Report 2000-2045, referred to India as the 'Diabetes Capital of the World', harbouring 17 per cent of the worldwide diabetic population. It said that by 2045, an estimated 135 million Indians will suffer from diabetics and this will be a huge healthcare cost for the government, if no action is taken.

1.1 Objective

Given the need for an appropriate tax design for positive health outcomes, the objective of this policy brief is to provide evidence based and data driven tax policy recommendations that can help in (a) increasing government GST collections (b) limiting the intake of added sugars in beverages and (c) support reformulation initiatives for the production of healthier beverages and overall growth of the sector. At present, 80 per cent of the CSD market in India is in the informal sector, leading to a loss of government revenue. Further, businesses are not investing in this sector and generating jobs. The aim of this policy brief is to facilitate a discussion and debate on the subject.

It presents the trends and growth in sales across different CSDs product sub-categories; examines the global best practices in designing layered-sugar taxes and the Indian tax regime; analyses the impact of the high GST and recommends a layered-sugar tax that can help increase government GST collections, limit the intake of added sugars in beverages/support positive health outcomes and incentivise product reformulations leading to the production of healthier beverages, more investment, job creation and the overall growth of the sector.

1.2 Definition of Carbonated Beverages

The FSSAI is the nodal body responsible for defining non-alcoholic carbonated beverages and laying down the regulatory requirements for manufacturing such a product. According to the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011,⁴ non-alcoholic carbonated beverages are defined as 'carbonated-water based drinks with water conforming to the standards prescribed for Packaged Drinking Water under Food Safety and Standard Act, 2006 impregnated with carbon dioxide under pressure' and may contain any of the following singly or in combination:

- *Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey, fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic carobean, furcellaran, tragacanth, gum ghatti, edible gelatin, albumin, liquorice and its derivatives, salts of sodium, calcium and magnesium, vitamins, caffeine not exceeding 145 parts per million, estergum (glycerol ester of wood resin) not exceeding 100 parts per million, gellan gum at gmp level and quinine salts not exceeding 100*

⁴ Source: https://www.fssai.gov.in/upload/uploadfiles/files/Food_Additives_Regulations.pdf (last accessed on April 1, 2024)

parts per million (expressed as quinine sulphate). it may also contain saccharin sodium not exceeding 100 ppm or acesulfame-k not exceeding 300 ppm or aspartame (methyl ester) not exceeding 700 ppm. or sucralose not exceeding 300 ppm or neotame not exceeding 33 ppm.

Additionally, the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011⁵ also defines 'caffeinated beverage' with the following standards:

- I. Water used in preparation of caffeinated beverages should conform to the standards of packaged drinking water as prescribed in regulation 2.10.8 of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.
- II. Essential Composition: It shall contain not less than 145mg per litre and not more than 300 mg per litre total caffeine from whatever sources it may be derived in the formulation of the product.

The FSSAI is in the process of coming up with the Indian Star Rating (1/2 stars for the least healthy food to 5 stars for the healthiest food)/Front-of-Pack Nutrition Labelling (FOPNL), which will rank packaged food items based on sodium, sugar, and fats printed on the front of the package. The rating system also grants positive points for nutrients/components to encourage healthy products. Positive points are awarded for fruit and vegetable (FV), nuts; legumes and millets (NLM); fibre and protein being part of the product. Negative points are awarded to products constituting of high amounts of energy, sugar, salt and fat.

The Indian Star Rating system will exempt products which do not contain energy/sugar from declaring the Star rating on their packages. Along with these, beverages with the milk logo as specified under the Food Safety and Standards (Food Product Standards and Food Additives) Regulation, 2011 shall be excluded from the HFSS criteria.

The FSSAI continues to permit the use of non-nutritive sweeteners to promote reformulation based on comprehensive risk assessments done globally, inclusive of the JECFA (Joint Expert Committee of Food Additives) of Food and Agriculture Organization of the United Nations (FAO) of United Nations/WHO.⁶

1.3 Methodology and Data Sources

For an analysis of CSDs and their sales and purchases in India by sub-categories, Euromonitor International's Passport (referred to as Euromonitor database hereafter), from January to December (2011-2021) and Kantar's *WorldPanel India* have been used in this policy brief. In the Euromonitor database, retail sales are used as a proxy for the consumption of different

⁵ Source: https://foodregulatory.fssai.gov.in/All%20Docs/Food%20Standards/compendium/Compendium_Food_Additives_Regulations.pdf (last accessed on April 1, 2024)

⁶ [jecfa96-summary-and-conclusions.pdf \(who.int\)](#); [note on NSS.docx.pdf \(fssai.gov.in\)](#) (last accessed on Sept. 16, 2024).

types of beverages by their sugar content, volume and value. For sugar, Euromonitor refers to the total sugar from the back of pack label. It includes natural sugars, such as lactose and fructose, plus any added sugars, for example, sucrose and high fructose corn syrup. According to the database, “sugar, also known as ‘carbohydrates of which sugar’ on some labels, refers to the amount of carbohydrate that is broken down into natural sugars, such as lactose and fructose, plus any added sugars, for example sucrose and high fructose corn syrup. The volume for ‘sugar’ will also be included in the volume for total ‘carbohydrate’ and the amount of sugars will never exceed the amount of total carbohydrates in a food or beverage product. Sugar is not always included in mandatory labelling requirements.”

For the purpose of this policy brief, the sub-sub-categories of CSDs given in the Euromonitor database have been divided into three categories, based on the recommended total sugar level according to the WHO NPM, specific to the Southeast Asian Region (WHO, 2017). Table 1.3 below gives the sugar-wise classification of the various carbonated and caffeinated beverage sub-categories.

The Kantar database for beverages consists of CSDs such as Pepsi, Coca-Cola, Fanta, Limca and Thums Up. Although Kantar does not give sugar-wise classification, it specially focuses on the heterogeneity in CSD consumption across socioeconomic classes (SECs),⁷ and across two broad categories – town class (urban population) and village class (rural population) across the country.

Table 1.3: Euromonitor Sub-Sub-categories According to the Recommended Sugar Content by WHO SEAR NPM 2017

Sugar level according to	Sub-category
A. Sugar level more than 5.0 - 6.0 g per 100 g	Regular Cola Carbonates
	Lemonade/Lime
	Ginger Ale
	Tonic Water/Other Bitters
	Orange Carbonates
	Other Non-Cola Carbonates
	Energy Drinks
B. Sugar level between 5.0 - 6.0 g per 100 g	Sports Drinks
C. Sugar level less than 5.0 - 6.0 g per 100 g	Low Calorie Cola Carbonates

Source: Compiled using Euromonitor Database and WHO SEAR NPM (2017).

⁷ The socio-economic classification (SEC) is a measure as defined by Market Research Society of India (MRSI). It is based on two broad parameters – 1) education of chief earner and 2) number of “consumer durables” owned by the family (from the predefined list of 11 durables, namely, electricity connection, ceiling fan, LPG stove, two-wheeler, colour TV, refrigerator, washing machine, personal computer/laptop, car, air conditioner and agricultural land).

However, there are certain limitations to the databases, as mentioned in Box 1.1.

Box 1.1: Limitations of Euromonitor and Kantar Dataset

- All data on market sizes in the Euromonitor database represents only take-home values and volumes – what is commonly called off-trade. They do not include any purchases made on-premise (on-trade) at (say) hotels and restaurants, and do not include any sales through catering.
- For all data on market sizes in the Euromonitor database, all values are reported in Indian Rupees, with historic data being reported based on current prices and forecast data (2022-2026) based on constant 2021 prices and applied across all the years from 2022-2026.
- The Euromonitor database provides forecast retail sales (for both value and volume), for the years 2022 to 2026. However, for the forecast estimates, the inflation rate for 2021 has been considered and applied across all the years from 2022-2026.
- The nutrition data of the Euromonitor database does not mention artificial sweeteners/low/no sugar variants with sugar substitutes since they are not included in the “nutrition facts” on the back of the pack label and thus are not quantified in the database.
- Kantar database does not cover energy drinks and sports drinks.
- The sub-categories of the two databases, Euromonitor and Kantar, do not match and hence, a comparison between the two could not be done.

1.4 Layout

This policy brief is divided into four sections. The next section, Section 2, discusses some of the tax structures in other countries with respect to carbonated beverages and the GST regime and its impact on the domestic carbonated beverage industry. Section 3 presents an overview of the carbonated beverage sector in India, its contribution to the Indian economy and its retail sales and purchases trends, based on secondary data and qualitative interviews with beverage companies. Section 4 presents recommendations that address identified policy gaps to support the growth of reformulated and healthier beverages through the right fiscal policies.

2. Carbonated Beverages and Taxes: India vis-à-vis Other Countries

A rising number of countries are rationalising taxation of beverages to encourage and incentivise producers to make beverage offerings with low/no added sugars as healthier alternatives to the carbonated beverages available in the market. As of 2022, 122 countries have implemented some form of taxation on these beverages, according to World Bank data. In the same year, WHO released a list of 85 countries that are trying to reduce the

consumption of SSBs through certain fiscal measures, including taxation. As of 2023, out of 108 countries that monitor some sort of SSB, 105 impose taxes on carbonated beverages.⁸ Globally, the most basic distinction in tax regimes across countries is between the type of tax – excise duty versus value added tax (VAT)/goods and services tax (GST). While excise duties are taxes levied on the manufacture or import of particular goods, VAT/GST is levied as a percentage of the value of the product that is assessed and collected on the net value added at each stage in the supply chain. It is generally applied at a fixed rate for a range of products and is charged on the sale of products instead of the manufacturer.

Box 2.1: Type of Taxes: Excise v/s Sales Tax

Excise duties are divided into three broad types – specific, ad-valorem and mixed excise.

Ad-valorem is calculated as a per cent of the wholesale or retail price of the beverage.

Mixed excise combines the features of specific and ad-valorem excise duty.

In specific excise duty, the tax rate is constant per given unit. It can be based on the quantity of liquid (volumetric) or on the sugar content per 100 ml sugar.

Specific excise is categorised into volumetric and sugar-based specific excise – in volumetric specific excise duty, the tax rate is constant per volumetric unit of product whereas in sugar-based specific excise duty, the tax rate is constant per specific amount of sugar per 100 ml of beverages.

Out of 122 countries, 114 countries have implemented excise (import) duties while only eight countries, including India and the United Kingdom (UK), have implemented VAT/GST (sales) tax. Out of the 114 countries with excise duties, 61 countries have specific excise duties, of which four countries (South Africa, Mauritius, Ecuador and Cook Islands) have tier-based tax on sugar content. In 54 countries, the specific excise duty is based on volume, and in two countries, namely France and Belgium, the specific excise duty is based on a mix of both volume and sugar. Further, 42 out of 122 countries have ad-valorem excise duties (for example, Brazil) and 11 countries have mixed excise duty (for example, Thailand).

In India, the central government introduced the GST with effect from July 1, 2017, to replace multiple taxes (such as central excise duty, duties of excise, service tax, countervailing duties, and special additional duty) levied earlier. The GST structure has been developed as a four-tiered tax system with four separate rates: zero-rate, low-rate, two standard rates and a high-rate. For certain items, there is an added ‘compensation cess’ of 12 per cent applicable on the GST rate in line with the growing international practice of taxing SSBs. Initially, the compensation cess was applicable until 2022; however, this has been extended by four years,

⁸ Source: <https://www.who.int/news/item/05-12-2023-who-calls-on-countries-to-increase-taxes-on-alcohol-and-sugary-sweetened-beverages> (last accessed on April 1, 2024)

until March 31, 2026.⁹ This is applicable to goods (such as alcohol and tobacco) and services that create negative externalities for the economy. In Section 2.1, some of the global best practices for taxation of carbonated beverages are discussed, followed by the GST tax regime in India and its impact on the carbonated beverage sector in Section 2.2.

2.1 Global Overview and Some Best Practices

Due to its health implications, policymakers endeavour to make a distinction between beverages with high sugar, beverages with low-sugar and beverages with no sugar and tax them accordingly to incentivise suppliers to reformulate their products into healthier alternatives. As such, nutritionists and health experts are trying to build a consensus towards revising the SSB tax policy to layered-sugar taxes based on the volume and/or sugar content and incentivising healthier options within the CSDs. However, there are some differences across countries with respect to the following:

- The type of sugar that they tax – free sugar, added sugar and total sugar.
- Tax policy with respect to sugar substitutes, especially artificial/low/no sugar variants with sugar substitutes.
- Whether the tax is imposed on the volume of the liquid or quantity of sugar in the liquid?

If the need to collect revenue is the only reason for high taxation, then it may ignore the regressive nature of the taxes, which can impose a higher burden on low-income groups as has been shown by numerous studies (see Sharma et al., 2014; Grummon et al., 2019; Nakamura et al., 2018; Campos-Vazquez and Medina-Cortina, 2019; and European Competitiveness and Sustainable Industrial Policy (ECSIP) Consortium, 2014). Moreover, there are adverse impacts of blindly implementing a high tax. An unfairly high tax can result in an increased propensity to avoid taxes, tax leakage, growth of spurious and counterfeit products, and/or also restrict economic growth and job creation. For example, in 2014, Denmark fully eliminated the sugar tax because it was causing regional job losses and other economic losses as residents were travelling to neighbouring countries and border shops to purchase untaxed sugary foods and beverages. The Danish government estimated an annual loss of about EUR60.35 million (approximately USD68.96 million) in revenue due to scrapping of the sugar tax but added that it was likely to recover about EUR38.9 million (USD44.45 million) that was being lost to illegal soft drink sales and people crossing the border to buy cheaper soda.¹⁰

The impact of the taxes is based on multiple factors, including the availability of alternative products in the market and their prices. By product categories, some countries include both alcoholic and non-alcoholic beverages in their tax policies while others consider alcoholic

⁹ Source: <https://www.india-briefing.com/news/india-extends-gst-compensation-cess-levy-till-march-2026-25380.html/> (last accessed on May 28, 2024)

¹⁰ Source: <https://www.foodnavigator.com/Article/2013/04/25/Denmark-to-scrap-decades-old-soft-drink-tax> (last accessed on April 12, 2024)

beverages to have greater adverse health impacts. There is a consistent effort worldwide by the beverage sector to reformulate their products by lowering their sugar content or switching to other healthier options like low/no sugar variants by using sugar-substitutes. For example, the UK introduced the Soft Drink Industry Levy in 2018 to tax SSBs based on their sugar content, thus incentivising the beverage industry to reformulate their products to contain lower sugar levels to avoid/reduce the tax amount (WHO, 2023c). Studies have also shown that implementation of SSB taxation also has a positive effect by encouraging reformulation of products. For example, a study by Wierzejska (2022) showed that in the year after the introduction of the sweetened beverage tax in Poland, health enhancing changes were found in the composition of 62 per cent of the beverages analysed. The study also found that after the introduction of taxes in the UK in 2018, the average amount of sugar in SSBs decreased from 9.1g/100ml to 4.4g/100ml. Similarly, in Columbia, where manufacturers reformulated beverages voluntarily to avoid a tax introduction, the amount of sugar in SSBs decreased by approximately 4g/100ml.

Box 2.2: Sugar Tax in the United Kingdom: Soft Drinks Industry Levy

The Soft Drinks Industry Levy (SDIL) was initially announced in 2016 but implemented in April 2018 in England. The SDIL imposes a tiered tax on soft drinks with 5 or more grams of sugar per 100 ml, and targets drinks that have been sweetened with added sugar and excludes fruit juices or milk products. It aims to encourage manufacturers to reduce the sugar content of their drinks through voluntary reformulation. Focussing on the impact of the SDIL, the Public Health England (PHE) report found that, between 2015 and 2019, the total sugar content in drinks subject to the levy decreased by approximately 40 per cent for products sold by retailers, manufacturers, and the out-of-home sector. Sales of drinks subject to the levy increased on average by 15 per cent. Therefore, the total amount of sugar purchased through these drinks decreased on average by 36 per cent.

Research suggests that some manufacturers pass on part of the cost of the levy to consumers through price increments that are not always limited to the drinks targeted by the policy. Industry and government stakeholders have highlighted that it is technically easier to reduce sugar in drinks than in some food products (where sugar often has a functional role and is used to enhance taste, extend shelf life and contribute to mouthfeel, texture and bulk of food).

Source: For more details, see <https://researchbriefings.files.parliament.uk/documents/POST-PN-0638/POST-PN-0638.pdf> (last accessed on March 14, 2024)

2.1.1 Determining what to tax and how much to tax

An SSB tax has slabs either based on volume of the beverage and/or its sugar content (World Bank, 2023), which helps to incentivise the suppliers to reformulate their products into healthier alternatives.

Box 2.3: Using Sugar Substitutes in SSBs?

In recent time, the use of sugar substitutes (also called as non-caloric or low/no calorie sweeteners) as a substitute for sugar in SSBs has become very common to reduce the intake of the sugars in SSBs (Borges et al., 2017). Many popular soda companies have introduced alternatives, like diet sodas, that contain only sugar substitutes/non-caloric intense sweeteners, in order to provide a healthier substitute. However, there is an ongoing debate regarding whether sugar-substitutes/non-caloric sweeteners are the ideal substitutes for sugar. For example, the UK, has a zero per cent tax on artificial sweeteners. In regard to SSBs, UK only taxes products which contain mono or di-saccharides or natural sugar added in any other form (like honey). Similarly, after April 8, 2014, Canadian authorities expanded their policy on the tax status of beverages containing sugar substitutes like stevia and other sweeteners to obtain the zero-rate tax privilege. Different states of the USA have different policies on taxing non-caloric sweeteners in beverages. For example, the state of Philadelphia taxes sodas with or without sweeteners at the same rate whereas the state of Albany only includes products with caloric sweeteners added, which excludes diet sodas (since artificial sweeteners are non-caloric in nature). Sugar substitutes like stevia, aspartame, sucralose, ace-sulphame potassium, neotame etc., provide great tools to create low and no calorie/sugar variants in beverages.

In India, aspartame (HSN code 29242990), which is a very commonly used artificial sweetener in beverages, is taxed at 0 per cent. Despite this, products such as diet sodas, which contain aspartame, are taxed at the same rate as normal sodas in India. In contrast, the Philippines includes beverages with non-caloric sweeteners in their tax policy but at the same time, ensures that such drinks are taxed lower than ones containing high fructose corn syrup (HFCS).

Source: [https://www.gov.uk/hmrc-internal-manuals/vat-food/vfood2520-:~:text= They are all zero-rated, is the most widely used](https://www.gov.uk/hmrc-internal-manuals/vat-food/vfood2520-:~:text=They+are+all+zero-rated,+is+the+most+widely+used;); <https://www.canada.ca/en/revenue-agency/services/forms-publications/publications/news92/news92-excise-gst-hst-news-no-92.html>; http://media.inquirer.com/storage/special_projects/soda_tax_will_your_beverage_cost_more.html; [https://revds.com/taxpayerpdfs/CA-GA-LA-KY-TX-forms/Albany Business Forms/Albany SSBT Frequently Asked Questions.pdf](https://revds.com/taxpayerpdfs/CA-GA-LA-KY-TX-forms/Albany+Business+Forms/Albany+SSBT+Frequently+Asked+Questions.pdf) (last accessed on January 5, 2024)

2.1.2 Taxation by product sub-categories

By product categories, some countries include both alcoholic and non-alcoholic beverages in their tax policies while others consider alcoholic beverages to have greater adverse health impacts. Carbonated drinks and energy drinks, which usually have a high sugar content, are the most common product taxed across countries (see Hattersley & Mandeville, 2023). Due to the high taxes across countries, carbonated drink manufacturers are reformulating their products by lowering their sugar content or switching to other possible permissible ingredient options like sugar-substitutes/low or no-caloric sweeteners. As such, nutritionists and health experts are trying to build consensus towards revising the SSB tax policy to layered-sugar taxes based on the volume and/or sugar content and incentivising healthier options. The inclusion

or exclusion of certain products for taxation purposes depends on multiple factors like a country's dietary patterns, past trends of sugar intake through SSBs, existing national dietary guidelines, political reasons, lobbying, etc.

It is, therefore, important for countries to balance between imposing taxes to improve health outcomes and generating enough revenue. Hence, each country differs in the products they tax, based on consumer demographics and preferences. For a robust tax, the tax administrations of countries often do a situational analysis of the economy to gather sales and consumption data of different types of beverages, by size, nutrition and health outcomes, disease rates and other factors linked to consumption of SSBs. They also consider whether their decision to tax certain products will be accepted by all the stakeholders involved such as consumers and manufacturers of SSBs. Nutritionists and health experts may contribute to understanding and measuring the future health outcomes of the tax. Aligning taxes with other programmes that focus on reducing the consumption of sugar is important, like the SDIL in the UK. Given the importance of a robust tax policy, the next section discusses the tax regime and its impact in the Indian context.

2.2 India's Current Tax Structure

A reason for imposing a high rate on aerated beverages is that in the pre-GST regime, aerated beverages were a high tax commodity attracting an average tax rate of 40 per cent across states. It was reduced to 28 per cent with the implementation of GST (the highest GST slab). To compensate for the revenue loss to states, a compensation cess of 12 per cent, initially for a certain period. Non-alcoholic beverages subject to compensation cess under SSBs include sugars-sweetened aerated water, lemonade and energy drinks (which cover both energy and other caffeinated drinks). There is no separate category or mention of sports drinks, according to the FSSAI definition (as discussed in Section 1). While the compensation cess on aerated beverages of 12 per cent is still applicable to the products, the 37th GST Council Meeting, on September 20, 2019, recommended that GST rates on caffeinated beverages also be increased to 28 per cent from the existing rate of 18 per cent. This is over and above the compensation cess of 12 per cent already applicable on these products. The motive was to bring parity in the rates of caffeinated beverages and aerated drinks. Additionally, non-caffeinated sports/hydration drinks are also taxed at the same 40 per cent, along with carbonated fruit beverages (previously, Prime Minister Narendra Modi had appealed to the industry to add fruit to NARTD beverages).¹¹ The compensation cess of 12 per cent was to be discontinued by 2022; which was extended by four years, till 2026.

¹¹ Source: <https://economictimes.indiatimes.com/industry/cons-products/food/narendra-modi-asks-pepsi-coke-to-blend-fruit-juices-in-fizzy-drinks/articleshow/43330216.cms?from=mdr> (last accessed on June 11, 2024).

However, at present, the GST rates are not aligned with the sugar content in the CSDs nor are they aligned with the product classification given by the Food Safety and Standards Authority of India (FSSAI) that companies have to mandatorily follow. According to the FSSAI's Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, processed fruit beverages/fruit drinks/ready to serve fruit beverages require no less than 10 per cent fruit juice content (no less than 5 per cent for lime/lemon beverages). For carbonated fruit beverages or fruit drinks, the requirement is the same, i.e., no less than 10 per cent fruit content (no less than 5 per cent lime/lemon juice).¹² Any non-alcoholic beverage company manufacturing in India needs to adhere to these standards as notified by the FSSAI. However, the existing GST tax slabs do not take into consideration these notified standards while designing taxes and taxes are not aligned with the required fruit content in CSDs.

The WHO and Indian health authorities agree that tax should be based on the sugar content of the beverages, and not on whether the beverage is carbonated or not. The carbonation in beverages is introduced through the impregnation of carbon dioxide through advanced technology. Carbon dioxide is added to impart a distinctive fizzy and tangy profile to these beverages, thus adding to the refreshing taste. Besides imparting the taste, carbon dioxide also has a role in preserving the beverages by preventing spoilage. The carbon dioxide used in beverage manufacturing complies with food grade quality requirements and adheres to all required food safety and quality specifications. In India, too, CSD manufacturers have to be fully compliant with FSSAI regulations and hence, there is no food safety or health issue. Globally, the Joint Expert Committee of Food Additives (JECFA), the jointly administered scientific body of the FAO and WHO, has done a comprehensive risk assessment of carbon dioxide and given guidelines, which India is compliant with. FSSAI regulations are also fully compliant with Codex Alimentarius. Hence, the argument of carbonation-based taxes is incorrect and is not based on scientific evidence and cannot be linked to health outcomes.

¹² Source: https://fssai.gov.in/upload/uploadfiles/files/Food_Additives_Regulations.pdf (last accessed on October 8, 2023).

Table 2.1: Non-Alcoholic Beverages and GST Rates: Some Examples

HSN Code	Type of Goods	GST Rate + Compensation Cess	Examples	Effective From
2201 10 20	Aerated water i.e., soda w/o sugar or artificial sweetener or w/o any flavours	18%	Kinley Soda, Schweppes Soda, Everess Soda, Sepoy & Co. Indian Tonic Water	July 1, 2017
2201 90 90	'Others' Packaged Drinking Water	18%	Kinley Water, Smart Water, Aquafina water, Bisleri Water, Himalayan Natural Mineral Water (Tata Consumer Products)	July 1, 2017
2201	Drinking water packed in 20-litre bottles	12%	Bisleri, Kinley, Aquafina	January 25, 2018
2202 10 10	Aerated Water	28% + 12%	Coca-Cola, Campa Cola, Sprite, Coke Zero, Pepsi Black, Mountain Dew, 7up, Limca,	July 1, 2017
2202 10 90	Waters, including mineral waters and aerated waters, containing added sugar or other sweetening matter or flavoured: Other	28% + 12%	Limca Sportz ion, Gatorade	July 1, 2017
2202 99	Carbonated Beverages of Fruit Drink or Carbonated Beverages with Fruit Juice (CFD)	28% + 12%	Nimboo Masala Soda, Fanta Orange, Apple Delite, Appy Fizz, Bisleri Limonata	Effective October 1, 2021, the GST rate is 40% on all carbonated beverages of fruit juice irrespective of the amount/percentage of juice content
2202 99 20	Fruit Juice Based Drinks	12%	Slice, Tropicana, Maaza, Minute Maid Juices, Nimbooz, Tropicana, Dabur Real Fruit Juice, Frooti, B Natural by ITC	July 1, 2017
2202 99 30	Beverages containing milk	12%	Creambell, Parle Agro (Smooth), Mother Dairy, Amul, Nestle	1st July 2017
2202 99 90	'Others'	28% + 12%	Energy Drinks/ Caffeinated Beverages – Red Bull, Thums Up Charged, Sting, Monster	Earlier launched at 18% GST until September 20, 2019. However, w.e.f October 1, 2019, GST rate increased to 40%,
2202 99 90	'Other'	18%	Honest Tea	Recently re-launched 'Tea Based Beverage'. Taxes effective from July 1, 2017
0403	Buttermilk/ Lassi	5%	Amul, Mother Dairy, Maaza Lassi	July 18, 2022
2009	Fruit Juices	12%	Tropicana 100%, Dabur Real Active 100% juice	July 1, 2017
2106 90 50	'Other'	18%	Beverage in Bag	

Source: Compiled from industry inputs

Studies such as John et al., (2022) and Varghese et al., (2023) have concluded that GST does not differentiate between healthy and less-healthy beverages. As shown in Table 3.1, the highest GST rate of 28 per cent along with a ‘sin tax’ or ‘compensation cess’ of 12 per cent (a total of 40 per cent) is imposed on all carbonated drinks, including zero-sugar carbonated drinks. Carbonated beverages with and without fruit content are taxed at 28 per cent and have an additional 12 per cent compensation cess. The tax structure also does not take into account the volume of the beverages. As evident from Table 2.1, while water, including natural/mineral water, is taxed at 18 per cent GST, water packed in 20-litre bottles is taxed at 12 per cent. Ideally, both large-sized and small-sized packages of water should be in the same GST slab and, given that there is a need for safe drinking water in India, GST should not be more than 12 per cent. In other words, health implications may not have been considered while designing the GST rates.

2.2.1 Impact of Taxes on Consumption and Revenue Collection

The core objective of a tax department is to increase revenue collection with broader economic goals of generating investment in manufacturing, creating employment, etc. If sales grow, tax collection is expected to grow. The tax department already has data on tax collection by product sub-categories. However, unlike the state excise collection, which was presented in a transparent manner by some states in the past, the GST collection by product sub-categories is not available in the public domain, making it difficult to estimate how the tax collection has changed with imposition of the GST.

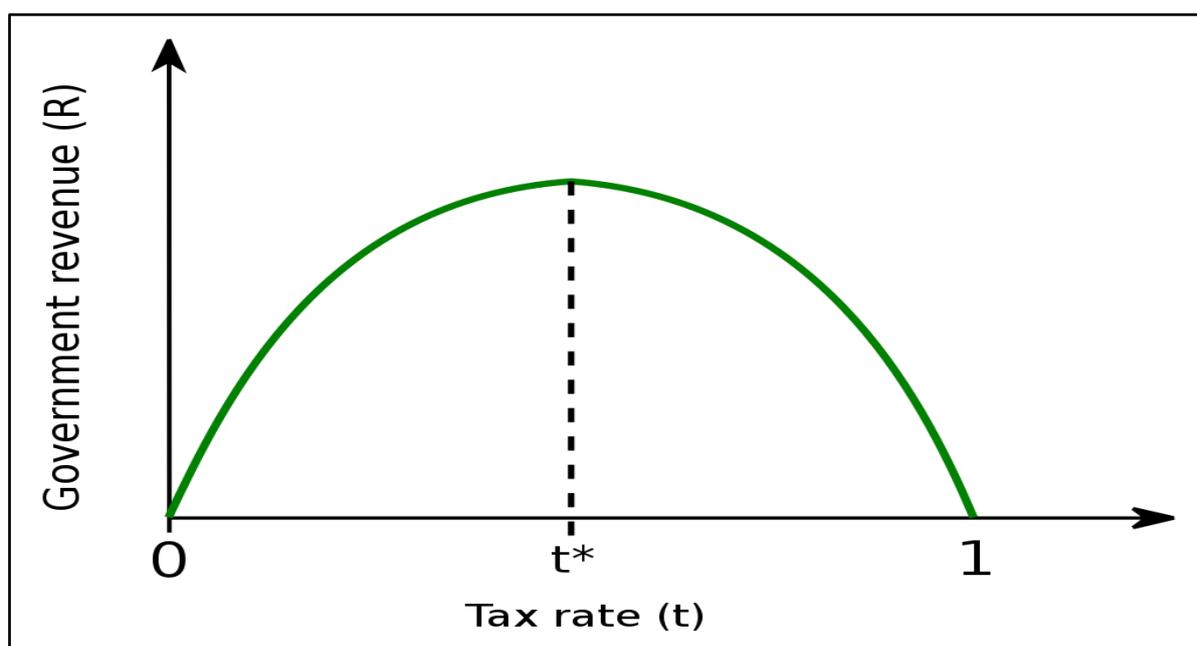
The Indian GST rates for food and beverages are one of the highest in the world. Further, India has the highest standard GST rate in Asia, and the highest number of different slabs of GST in the world (IMF, 2018). The high tax rates

Tax revenue can increase by (a) product reclassification based on sugar content and taking into account the new varieties of products in the market and (b) by formalising the informal sector.

can increase the tax burden on firms and consumers, and can discourage production and consumption. Further, a higher tax burden also incentivises tax evasion (World Bank, 2019; Dabla-Norris et al., 2019), as is evidenced in the case of India where there is a large informal sector.

To understand the interaction between taxation and revenue generation, policymakers often apply the Laffer Curve theory, which provides the theoretical relationship between rates of taxation and the government's tax revenue. According to Laffer's theory, at zero and extremely high tax rates, tax revenues tend toward zero (see Figure 2.1). An extremely high taxation rate can result in unaffordable prices and may lead to low volumes of purchase by consumers or their finding a way to avoid paying taxes. Thus, theoretically, a moderately high tax is better than a very high tax for revenue growth.

Figure 2.1: Laffer Curve on Optimal Tax Rate



Source: Blackburne, H.R. (2022)

For tax collection, it is important to understand how consumers react to price changes, or the price elasticity of demand. In India's case, while some studies (for example, John et al., 2022, funded by the WHO; Varghese et al., 2023) tend to show that non-alcoholic beverages are price elastic, most studies show that they are price inelastic. However, these studies are not comprehensive as GST collections by product sub-category of beverages, are not available in the public domain. Further, if all CSDs are in the high tax bracket of 40 per cent irrespective of their sugar content, there is no choice available to a consumer and price elasticity is ineffective. If there are few players in the market for CSD and products are similarly priced, then there are two options for the manufacturers – (a) all of them have similar price increase, which means that consumers cannot substitute within this category or (b) producers do not pass on the increase in tax to consumers, in which case, they make losses, adversely affecting business expansion and future investments, discouraging production and consumption and incentivising tax evasion.

In case of India, some companies are contemplating withdrawing from manufacturing and sales of CSDs like carbonated fruit drinks due to high taxes. During stakeholder consultations, companies said that a GST of 40 per cent increases the price of products like fruit-based CSDs and as such products are new in the market, it is slowing down demand, investment and scaling up. There is clear evidence that several fruits-based fizzy drinks are produced in countries like Thailand (for example, Pepsi Zero Sugar Lime Flavour, or Mirinda Strawberry or Mirinda Pineapple),¹³ which are not produced in India despite the country being one of the largest producers of fruits.

¹³ Source: <https://www.suntorypepsico.co.th/en/brand/detail/1>; <https://www.suntorypepsico.co.th/en/brand/detail/2> (last accessed on June 11, 2024).

While there is increasing concern regarding micronutrient deficiencies and CSDs can be fortified, as has been the case in a number of countries globally, such varieties are unable to take off in the Indian market due to high taxes.

There is a growing demand for CSDs and energy drinks in the Indian market as is evidenced by the reduction in import duty on energy drinks in the recent Trade and Economic Partnership Agreement (TEPA) that India signed with the four European Free Trade Agreement (EFTA) countries – Iceland, Liechtenstein, Norway and Switzerland on March 10, 2024.¹⁴ Thus, while India is willing to take customs revenue losses by reducing tariffs for trade partners, it is not allowing domestic players to grow, and is restricting “Make in India” with a high GST.

While India is willing to reduce custom duties on CSDs under trade agreements, it is not allowing domestic players to grow by continuing with 40 per cent GST.

It is also necessary to keep in mind that there is a large unorganised sector for beverages in India that does not pay taxes and this sector is growing. High taxes on CSD may be shifting purchases to the cheaper unorganised sector,

which may lead to lower tax collections. For example, Indian beverage companies such as Coca-Cola India Private Limited and PepsiCo India Holdings Private Limited (Varun Beverages Limited) reported revenue losses of INR4,648 crore and INR765 crore respectively between FY 2018-19 and FY 2019-20, despite an initial positive trend in FY 2017-18 to 2018-19; there was a substantial decline for FY 2019-20. A survey by the authors found that GST contribution of around 50 per cent of the surveyed companies declined while 30 per cent contributed the same amount of GST as in the previous financial year; only 20 per cent of the surveyed companies reported a slight increase in GST contribution for 2020 as compared to 2019 (see Mukherjee et al., 2022). Thus, despite having the highest tax slab, the tax collection for carbonated beverages has been low due to insufficient growth of the sector (for details see Mukherjee et al., 2022). The high tax may have led to a large informal sector and there is a need to estimate the revenue loss due to the informal sector.

Reformulated low-sugar and zero-sugar CSD and fruit-based fizzy drinks are costly to produce, compared to traditional CSD drinks, which have relatively high sugar content. High taxes on all carbonated drinks irrespective of their sugar content makes it difficult and unattractive to innovate, as it increases the price of healthier products. Sugar is highly subsidised in India while its alternatives are expensive, making it cheaper to produce CSDs with high sugar content compared to reformulated products. Reformulated products are consumed mostly by high and high-middle-income consumers, while low-income groups continue to consume the high sugar aerated products, shifting the burden of taxes for some product categories like CSDs to low-income groups.

¹⁴ Source: <https://www.efta.int/Free-Trade/news/EFTA-and-India-sign-Trade-and-Economic-Partnership-Agreement-540631> (last accessed on June 11, 2024).

Global and Indian studies show that a high tax can deter scale expansion, investment and exports. Despite being one of the largest producers of sugar and fruits used in CSD production, there is much less variety of CSD products in Indian market compared to countries like Thailand (for example, Mirinda Strawberry or Mirinda Pineapple, Fanta Strawberry, etc.), the Philippines (for example, Royal Tru-Orange or Royal Tru-Grape)¹⁵ or the UK (for example, Cherry Coke, Fanta Fruit Punch, etc.). Last but not least, although India has taken several measures to promote a healthy diet and reduce incidences of NCDs such as diabetes (see WHO, 2023 for details), the country is yet to come out with a fiscal incentive linked to healthy production of beverages, such as subsidies, under schemes like the Production Linked Incentives (PLI).¹⁶ Reformulated products can be encouraged through targeted subsidies under schemes like the Production Linked Incentives (PLI),¹⁷ which are currently missing.

In India, fiscal incentives given to beverage manufacturers are not linked to the sugar content in the beverage.

Fiscal incentives are not linked to exports of healthier and innovative processed beverages which has growing demand in key export markets.

In India, there are hardly any studies measuring the health outcome of the demerit tax and this is a major gap in existing research (Joseph 2023).

There is a need in India to design an efficient and effective fiscal policy that can help reduce the size of the informal sector and increase tax collection, have a positive health outcome by having a layered tax targeted at reducing the intake of sugar in CSDs and support production and consumption of healthier beverages/reformulated products.

However, just having a tax policy in place is not enough. Policy designs and its potential impact on the intended products should also be studied. Moreover, as product proliferation increases, policy makers need information on product sub-categories and surveys help to collect such information. For example, while taxes may help reduce consumption in certain cases, it may not be so if consumption is price inelastic, and reformulated or healthier products are costlier. In such cases, high taxes will be regressive, (with a high burden on low-income groups) and reduce the revenue earned, as discussed above. The tiered tax structure for sugary drinks in the UK serves as a key design element for the industry in encouraging reformulation of carbonated and sugary beverages. Thus, a sugar-sweetened beverage tax should:

- Be informed by a nutrient profile model.
- Not include unjustified exemptions.
- Target producers, rather than consumers, to encourage reformulation.

¹⁵ Source: https://www.cokebeverages.ph/3_royal?p=2 (last accessed on March 14, 2024).

¹⁶ Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1708691#:~:text=The20Union20Cabinet20chaired20by20the20Prime20Minister,markets20with20an20outlay20of20Rs.201090020crore> (last accessed on May 11, 2023).

¹⁷ Source: <https://www.wcrf.org/looking-back-at-5-years-of-the-uk-soft-drinks-industry-levy/#:~:text=The%20aim%20is%20to%20encourage,not%20subject%20to%20the%20tax> (last accessed on March 14, 2024).

At present, there is a lack of publicly available data on different sub-categories of beverages by their sugar content. Although, we refer to the Euromonitor database for our research purposes, it refers to the “nutrition facts” on the back of the pack label. It is, thus, difficult to do an impact analysis without understanding how consumers and producers react to changes in taxation and consequently, product prices. So far, product prices of high sugar carbonated beverages are low while those with less or zero sugar are very high. Therefore, the taxes may be regressive with a higher burden on low-income groups. While nutritionists and health experts discuss the urgent need to have a layered tax based on the sugar content in beverages, there is a lack of information on beverages sector sales trends by sugar levels. In this context, the next section presents the trends in retail sales of carbonated beverages in India, using the Euromonitor Database and Kantar database, and their contribution to the Indian economy.

3. India’s Carbonated Beverage Sector: An Overview

With a large population and growing incomes, the Indian carbonated beverage market is an attractive one. With a large raw material base, the country has the capacity to produce a variety of carbonated beverages. The carbonated beverage industry has grown in terms of both total value and volume, and is predicted to grow further due to factors such as rising disposable incomes, increased brand penetration and a rise in the variety and availability of the beverages (Mukherjee et al., 2022). Some studies (such as Research and Markets, 2023) estimated the Indian CSD market generated revenue worth USD18.25 billion in 2022 at a compounded annual growth rate (CAGR) of 19.8 per cent between 2017 and 2022. Some of the major players in the market include Hindustan Coca-Cola Beverages Pvt Ltd., Varun Beverages Pvt Ltd. (a franchisee of PepsiCo Ltd), Reliance Industries Limited (RIL), Bisleri International, and Parle Products Pvt. Ltd. While the government has introduced several policies, it is important to understand the sales pattern of beverages by product categories and sub-categories and sugar content, and how it is likely to change in the future for robust fiscal policymaking and a sugar-based tax. The objective of a robust fiscal policy is to help the government meet its health objectives, promote the manufacturing of healthy products and ensure steady revenue collection.

This section gives an overview of the carbonated beverages sector of India, focusing on trends and development. While Section 3.1 presents the contribution of the sector to the Indian economy, based on qualitative interviews of some of the major beverage companies, Section 3.2 and Section 3.3 present the market size of the sector and analyse the changes in consumption patterns across the sector and various sub-categories respectively.

3.1 Contribution of Sector to the Indian Economy

Studies have highlighted the importance and contribution of the non-alcoholic beverages sector to the Indian economy. They show that the non-alcoholic beverages sector contributes significantly to the GDP, employment, investment and exports of a country, as well as generates both forward and backward linkages in the economy as they work closely with

farmers, distributors and small retailers to reach consumers, thus making both direct and indirect contributions to the economy.

Although there is no official estimate for the contribution of the carbonated beverage sector to GDP, it is a key component of the food-processing sector, also called the ‘sunrise sector,’ which accounted for 10.54 per cent and 11.57 per cent of GVA in the manufacturing and agriculture sector respectively in 2020-21 (MOFPI, 2023). According to the Indian Beverages Association, its members plan to invest around USD10 billion in the next five years (2024-2029).

The food processing industry as a whole is a labour intensive sector, accounting for 11.10 per cent of employment, according to the Annual Survey of Industries (ASI) 2019-20 (MOFPI, 2023). A previous survey of the non-alcoholic beverage industry, conducted by the authors (Mukherjee et.al, 2022), revealed that direct employment in the entire beverage industry increased from 127,816 in 2010-11 to 161,065 in 2017-18. The combined value added to the economy was estimated at INR 7,91,539 million from the upstream and downstream effects of the input-output model. The total job creation of the sector was estimated to be 6,91,491, which included employment creation both in upstream and downstream operations. The labour to output ratio is 0.49 for non-alcoholic beverages, which means that in order to produce INR1 crore output in this sector, an estimated 4.9 persons are directly employed. Further, for every INR1 crore output, a total of 8.9 additional jobs are created in the economy due to direct and indirect impacts. The sector can contribute significantly to all players in its value chain, including farmers, MSME suppliers, wholesalers, retailers and logistics companies. For example, in 2024, Coca-Cola India system is sourcing 80 per cent of its input materials from its network of 3.5 lakh Indian farmers and is supporting over 45 lakh retailer livelihoods, both directly and indirectly (see Box 3.1 for examples of the contribution beverage companies to the Indian economy). However, employment in the CSD segment is much lower than in other developing countries in ASEAN and in China, as is investment and product variety.

Discussions with stakeholders revealed that due to a high tax of 40 per cent, they are advised by their tax consultants and investors to invest in juices, milk-based drinks or other product categories, which have lower taxes. Further, sugar is subsidised and, hence, input cost is low. Therefore, only a few low-sugar CSD options are in the Indian market and those that are there are high-priced and beyond the reach of middle and low-income consumers.

Since data on GST collections by product sub-categories is not available, it is difficult to estimate the contribution of the carbonated beverages sector to taxes. For future policymaking, this data may be shared for research purposes and stakeholder consultations. In particular, there is a need for data on product sub-category-wise GST collections, and how it has changed over time to understand the contribution of different types of beverages to taxes. At the same time, there is a need to have an estimate of the informal sector and revenue leakage due to high taxes.

The consultations with industry, nutritionist and tax experts found the following:

- a. High tax is a barrier to investment in CSD products, especially healthier options within this category.
- b. High tax may have lead to revenue leakage and reduced incentives to formalise the sector.
- c. Tax revenue from CSD may not be rising.
- d. There is no incentive to innovate and reformulate products and reduce their sugar levels because taxes are uniform across sub-categories irrespective of the sugar content.
- e. The FSSAI, ICMR-NIN and other health organisations should work with the GST council to have a layered-sugar tax for CSDs.

Box 3.1: Beverage Companies and their Contribution to the Indian Economy

- **Coca Cola India Private Limited (CC IPL)**

Coca-Cola India system comprises 13 Indian home-grown bottlers, operating with 253 lines in 64 plants across 16 states, with investment worth INR25,000 crores. Along with providing employment to over 1.5 lakh people and to 45 lakh retailers, Coca-Cola India System has/plans to invest INR48,000 crore during 2023-2030 across the states of Gujarat, Uttar Pradesh, Telangana, Maharashtra, West Bengal and Jammu and Kashmir. The concentrate plant coming up in Gujarat is the 9th global concentrate plant with an investment of USD450 million (INR3700 crore). The plant is expected to also cater to global demand.

Embracing the Indian government's sustainability goals, CC IPL supports and empowers small farmers through state-wide sustainable agriculture projects, increasing their productivity.

- **Red Bull India Private Limited**

Operating since 2007, Red Bull India Private Limited (RBIL) is deeply committed to the Indian market. It has invested significantly in working with local Indian partners through distribution and sales channels across the value chain and is available throughout the country. With logistics, distribution, sales, and a supply chain presence in 17 states, it has an efficient and integrated presence across the entire country.

The company is committed to boosting growth in the non-alcoholic beverages sector in India, with estimated investments of over INR750 crore in the last few years; this number is distinct from tax contributions. As a company, RBIL is also committed to generating employment in India, with it currently employing more than 2300 people.

- **Varun Beverages Limited**

By the end of 2023, Varun Beverages Limited (VBL), the bottler of PepsiCo India, has invested approximately INR2100 crore. Of this, INR850 crore was allocated to the establishment of two new greenfield production facilities in Bundi, Rajasthan, and Jabalpur, Madhya Pradesh. Another INR800 crore was allocated for the expansion of the six existing facilities in India as brownfield investment, with the rest used for international expansion, asset write-offs, and managing forex fluctuations. As part of their growth strategy, VBL has also invested approximately INR150 crore in land acquisition for the construction of a plant in the coming years, including properties in Buxar, Bihar and Kangra, Himachal Pradesh.

Source: KIIIs

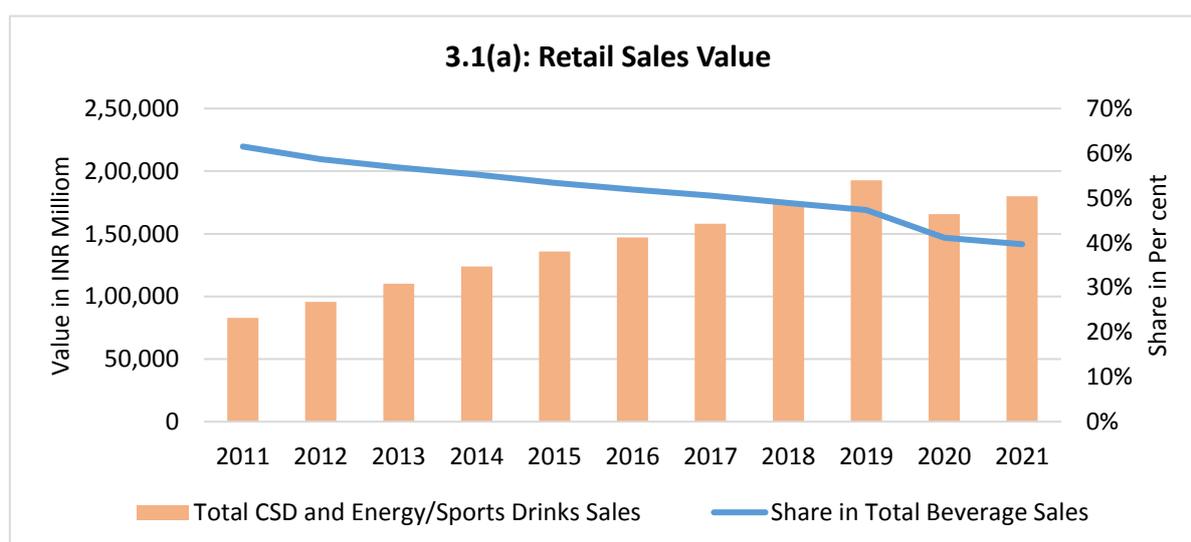
Health experts pointed out that there is no research-based evidence to suggest that carbonated beverages are not healthy. Given that data on tax collections are not available, the impact of the tax revenue can be best analysed by retail sales; this is discussed below.

3.2 Domestic Carbonated Beverages Market Trends

As shown in Figure 3.1, we see that the combined market size of CSDs and energy and sports drinks has been growing at an estimated CAGR of 8.1 per cent over the past decade. In terms of retail sales value, sales peaked in 2019, at INR1,92,662.6 million. This was followed by a decline of 16.3 per cent in 2020, due to various reasons such as supply chain disruptions and lockdowns owing to the coronavirus (COVID-19) pandemic (see Figure 3.1). Although the overall share of these products in the market¹⁸ has been declining at a CAGR of (-) 4.3 per cent, from 2011 to 2021, the per capita retail sales value of CSDs, energy drinks, and sports drinks¹⁹ has been increasing at a CAGR of 6.8 per cent. In 2011, per capita retail sales were INR66 per capita, compared to INR128 per capita in 2021.

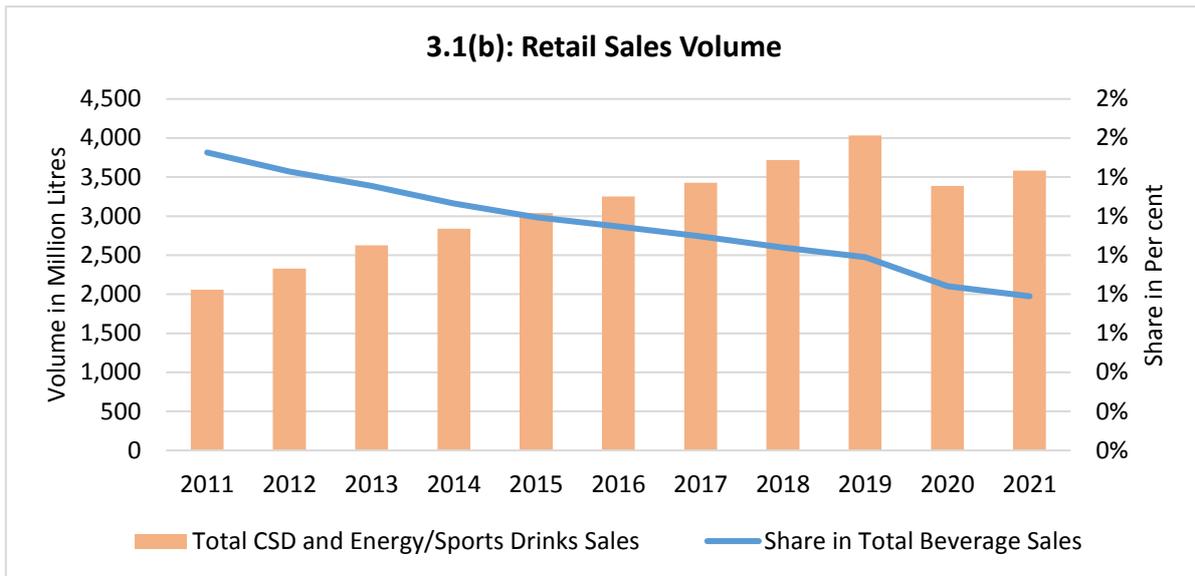
Similarly, in terms of retail sales volume across the previous decade, although sales volume has grown at a CAGR of 5.7 per cent from 2057 million litres in 2011 to 3583 million litres in 2021, its share in the retail sales of all beverages has declined. The decline has been relatively steeper than the decline in retail sales value (as seen in Figure 3.1), at a (-) 6.4 per cent CAGR from 2011 to 2021. In terms of volume, sales of carbonated soft drinks, energy drinks and sports drinks account for approximately 1 per cent of total beverage sales in 2021.

Figure 3.1: Retail Sales of Carbonated Beverages, Energy Drinks and Sports Drinks: 2011 to 2021



¹⁸ Total beverage sales include sales of all types of carbonates, liquid and powder concentrates, juice and juice-based drinks, ready-to-drink tea and coffee, and flavoured milk drinks as given in the Euromonitor Database.

¹⁹ The categories covered in this section are based on the Euromonitor database, as discussed in Section 1.



Source: Authors' calculation using Euromonitor Database

Note: Total beverage sales include sales of all types of carbonates, liquid and powder concentrates, juice and juice-based drinks, ready-to-drink tea and coffee, and flavoured milk drinks as given in the Euromonitor Database.

3.2.1 Market Trends in Carbonated Beverage Sub-categories

As discussed in Section 1, carbonated beverages comprise several products with varying sugar levels. While some products such as 'regular cola carbonates' or 'ginger ale' have relatively higher added sugar content, there are also beverages such as 'low calorie cola carbonates'. It is, therefore, important to analyse which type of beverages are being consumed more for taxes to be effective.

To analyse the trend in retail sales, the Euromonitor carbonated beverage sub-categories can be classified into three levels of sugar content, namely carbonated beverages with (i) sugar level more than 5.0 - 6.0 g per 100 g; (ii) sugar level between 5.0 - 6.0 g per 100 g; and (iii) sugar level less than 5.0 - 6.0 g per 100 g, as per the recommended sugar levels of WHO SEAR NPM 2017. In 2011, we see that (Table 3.1), lemonades/lime and regular cola carbonates have the maximum market share in terms of retail sales value at 22.40 per cent and 22.31 per cent respectively. It is followed by other non-cola carbonates, with a market share of 20.82 per cent. However, the share of the lemonade/lime and regular cola carbonates has declined to 16.40 per cent and 10.74 per cent in 2021, i.e., the retail sales value has declined from INR30083.2 million in 2011, to INR48,741 million in 2021. From a tax collection perspective, although both regular cola carbonates and lemonade/lime have a declining share in terms of retail sales value, the products continue to attract a 12 per cent compensation cess, over and above the highest GST tax slab of 28 per cent. Hence, this is likely to adversely impact tax revenue collection and tax revenue growth.

Table 3.1: Share of Carbonated Beverage Sub-categories Over the Years: Retail Sales Value

Share in per cent

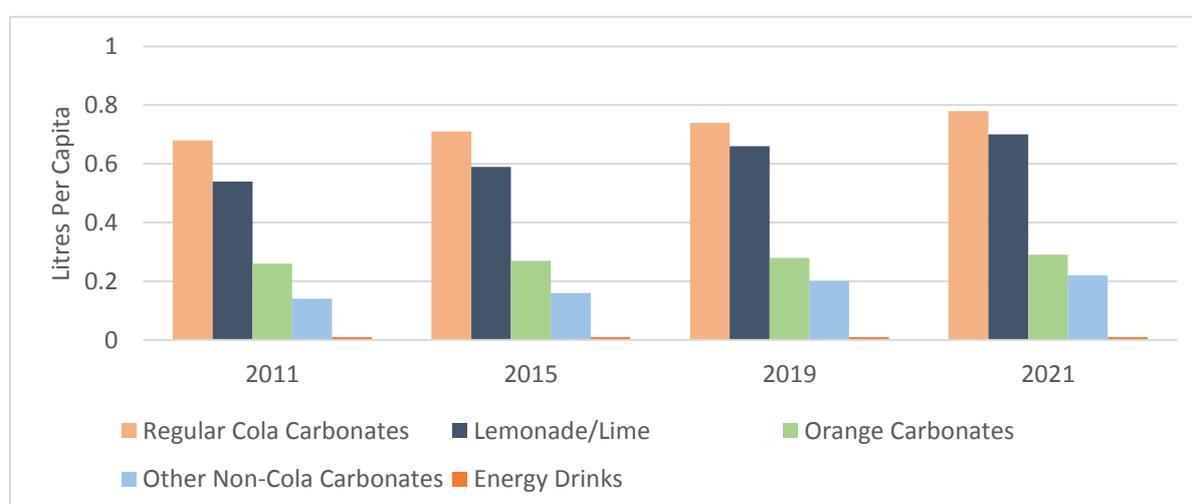
Beverage category by sugar contents	Sub-category	2011	2015	2019	2020	2021
A. Sugar level more than 5.0 - 6.0 g per 100 g	Regular Cola Carbonates	22.31	16.77	12.76	11.12	10.74
	Lemonade/Lime	22.40	21.19	20.62	16.89	16.40
	Ginger Ale	0.01	0.00	0.00	0.00	0.00
	Tonic Water/Other Bitters	0.04	0.03	0.02	0.02	0.02
	Orange Carbonates	8.77	6.67	5.60	5.21	4.88
	Other Non-Cola Carbonates	4.86	5.62	5.54	5.19	4.94
	Energy Drinks	2.56	2.31	1.69	1.76	1.64
B. Sugar level between 5.0 - 6.0 g per 100 g	Sports Drinks	0.34	0.64	0.94	0.83	0.94
C. Sugar level less than 5.0 - 6.0 g per 100 g	Low Calorie Cola Carbonates	0.21	0.16	0.11	0.10	0.10

Source: Compiled from Euromonitor Database

Note: Euromonitor’s nutrition data does not mention low/no sugar variants with sugar substitutes/artificial sweeteners since they are not included in the “nutrition facts” on the back of the pack label and thus, are not quantified in the database.

In terms of per capita retail sales, Figure 3.2 shows that among beverages with sugar levels between 5.0 – 6.0g per 100 gm, regular cola carbonates have had the highest per capita retail sales consistently over the years, followed by lemonade/lime and juice drinks (up to 24 per cent juice). While the per capita sales of regular cola carbonates, lemonade/lime have increased from 0.68 and 0.54 litres per capita in 2011 to 0.78 and 0.70 litres per capita in 2021, the per capita retail sales of sports drinks and low-calorie cola carbonates have increased from approximately 0 litres per capita in 2011 to 0.1 litres per capita in 2021. This again indicates that there is a shift in the consumption trends of the Indian population.

Figure 3.2: Volume of Per Capita Retail Sales of Carbonated Beverages with Sugar level more than 5.0 - 6.0 g per 100 g



Source: Authors’ calculation using Euromonitor Database

Note: Euromonitor’s nutrition data does not mention artificial sweeteners since they are not included in the “nutrition facts” on the back of the pack label and thus are not quantified in the database.

Both regular cola carbonates and low-calorie cola carbonates have the lowest growth rates both in terms of value and volume.

While consumers are shifting from carbonated drinks to juices and milk-based drinks due to health consciousness as observed during the pandemic, these also have high free sugar content.

WHO (2023b)

Previous studies (WHO, 2023b; Mukherjee et al., 2022) found that reformulated products are coming up in the market, and companies are willing to innovate. However, there are no incentives for reformulated products or innovative low/zero-sugar carbonated beverages (refer to Section 2). The high cost of reformulation, the huge subsidy on sugar which reduces input costs, and the risk of consumers rejecting such products along with huge price differences between SSBs and

healthier options prevent market penetration of the healthier options. It is also important to note that, given the high prices of the healthier beverage options (primarily due to high prices driven by the high cost of product reformulation and lack of fiscal support), their consumption remains confined to the urban high and middle-income groups.

3.2.2 Trends in carbonated beverage sub-categories and their sugar content

Table 3.2 reveals that carbonated beverages are undergoing a noticeable change in their sugar content levels, mostly driven by consumer preferences. Within carbonated beverages, there is a growing market for low-sugar content alternatives. Stakeholders pointed out that consumers increasingly prefer zero sugar carbonated beverages and fruit-based carbonated beverages. Fruit-based, low-sugar carbonated beverages can help in value addition and development of horticulture supply chains.

Table 3.2: Changes in Sugar Content of Beverages Over the Years

Sugar content in g per 100g/ml, percentage change

Beverages category by sugar content	Sub-category	2011	2021	Change
A. Sugar level more than 5.0 - 6.0 g per 100 g	Regular Cola Carbonates	10.5	10.5	0.00
	Lemonade/Lime	11.5	12.0	4.35
	Ginger Ale	9.0	8.0	-11.11
	Tonic Water/Other Bitters	8.0	8.0	0.00
	Orange Carbonates	13.4	13.4	0.00
	Other Non-Cola Carbonates	12.3	12.6	2.44
	Energy Drinks	11.6	9.8	-15.52
B. Sugar level between 5.0 - 6.0 g per 100 g	Sports Drinks	6.1	5.9	-3.28
C. Sugar level less than 5.0 - 6.0 g per 100 g	Low Calorie Cola Carbonates	1.0	5.5	450.00

Source: Compiled from Euromonitor database

Note: Euromonitor's nutrition data does not mention artificial sweeteners since they are not included in the "nutrition facts" on the back of the pack label and thus are not quantified in the database.

3.3 Consumption Trends by Socio-economic Classes

To identify the pattern in the consumption of carbonated beverages across SECs, the analysis in this section is done across SEC groups (A, B, C, D/E) and across two broad categories – town class (urban population) and village class (rural population), across the country.

3.3.1 SEC Groups

As discussed in the previous sections, high taxes often shift the tax burden on to the lower-income groups and high taxes will be regressive, with a high burden on low-income groups and reduce the revenue earned. It is, therefore, important to know which section of society consumes which type of SSB. From Table 3.3, it is evident that for CSDs, SEC A, the highest SEC group, has had the slowest growth rate of 5.48 per cent in terms of purchase volume, while the lower SECs have a CAGR above 7 per cent.

It should also be noted that, compared to CSDs, the purchase volume CAGR for mango-based drinks and juices is higher for some SECs, indicating a shift in the purchase patterns of the Indian consumer. A similar trend is observed in the CAGR for purchase value of CSDs across the SEC groups.

Table 3.3: CAGR (2012-13 to 2022-23) of Bottled Soft Drinks Sub-categories: SECs

In per cent

SECs	Purchase Volume			Purchase Value		
	CSDs	Mango-based Drinks	Juice	CSDs	Mango-based Drinks	Juice
SEC A	5.48	10.27	5.31	10.55	13.91	9.03
SEC B	7.88	7.08	11.88	12.80	10.70	15.42
SEC C	7.16	5.17	13.35	11.71	8.97	16.96
SEC D/E	7.17	9.46	9.70	11.51	13.11	13.88

Source: Kantar World Panel

Note: CSDs such as Pepsi, Coca-Cola, Fanta, Limca, Thums Up; mango-based drinks such as Frooti, Slice, Maaza; juices such as Real and Tropicana

Overall, it can be seen that consumption of CSDs is increasing at a higher rate among the lower socio-economic classes, with a simultaneous shift towards mango-based and juice drinks from CSDs.

3.3.2 Urban/Rural Classes

The urban consumer (TCL) has been divided into five categories based on population: towns with a population of ≤ 1 lakh or $TCL \leq 1$ L, TCL_{01-05} L, TCL_{05-10} , TCL_{10-40} , and TCL_{40+} (i.e., above 40 lakh population). Table 3.2 shows that the CAGR for purchase volume of CSD among the highest TCL was negative between 2012-13 and 2022-23. Across all the TCLs, it is evident that purchase of juices is increasing at a much higher rate than the other two sub-categories

of bottled soft drinks in terms of both purchase volume and value. However, it is not indicative of a healthier switch, as juices often contain the same/higher levels of sugar but are taxed at a lower rate. It is, thus, important to have a sugar-level based layered tax instead.

Table 3.4: CAGR (2012-13 to 2022-23) of Bottled Soft Drinks Sub-categories: TCL

In per cent

TCL	Purchase Volume			Purchase Value		
	CSDs	Mango-based Drinks	Juice	CSDs	Mango-based Drinks	Juice
TCL 40L+	-2.87	0.14	0.09	1.91	3.64	3.89
TCL 10-40L	3.67	7.36	16.21	8.84	11.05	21.23
TCL 5-10L	4.06	3.09	9.86	9.17	6.65	18.43
TCL 1-5L	5.98	8.59	14.34	10.99	12.09	13.31
TCL<=1L	4.85	2.99	14.91	9.33	6.61	18.82

Source: Kantar World Panel

Note: CSDs such as Pepsi, Coca-Cola, Fanta, Limca, Thums Up; mango-based drinks such as Frooti, Slice, Maaza; juices such as Real and Tropicana

The rural population (VCL) has been categorised into three categories as follows: VCL \leq 2000, VCL 2001-5000 and VCL \geq 5000. Table 3.5 shows that although there has been a high CAGR from 2012-13 to 2022-23 for all the VCL categories, CAGR for the CSDs is not the highest. For VCL > 5000, the highest CAGR in terms of both purchase volume and value has been registered for juices. This, again emphasises the need to tax beverages according to their sugar levels and not only on the basis of whether they are carbonated or not.

Table 3.5: CAGR (2012-13 to 2022-23) of Bottled Soft Drinks Sub-categories: VCL

In per cent

VCL	Purchase Volume			Purchase Value		
	CSDs	Mango-based Drinks	Juice	CSDs	Mango-based Drinks	Juice
VCL \leq 2000	18.60	23.86	14.91	23.84	27.86	19.57
VCL 2001-5000	14.73	19.21	27.06	19.36	23.56	31.06
VCL >5000	15.42	22.77	35.18	20.77	26.94	38.58

Source: Kantar World Panel

Note: CSDs such as Pepsi, Coca-Cola, Fanta, Limca, Thums Up; mango-based drinks such as Frooti, Slice, Maaza; juices such as Real and Tropicana

As observed from the above trends, there is shift from CSDs towards other SSBs that may/may not have the same/higher sugar content. It is, therefore, important to differentiate between healthy and less healthy beverages such that it can be aligned with GST rates. Moreover, clubbing non-alcoholic beverages with tobacco products in a country where there is a large informal sector for carbonated beverages is preventing the growth of formal sector, especially start-ups.

4. Recommendations and the Way Forward

Based on data and evidence, this section recommends measures that can help in (i) increasing government GST collections, (ii) limit the intake of added sugars in beverages, and (iii) support innovation and investment towards production of healthier beverages and the overall growth of the sector.

Globally, there is consensus among policymakers on the need to have a sugar-based/layered tax on CSDs. The data shows that 'regular cola carbonates' had a less than 5 per cent growth rate between 2011 and 2021, which is low. At the same time, around 80 per cent of the market is in the informal sector. Indian consumers are becoming more health conscious and are ready to explore new products like low/no sugar carbonated beverages and fruit-based carbonated beverages. Hence, there are opportunities for the country to increase the manufacture of different varieties of CSDs, including low-sugar varieties, which can increase the revenue of the sector, investment in manufacturing and create jobs. Thus, a layered tax model based on added sugar content in CSDs can promote growth.

Global studies show that while designing robust tax and subsidy policies, many factors should be considered, including the impact on tax revenue, ease of tax collection, positive health outcomes, support for manufacturing and product reformulation, portion size (encourage lower quantity consumptions), its effectiveness in driving consumers towards healthier products, exclusion list (products that are excluded from layered-sugar tax such as milk-based product), etc. Fiscal policy also has to be holistic and for taxation categories has to be clearly defined.

The effect of a high tax on a high sugar drink might be nullified if a subsidy is provided on sugar used for beverage processing, thus taking away any health benefit of a high tax.

For designing a successful policy on SSB taxation, the aim should be to drive consumers towards alternatives and options that are healthier. The introduction of taxes proportionate to sugar content in CSDs can lead to consumers opting for healthier choices, potentially improving public health and lowering government expenditure on health.

Even if the product is made expensive through taxes, consumers may continue to consume these products unless there are alternatives in the market. Hence, alternatives and reformulated products should be made cheaper.

Once the taxation policy has been designed, the potential impact of this policy must be considered. GST has been in operation for some time now but lack of data on tax collection by product categories makes it difficult to understand its impact and consequently, making it difficult to design a robust tax regime. There is a need for research on changes in prices, consumption, sales and tax revenue collection in India. If sufficient data is available on sales, consumption and tax collection in public domain, it would make it easy to estimate the cost

of the policy itself, enabling its comparison with the estimated costs of other interventions designed to promote healthier consumption.

To conclude, there is an urgent need to have a layered tax on CSDs based on sugar content. Such a layered tax structure is needed to separate healthier products from the less healthy products, to promote the production and sale of healthier alternatives and to enable and encourage consumers to opt for low and no sugar beverages. A lower tax on healthy products may lower prices and, therefore, increase consumption besides providing incentives to producers to shift production to healthier options.

While there are many examples of best practices of layered SSB taxation globally, discussions with stakeholders indicated that the GST council may specifically look at the examples of three countries, namely, the UK, Thailand and the Philippines, in the context of designing a layered-sugar tax. These countries have imposed excise duties. In the Indian context, GST has been a path breaking initiative to make the country a single market. GST is a consumption-based tax, which implies that the tax burden is shared by the consumer and supplier. Hence, theoretically GST is the most efficient way of increasing the prices of relatively unhealthy CSDs, unless such taxation is accompanied by subsidies on inputs like sugar that reduce the impact of higher taxes on less healthy products.

One of the core objectives of taxation is to optimise revenue collection and prevent revenue leakage. In case of India, 80 per cent of the sector is informal and there are a large number of counterfeit products. Hence, there is revenue leakage, which is evidenced from the low tax collections from this sector. The leakages and counterfeit products are more for carbonated beverages and water. A moderately high tax can help to formalise the sector. There is a need to have stricter control on counterfeit products.

Given that new products are coming up in the market, there is also a need to review/reclassify the category of “other non-alcoholic beverages” in current GST rates by sugar content.

There is no data on “per capita consumption” of different beverages based on their sugar content. Unless that information is available along with the data on revenue collection across different types of beverages, it is difficult to design a tax by volume. Hence, there is a need to make such data widely available for nutritionists and public health experts to analyse the fiscal policy implications.

The FSSAI, ICMR-NIN and other health organisations should work with the GST council to have a layered-sugar tax for CSDs. Specifically, the FSSAI must work with the GST Council to align taxation with regulations.

**Figure 4.1: Recommended GST Rates for Sweetened Beverages (including CSDs):
Added Sugar-based Layered Tax**

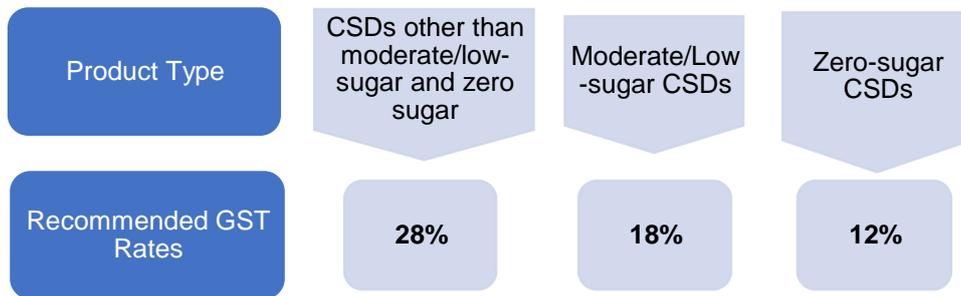


Figure 4.1 shows that products with moderate sugar level can be taxed at 12 per cent or 18 per cent, depending on the sugar level. High sugar products can continue to be taxed at the highest tax bracket of 28 per cent.

With the application period for compensation cess being extended till March 2026, it has led to increased period of tax burden on this industry. Overall, the compensation cess of 12 per cent should be removed from CSDs to facilitate more investment, job creation and innovation. This will also help start-ups to enter and invest in this sector. Overall, tax rates in India need to be compared with those in ASEAN and other countries to give Indian manufacturers a level playing field with their global competitors.

A committee of key policymakers/representatives of core government bodies, international experts, tax and health experts may be set up to design the layered tax slabs for the purpose of sugar-based/layered GST.

Global examples show that layered taxes have a positive impact on formalising the sector, increasing revenue, product reformulation to low-sugar products and sales; it can also reduce the burden on low-income groups to make the regime less regressive. In countries like the UK when the tax authorities announced a layered-sugar tax to be imposed after two years, industry reformulated their products and tax revenue also increased. These examples may be reviewed by Indian tax authorities.

To conclude, positive health outcomes is important for a country with the highest population. Taxes should not be regressive in their impact and should be used to guide price sensitive Indian consumers towards healthier product options. Taxes should be designed in a way that helps to formalise the sector and reduce the scope for tax evasion. Implementation and enforcement should such that there is no tax leakage. GST in consultation with stakeholders' can come up with an implementation plan for the layered tax. It is also important to have clarity on the product sub-categories, portion sizes/volume consumed, etc. This can be done through multi-stakeholders' consultations. Along with a layered-sugar tax for CSDs, it is important to develop consumer awareness on balanced calorie intake and physical activity to achieve positive health outcomes. An evidence-based, data driven tax policy will help India to achieve a positive health outcome.

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Appendix A

Table A1: Countries with Tax Rates Lower than India: Some Examples

Country	Region of implementation	Tax category	Products subject to tax	Definition of Sugar used for Tax Purposes	Tax slabs (by sugar content or volume of liquid)	Excluded products
Brazil	National	Ad-valorem Excise tax	Waters (whether sweetened or not), carbonates, sports drinks, energy drinks, concentrates.	N.A.	Tax structure has slabs based on the type of beverage: <ul style="list-style-type: none"> • 2.6% on beverages and carbonated unsweetened waters • 8% on concentrates for preparing drinks. 	Juices, coconut and other plant waters, soy milk, RTD tea and coffee.
Catalonia (Spain)	State/Province	Specific Excise	Soft drinks, flavoured water, chocolate drinks, sports drinks, cold tea and coffee drinks, energy drinks, fruit nectar drinks, vegetable drinks, sweetened milk, alternative milk drinks, milkshakes, and milk drinks with fruit juice	Free Sugars	Tax structure with slabs based on sugar content: <ul style="list-style-type: none"> • €0.08 per litre for drinks with 5–8 g per 100 ml sugar, • €0.12 per litre for drinks with >8 g per 100 ml. 	Natural fruit juices, sugar-free soft drinks, and alternatives to milk with no added caloric sweeteners.
Chile	National	Ad-valorem Excise	Non-alcoholic drinks with added sweeteners including energy drinks and waters	N.A.* ²⁰	Tax structure has slabs based on sugar content. <ul style="list-style-type: none"> • 10% on SSB with <6.25 g total sugar per 100 ml • 18% on SSB with >6.25 g total sugar per 100 ml 	100% fruit juice, dairy-based beverages, unsweetened waters
Finland	National	Specific Excise	Non-alcoholic beverages, including water beverages, juices, concentrates and powders intended for preparing beverages, sports drinks, energy gels, and soy and oat beverages	Free Sugars	Tax structure has slabs based on volume of product: <ul style="list-style-type: none"> • €0.13 per litre on sugar-free soft drinks (LCSBs) and unsweetened mineral waters; • €0.32 per litre on sugar-containing soft drinks; • €0.32 per litre on juices under HS 2009, €0.13 per litre on sugar-free juices; • €2.04/kg on solid concentrates, • €1.13/kg on sugar-free solid concentrates. 	Unflavoured milk

²⁰ Source: <https://www.bcn.cl/leychile/navegar?idNorma=1071503> (last accessed 19 September 2023)

Country	Region of implementation	Tax category	Products subject to tax	Definition of Sugar used for Tax Purposes	Tax slabs (by sugar content or volume of liquid)	Excluded products
France	National	Specific Excise tax	Non-alcoholic beverages containing added sugar or sweeteners, including sodas, fruit drinks, flavoured waters, and 'light' drinks	Free Sugars	Tax structure with slabs based on sugar content: <ul style="list-style-type: none"> • €0.03 per L for beverages containing ≤1 g sugar per 100 ml, • up to €0.2412 per L for beverages containing 15g sugar per L. • Additional €0.0205 per kg added sugar on beverages containing >15g sugar per L; • €0.03 per L on non-calorically sweetened drinks; • €0.0054 per L on natural or artificial waters. 	100% juices, milk-based drinks, concentrates
India	National	GST	All non-alcoholic beverages except coconut water	Added sugars ²¹	Tax structure has slabs based on the type of beverage <ul style="list-style-type: none"> • 28% on sweetened water-based and caffeinated beverages, • 8% on unsweetened waters; • 12% on fruit juices, whether or not containing sweeteners, soya milk drinks, fruit pulp or fruit juice-based drinks, and beverages containing milk • Additional 12% compensation cess applies on sweetened carbonated waters 	Coconut water
Ireland	National	Specific Excise tax	Non-alcoholic, water-based and fruit-based drinks with added sugar content ≥5 g per 100 ml; Plant protein drinks and drinks containing milk fats with <119mg calcium per 100ml; Concentrates intended for preparation	Free Sugars ²²	Tax structure has slabs based on sugar content. <ul style="list-style-type: none"> • €16.26 per hectolitre on drinks containing 5-8 g sugar 100 ml • €24.39 per hectolitre on drinks containing ≥8 g sugar per 100 ml 	100% fruit juices, plant protein and milk-based drinks with calcium content > 119mg/l, LCSB, plain water

²¹ Source: <https://cbic-gst.gov.in/gst-goods-services-rates.html> (accessed 19 September 2023)

²² Source: <https://www.revenue.ie/en/tax-professionals/tdm/excise/sugar-sweetened-drinks-tax/sugar-sweetened-drinks-tax-general-ssdt-compliance-procedures-manual.pdf> (accessed 19 September 2023)

Country	Region of implementation	Tax category	Products subject to tax	Definition of Sugar used for Tax Purposes	Tax slabs (by sugar content or volume of liquid)	Excluded products
Malaysia	National	Specific Excise tax	Beverages with >5 g sugar per 100 ml, milk-based drinks with >7 g sugar per 100ml, and juices with >12 g added sugar per 100 ml; pre-mixed preparations of chocolate or cocoa, malt, coffee and tea with sugar content >33.3g/100g	Added Sugars ²³	Tax structure has slabs based on volume of products. <ul style="list-style-type: none"> • MYR 0.40 per litre on beverages with >5 g sugar per 100 ml • milk-based drinks with >7 g sugar per 100ml, and fruit or vegetable juices classified with >12 g added sugar per 100 ml • MYR 0.47 per 100g on pre-mixed preparations with sugar content >33.3g/100g per 100 ml 	SSB under HS2202 with <5g sugar per 100ml; Milk-based drinks with < 7g sugar per 100ml; Juices with < 12 g sugar per 100ml; Unsweetened waters.
Philippines	National	Specific Excise tax	Beverages made with caloric and non-caloric sweeteners, including sweetened juice drinks, sweetened tea, all carbonated beverages, flavoured water, energy and sports drinks, powdered drinks not classified as milk, juice, tea or coffee, cereal and grain beverages, and other non-alcoholic beverages that contain added sugar.	Added sugars ²⁴	Tax structure with slabs based on volume of product. <ul style="list-style-type: none"> • PHP 6 per litre (around US\$0.12) on drinks containing sugar and low/no sugar variants with sugar substitutes; • PHP 12 per litre (around US\$0.24) on drinks containing high fructose corn syrup (HFCS). 	All milk products whether sweetened or not, including plain milk, infant formula milk, follow-on milk, growing-up milk, powdered milk, ready-to-drink milk, flavoured milk, fermented milk, soy milk and flavoured soy milk; 100% natural fruit and vegetables juices without added sugar or caloric sweeteners; meal-replacement and medically indicated beverages; ground coffee, instant soluble coffee and pre-packaged powdered coffee products; and beverages sweetened with coconut sap or stevia glycosides.
Portugal	National	Specific Excise tax	Mineral, flavoured, and carbonated waters containing added sugar or sweeteners; concentrates in liquid,	Free Sugars	Tax structure with slabs based on sugar content:	100% juice, milk, dairy alternatives

²³ Source: [https://nutriweb.org.my/mjn/publication/27-1/Vol 27\(1\) 15. mjn.2020.0040 Safiah \(final\).pdf](https://nutriweb.org.my/mjn/publication/27-1/Vol 27(1) 15. mjn.2020.0040 Safiah (final).pdf) (last accessed 19 September 2023)

²⁴ Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6357562/- :~:text=Definition%3A sugar-sweetened beverages where, sugar is added by the manufacturers.> (last accessed 19 September 2023)

Country	Region of implementation	Tax category	Products subject to tax	Definition of Sugar used for Tax Purposes	Tax slabs (by sugar content or volume of liquid)	Excluded products
			powder or solid form intended for the preparation of beverages.		<ul style="list-style-type: none"> • €1.05 per hectolitre on products containing <25g sugar per L • €6.32 per hectolitre on products containing 25-50g sugar per L • €8.42 per hectolitre on SSB containing 50-80 g sugar per L • €21.07 per hectolitre on SSB containing ≥80 g sugar per L. • Liquid concentrates: €6.32/hl, €37.93/hl, €50.56/hl and €126.42/hl, depending on sugar content, respectively (<25g per L, 25-50g per L, 50-80g per L, ≥80g per L) • Powder concentrates: €10.54/hl, €63.21/hl, €84.28/hl and €210.71/hl, per 100kg net weight, depending on sugar content, respectively (<25g per L, 25-50g per L, 50-80g per L, ≥80g per L) 	
South Africa	National	Specific Excise tax	Sugary beverages (mineral and aerated waters containing added sugar or other sweeteners or flavours and other non-alcoholic beverages) and concentrates that contain >4 g sugar per 100 ml	Added caloric sweeteners ²⁵	Tax structure with slabs based on sugar content. <ul style="list-style-type: none"> • ZAR 0.021 per gram of sugar over 4 g per 100 ml. • First 4g of sugar per 100ml levy free. 	Juices (whether sweetened or not), milk-based drinks, unsweetened waters, LCSBs
Spain	National	VAT	Drinks containing added natural and derived sweeteners and/or sweetening additives.	Free Sugars	21% fixed tax rate on all products.	Milk-based drinks, 100% juices.
Sri Lanka	National	Specific excise tax	Non-alcoholic, non-milk-based beverages sweetened with sugars or other low/no sugar variants with sugar substitutes	Free Sugars ²⁶	Tax structure with slabs based both on volume of product and sugar content.	Milk-based drinks, unsweetened waters.

²⁵ Source: <https://researchspace.ukzn.ac.za/xmlui/handle/10413/18178> (last accessed 19 September 2023)

²⁶ Source: https://www.who.int/docs/default-source/searo/obesity/technical-report-taxation-for-sugar-sweetened-beverages-in-sri-lanka.pdf?sfvrsn=ca7d262b_2 (last accessed 19 September 2023)

Country	Region of implementation	Tax category	Products subject to tax	Definition of Sugar used for Tax Purposes	Tax slabs (by sugar content or volume of liquid)	Excluded products
					<ul style="list-style-type: none"> Rs. 12 per litre or 30cts per gram of sugar, excluding first 6g per 100ml, whichever is higher, on beverages under HS 2202.10 and energy drinks (HS 2202.99.30). 30cts per gram sugar, excluding 8g per 100ml on beverages based on fruit and vegetable juices. 	
Thailand	National	Mixed excise tax	Non-alcoholic beverages, including juices, coffee and tea, concentrates intended for preparation, whether or not containing added sugars or other sweeteners	Total Sugar ²⁷	<p>Tax structure has slabs based on sugar content.</p> <ul style="list-style-type: none"> A base tax rate is applied according to the type of beverage. Additional specific tax on all drinks with >6 g total sugar per 100 ml THB 0.10 per litre on SSB containing 6–8g sugar per 100 mL; THB 0.30 per litre on SSB containing 8–10g sugar per 100 ml THB 0.50 per litre on SSB containing 10–14g sugar per 100 ml THB 1 on SSB containing >14g sugar per 100 ml. <p>Rate increases every two years until 2023 when following rates will apply</p> <ul style="list-style-type: none"> THB 1 per litre on SSB containing 6–8g sugar per 100 ml THB 3 per litre on SSB containing 8–10g sugar per 100 ml THB 5 per litre on SSB containing >10 g per 100 ml. 	
UK	National	Specific excise tax	Any pre-packaged soft drink with added sugar containing at least 5 g of total sugars per 100 ml. Added sugar defined as mono or	Added sugar ²⁸	<p>Tax structure with slabs based on sugar content.</p> <ul style="list-style-type: none"> £0.18 per litre on drinks with 5–8 g total sugar per 100 ml 	Milk-based drinks with >75% milk, milk substitute drinks (e.g., plant-based milk), pure fruit juices or any other

²⁷ Source: <https://www.excise.go.th/cs/groups/public/documents/document/dwnt/mjk4/~edisp/uatucm298729.pdf> (last accessed 19 September 2023)

²⁸ Source: <https://www.instituteforgovernment.org.uk/article/explainer/sugar-tax> (accessed 19 September 2023)

Country	Region of implementation	Tax category	Products subject to tax	Definition of Sugar used for Tax Purposes	Tax slabs (by sugar content or volume of liquid)	Excluded products
			disaccharides, or anything (other than fruit juice, vegetable juice and milk) that contains sugar, such as honey		<ul style="list-style-type: none"> • £0.24 per litre on drinks with >8 g total sugar per 100 ml 	drinks with no added sugar, alcohol substitute drinks, LCSB, and soft drinks of a specified description which are for use for medicinal or other specified purposes. Producers with <1 million litres/year exempt.
USA						
Berkeley	City	Specific Excise tax	Soda, energy drinks, and heavily pre-sweetened tea to which one or more caloric sweeteners has been added and that contains at least 2 calories per fluid ounce, as well as caloric sweeteners used to produce them.		Tax structure with slabs based on volume of product. US\$1 per ounce.	Milk-based drinks, LCSB, 100% fruit and/or vegetable juice.
Oakland	City	Specific Excise tax	Any beverage to which one or more caloric sweeteners have been added and that contains ≥25 kcals per 12 fluid ounce. Includes sodas, sports drinks, sweetened teas, and energy drinks.		Tax structure with slabs with volume of the product. US\$1 per ounce	Milk-based drinks, LCSB, 100% fruit and/or vegetable juice.

Source: Compiled by Authors from various sources



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