



Executive Summary

Contribution of Non-alcoholic Beverage Sector to Indian Economic Growth & Atmanirbhar Bharat

A Report by
Indian Council for Research on International Economic Relations

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EXECUTIVE SUMMARY

1. Background

India's aspiration to be a global leader in food processing and non-alcoholic beverages is a core component of the food processing industry. On the supply side, India is the largest global producer of several raw materials such as banana, mango, lime, lemon, papaya, milk and sugar used in manufacturing non-alcoholic beverages. Beverage processing will not only help reduce the wastage in the supply chain but enable the doubling of farmers' income, create jobs, and enhance investment in manufacturing. On the demand side, with a large middle-class and young consumers who are willing to experiment with different products, India is an attractive investment destination for beverage companies. In the past decade, many global and domestic companies, including start-ups, have invested in this sector and are experimenting with different products focusing on juice-based carbonated drinks, sports drinks, energy drinks, organic drinks, pulp/puree-based beverages, zero-calorie/no sugar drinks and other varieties of nutritious products. The government is supporting the sector through various schemes and subsidies. Yet, domestic production is much below potential and that of other developing countries in Association of Southeast Asian Nations (ASEAN) and exports are low. Estimates of the Ministry of Food Processing and Industries show that around 25 per cent to 30 per cent of fruits and vegetables are wasted in the supply chain.

Objective

The objective of the report is to understand the contribution of the non-alcoholic beverages sector towards the Indian economy, examine the strengths and best practices, identify challenges and suggest a way forward to make India one of the world's leading beverage processing hub as the country sets its vision for Amrit Kaal – India @2047

2. Methodology

The study is based on secondary data analysis and a primary survey. The secondary data has been used to (a) examine growth, recent trends and developments in the sector, globally and in India; (b) analyse retail sales, consumption trends and trade flows; (c) forecast future growth trends under different growth scenarios; and (d) examine the economic impact of the sector in terms of its contribution to the national economy through an input-output (IO) model.

Given the lack of disaggregated data on the non-alcoholic beverage sector, the primary survey captured the contribution

of the sector to the economy, perception of the companies and their supply chain partners, issues that they face and what factors will enhance investment in this sector and help India develop as a global manufacturing hub. The survey covered 20 companies, 21 supply chain partners and over 500 farmers across the six states of Karnataka, Bihar, Andhra Pradesh, Himachal Pradesh, Tamil Nadu and Maharashtra. Farmers were divided into two equal groups – those in the supply chain of the beverage companies and those located in close proximity and producing the same crop but not a part of the supply chain of the beverage companies.

3. Key Findings

3.1 Global Overview

The global non-alcoholic beverage market was worth USD1180 billion in 2020 and is projected to reach USD2175 billion in 2026, with a compound annual growth rate (CAGR) of 7.3 per cent. In 2019, the United States of America (USA), China, Japan, Germany and the United Kingdom (UK) were the top five revenue generating markets, while India ranked 19th, much below other developing countries like Mexico (6th), Brazil (7th), Indonesia (8th) and Nigeria (10th). Global trade was USD77.36 billion in 2019.

Over 60 per cent of the global market was accounted for by carbonated soft drinks (CSDs), ready-to-drink (RTD) tea/coffee, energy drinks and sports drinks. The per capita consumption of CSDs is lower in India compared to other countries like the USA. Mineral water (packaged drinking water/ natural mineral water) has the highest growth projection in Asia, with India being one of the largest markets. Globally, there is an increase in health awareness and companies are innovating new products to cater to such need, leading to a proliferation of nutritious products. Sales through e-commerce channels are growing; there was a 50 per cent growth in sales through e-commerce between 2019 and 2020.

Limited Exports – Huge Untapped Potential

By product categories, in 2020, in fruit and vegetable juices (HS code 2009), India ranked 59th among global exporters while Brazil ranked first; in natural or artificial mineral waters and aerated waters (HS code 2201), India ranked 65th while France is the topmost exporter followed by China. Thus, in spite of being the topmost producer of many raw materials, India is a small player in global trade.

The report examined the regulations and best practices of several developed and developing countries and found that high taxes on sugar sweetened beverages (SSBs) have given mixed results, with high incidence of the burden of taxation on lower-income groups. The impact of higher taxes vary depending on the price elasticity of the product, income group and consumer purchase behaviour. Therefore, countries have adopted labelling, awareness campaigns and advertisement regulations to make consumers aware of high sugar content foods. International brands have been roped in by countries to make commitments to reduce sugar. Tax concessions and subsidies are given to healthier products.

3.2 Indian Market

In India, around 80 per cent of the non-alcoholic beverage sector is non-corporate/informal; therefore, it is difficult to estimate the sales and revenues of this sector. The sector has been growing between 2010 and 2019 at a growth rate of 14.5 per cent in terms of total sales volume, and 13.72 per cent in terms of total sales value. The market size was valued at USD12.15 billion in 2019 compared to USD3.5 billion in 2010. By product categories, Indians consume carbonated beverages the most, followed by bottled water and fruit beverages and juices. The growth rate is lower in the case of CSDs, while consumption in segments like mineral water, sports drinks, and tea/coffee based drinks is increasing. Existing companies are diversifying their product portfolio and many start-ups and small and medium-sized enterprises have entered this sector in the last 10 years. The survey found that 35 per cent of the companies have introduced new products in the Indian market, which include zero-sugar/sugar free products and other products like tea/coffee based drinks and organic drinks.

The study found that the non-alcoholic beverage sector contributes significantly to the Indian economy in terms of value addition and job creation. The combined value added to the economy is estimated at INR7,91,539 million from upstream and downstream effect. The total job creation from this sector is estimated to be 6,91,491, which includes employment creation both in the upstream and downstream operation. The labour to output ratio for the non-alcoholic beverage sector is 0.49, which means that in order to produce INR1 crore of output in this sector, an estimated 4.9 persons are directly employed in this sector. The Input-Output model estimates that for every INR1 crore of output produced in the “non-alcoholic beverage sector”, a total of 8.9 additional jobs are created in the economy due to both the direct as well as indirect impact. However, employment creation is still below potential, as processing is much lower than in other developing countries in the ASEAN or in China. Foreign investment inflows are below one per cent and exports are much behind what is required for India to become a USD17 trillion economy by 2047.

India's Exports vs. Exports from China and Thailand in 2020 (USD Million)

Country	HS Code 2009: Fruit Juice/ Vegetable Juices	HS Code 2201: Waters: natural or artificial mineral waters and aerated waters: without added sugar or sweetening matter	HS Code 2202: Waters: mineral and aerated waters: with added sugar or sweetening matter
China	541.32	660.10	202.79
Thailand	560.76	23.37	1,605.45
India	9.46	0.45	19.98

India's per capita sales (21.36 litres in 2018) is much lower than per capita sales in other developing countries like Philippines (111.89 litres) and Vietnam (69.75 litres). India's revenue per person was only USD8.89 in 2019, compared to around USD1030 in the USA, USD67.05 in China, USD148.94 in Brazil and USD275.20 in Mexico. While the market share of CSDs is the highest, the highest socio-economic class (SEC A) is moving away from the consumption of CSDs.

Purchase Volume by Socio-Economic Groups: CAGR (2012-13 to 2019-20) in Percentages

	Carbonated Soft Drinks	Mango-Based Drinks	Juices
SEC: A	-2.59	3.96	1.42
SEC: B	3.49	3.49	10.98
SEC: C	6.73	4.23	15.33
SEC: D/E	13.74	17.79	13.78

From a taxation perspective, if the highest socio-economic group is reducing the consumption of CSDs while lower socio-economic groups are increasing their consumption, higher taxes can be regressive.

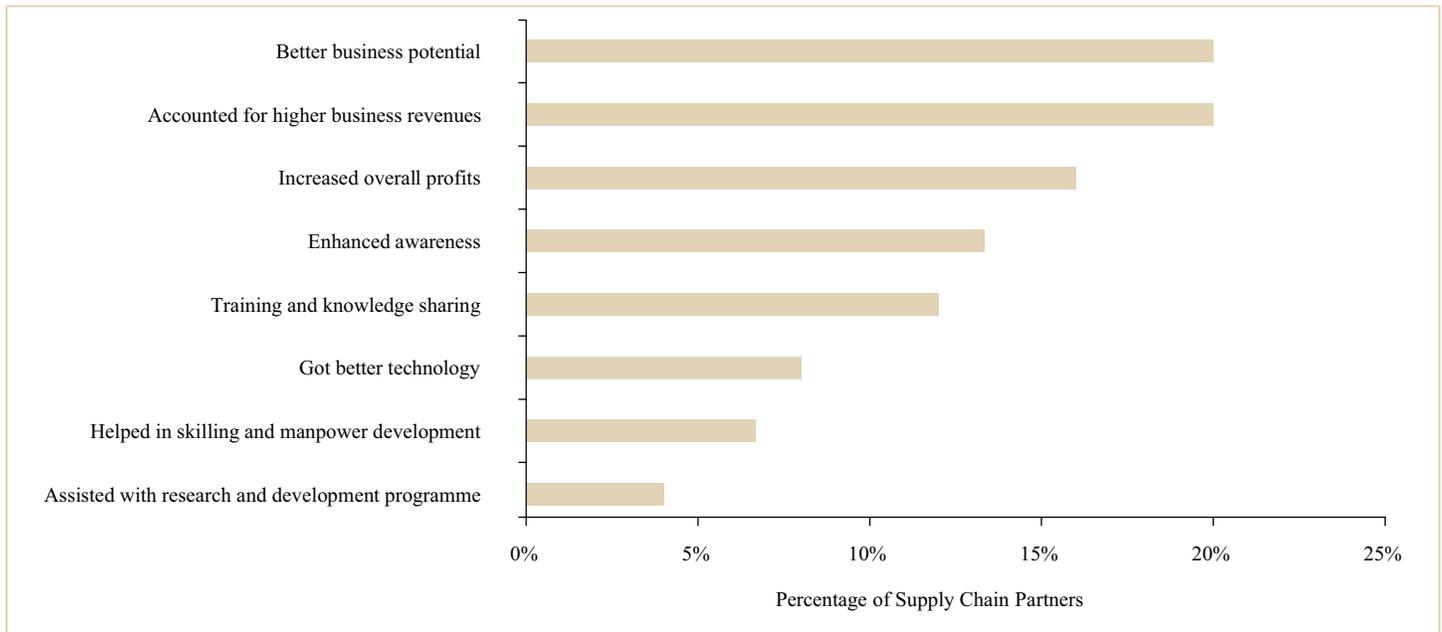
A growth forecasting model with three scenarios, namely realistic, optimistic, and pessimistic from 2020 to 2030 found that if the GDP grows at 7.88 per cent, 9.76 per cent, and 6.0 per cent respectively, the sector is expected to grow at 8.70 per cent in the realistic scenario, 10.77 per cent in the optimistic scenario and 6.66 per cent in the pessimistic scenario. The size of the market was estimated at INR671 billion in 2019, which is projected to reach around INR1472.33 billion in 2030, in the realistic scenario. Overall, the growth estimates have slowed down compared to the previous recorded growth of over 13 per cent for 2010-2019. Within similar food product categories, the growth of non-alcoholic beverages is lower than others like chocolate and sugar confectionery and salty snacks.

In the Financial Year (FY) 2018, 2019 and 2020, large companies in the CSD business have seen a decline in revenue, but small companies with innovative products in the beverages sector have seen revenue growth. Despite the highest tax rate of 40 per cent, tax contribution from CSD has declined in the past three years due to inadequate revenue growth.

4. Supply Chain Partner Survey

The supply-chain partners of the non-alcoholic beverage companies range from farmer producer organisations (FPOs),

Benefits to Supply Chain Partners: Primary Survey



Note: Multiple choice question.

contract manufacturers, packaging companies, and logistics service providers, to wholesalers/distributors. The survey showed that supply chain partners had several benefits from the partnership with non-alcoholic beverage companies – 32 per cent of the respondents attribute the share of contribution of the non-alcoholic beverage sector to their business to be above 50 per cent but below 75 per cent, while 21 per cent of respondents felt that the share is above 75 per cent but below 99 per cent. Around 16 per cent of the respondents were completely dependent on such collaborations for 100 per cent of their revenues.

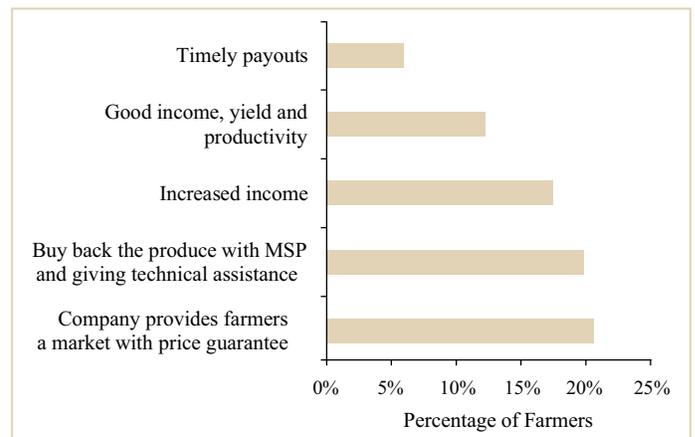
5. Farmers’ Survey

Several of these non-alcoholic beverage companies source their fruits/vegetables and other raw materials directly from farmers. The greatest benefit the farmers received was a confirmed market with price guarantee. Farmers in the supply chain said that 51-75 per cent of their income comes from fruits supplied to non-alcoholic beverage companies and a majority saw an increase in productivity through various projects supported by these companies. These farmers are also more likely to export, have higher income and lower household debts.

Apple farmers in the supply chain of the non-alcoholic beverage companies got a 20 per cent higher yield per hectare following training by beverage companies, 5 per cent higher prices and earned 59 per cent more income per harvest season, vis-à-vis their counterparts located in the same district. In the case of mangoes, there has been 8 per cent higher yield and 23 per cent higher price for those in the company supply chain.

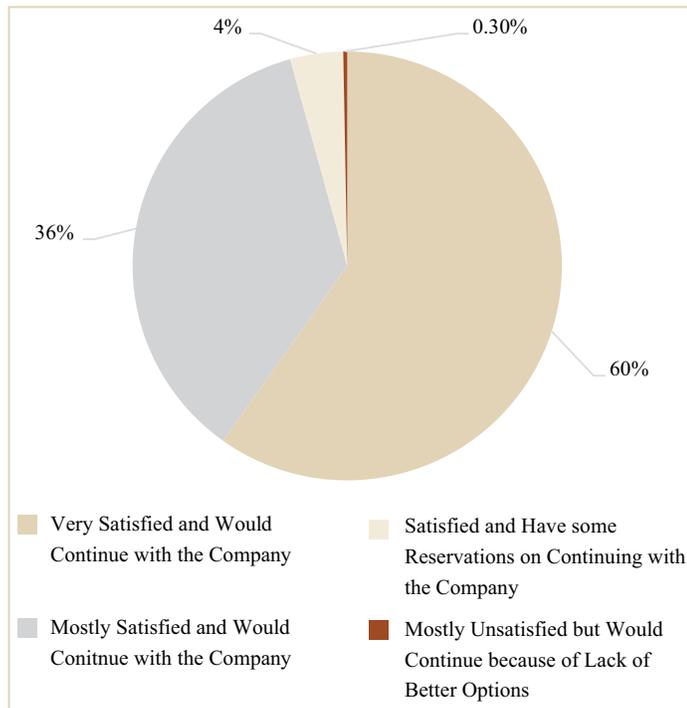
Benefits vary by product category and duration of engagement. Around 62 per cent of farmers received high yielding plant material from the companies. The other key areas of support included technology and equipment for drip irrigation.

Top 5 Benefits of Contract Farming for Farmers



Farmers identified the need for government support in three areas (a) financial assistance (b) training and knowledge enhancement and (c) logistics and transportation. Private partnership can play a major role in training, increasing productivity and improving infrastructure.

Overall Experience of Working with the Non-alcoholic Beverage Companies



6. Challenges

The top four challenges to the growth of this sector are (a) unfair competition from the unorganised sector and counterfeit products (b) negative perception regarding the industry (c) high goods and services tax (GST) and additional “sin tax” (as applied based on the Subramaniam Committee Report) and (d) infrastructure related issues. While the government is trying to improve infrastructure, the other three issues continue to pull down the growth of this sector. Irrespective of the ingredients used and nutrition content or scientific study and evidence in the context of India, there is a negative perception that non-alcoholic beverages are detrimental to health. This perception is so high that the Subramaniam Committee Report of 2015, titled “Revenue-neutral Rate and Structure of Rates for Goods and Services Tax”, classified all carbonated drinks, irrespective of their nutrition content or sugar levels, as “sin goods” and imposed an additional compensation cess of 12 per cent as in the case of alcohol and tobacco while other food products like chocolates and sugar confectionery were not in this category. Along with this, the highest GST slab is imposed on CSDs of 28 per cent, taking the total tax burden to 40 per cent. At the same time, the largest segment, the unorganised sector, does not pay any taxes. To avoid taxes, there has been a large and growing counterfeit industry and the survey found gaps in (a) monitoring food safety and quality standards (b) trademark enforcement and protection and (c) efforts to bring the informal sector into a formal tax regime.

Most of the non-alcoholic beverages are taxed at a standard rate of 12-18 per cent or at the highest rate of 28 per cent. Further, in a country where there is a shortage of clean and safe drinking water, natural/mineral water and aerated water are taxed at 18 per cent when the quantity is less than 20- litres, but water

packed in a 20-litre bottle is taxed at 12 per cent (discouraging smaller purchases) whereas in other countries, it is taxed at an average of 5 per cent as it is part of the Sustainable Development Goals (SDG - 6). Cross-country comparative analysis shows that India has one of the highest tax rates in non-alcoholic beverages globally.

Tax-related Challenges and Impacts

- **Low Per Capita Consumption and Low Revenue Collection:** As high tax slabs are not based on an analysis of consumer demand, the per capita consumption on these beverages in India is low, and thus results in lower revenue collection through taxes.
- **Burden of Taxes on Low-Income Groups:** As the consumption of CSDs among the highest socio-economic class is reducing and that in the lower socio-economic class is increasing, the tax burden for revenue generation falls on the low-income groups.
- **Increase in Counterfeit Products:** The rise in the prices of non-alcoholic beverages coupled with low affordability of a majority of the consumers has led to the sale of spurious/counterfeit products on the basis of cost arbitrage.
- **Deterring Scale Expansion and Investments:** A high tax rate deters companies from expanding and increasing their investments, preventing India from becoming a global beverage production hub despite being a large producer of fruits and vegetables.
- **Lack of a Level-playing Field with Similar Food Products:** Although SSBs are clubbed with other food products such as chocolate and sugar confectionery items, irrespective of the beverage type and nutrition level, other food products with similar health impact are not treated as adversely as CSDs in the current tax regime.

Further, GST rates are not aligned with the Food Safety and Standards Authority of India’s (FSSAI) Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, which beverage companies need to comply with. This regulation states that 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. However, a carbonated/aerated beverage attracts 40 per cent tax (28 per cent GST plus 12 per cent compensation cess), irrespective of the percentage of fruit content.

7. The Way Forward

Taking into consideration India’s abundant supply of raw materials, its drive to promote manufacturing and the strong linkages of the non-alcoholic beverage sector with other sectors

like tourism and hospitality, government policies need to support and promote “Make in India”. In the Union Budget of 2023-24, the GST rates should take into consideration the fruit pulp/puree/juices bought from Indian farmers and nutrition levels, and taxes should be designed in a way that it drives consumers to healthy consumption. For example, carbonated sugar-based drinks can have the highest GST slab of 28 per cent, but those with pulps/puree/juices should be at a lower tax slab. At the same time, to attract investment in manufacturing, non-alcoholic beverages should be taken out of the category of “sin goods” proposed by the Subramaniam Committee Report of 2015 and put in the category of food products like chocolate and confectionery. Further, healthier products like fruit juices/ beverages or mineral water should be levied the lowest tax. The GST tax slabs must also be aligned with FSSAI regulations.

With abundant raw materials, India has a natural advantage in producing fruits and vegetable based products. Currently, non-carbonated fruit and vegetable based juices and beverages (containing fruit pulp/juices in the range of 10-100 per cent) has a market size of approximately INR12,000 crore in revenue.

At the policy level, there is significant focus on improving farmers’ income, which is possible only if beverage industry uses the fruit pulp/puree/juices bought from farmers, and hence, it is pertinent to look into taxes for beverages and juices made from fruits. To encourage the growth of the Indian fruit and vegetable based juice/beverage industry and Indian farmers, the report proposes that the tax on fruit pulp/puree-based products should be reduced to 5 per cent from 12 per cent, taking care of the inverted duty, if any.

It is important for the GST council to look at the data on their tax collection by different product categories over time, its impact on consumers of different income groups, and examine the experiences of other countries. Moderate taxation can lead to more revenue collection, enhance investment in R&D and product innovation, reduce supply chain wastages, increase farmers’ income and make India one of the leading world beverage hubs.

Consumers should be encouraged to consume healthier products through awareness building programmes, labelling, etc. Companies may be encouraged through a subsidy policy to produce healthier products. Beverage companies and their associations should actively participate in government initiatives like the “Eat Right Campaign” of the FSSAI. There is need for more partnerships between companies, their associations and the government to address the negative perception and promote India as the world’s beverage manufacturing hub and develop “Brand India” in this segment. There is need for more investment in research and product innovation and in linking more and more farmers to the domestic and export supply chain of beverage companies. As India signs multiple trade agreements, to promote exports, there is a need for a clear export strategy. Also, more partnership between companies, their association and the government, is required to address the negative perception and promote India as a leading global beverage manufacturing destination. The contributions of this sector need to be highlighted through regular data collection and presentation.

Anita Praveen, IAS



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Ministry of Food Processing Industries

Foreword

India has natural advantage to become a global non-alcoholic beverage processing hub. In terms of revenue generation by the sector, India ranks among the top 20 countries, with a compound annual growth rate (CAGR) of 14.5 per cent in terms of total sales volume and at 13.72 per cent in terms of total sales value in the past decade. With an increasing production of horticultural products, which was estimated to be 329.86 million metric tons in 2020-21, the highest ever, coupled with continuous government efforts to improve ease of doing business in the country, India can aspire and achieve its potential to be a global leader in the processing of non-alcoholic beverages. India also makes an attractive investment destination with growing per capita income, a large middle-class, the willingness of ever-growing young consumer segment to experiment with different products and evolving consumer lifestyle which are creating demand for ready-to-eat (RTE) and ready-to-drink (RTD) food products.

A study by the Indian Council for Research on International Economic Relations (ICRIER) has been commissioned by the Indian Beverage Association to analyse strengths, identify challenges and suggest a way forward for India in the field of processing of non-alcoholic beverages. Based on extensive data analysis, in-depth interactions with companies and their supply chain agents, and a field survey of farmers, the study has come out with some interesting findings. The sector faces unmet potential for growth and employment, less than one per cent foreign investment inflows and exports that are much behind what is required to become a USD17 trillion economy by 2047. The study also identified and analyzed some key issues such as the negative perception about the sector, large counterfeit product market, applicable goods and services taxes (GST) and requirement for alignment of the GST rates and the FSSAI product definition.

I hope that the findings of this report would help address the challenges in the growth and development of this sector and would be taken note of while designing the sector's tax policy. This would not only help the sector grow, but also make India one of the world's leading beverage processing hubs, aligned with the overall objective and vision for the food processing industry as we move towards "Amrit Kaal" for the next 25 years. I also extend my compliments to the ICRIER team for conducting a thorough study of the non-alcoholic beverage sector – both in terms of global best practices and the Indian market.

The Ministry of Food Processing Industries (MoFPI) targets supporting and encouraging the dynamic food processing sector. The ministry has launched a number of programmes in its endeavour like the most recent Production Linked Incentive scheme, to which the companies have responded positively. The sector can rest assured of ample support from MoFPI in its path of growth in future as well.

18 May, 2022

(Anita Praveen)

ABOUT THE AUTHORS



Arpita Mukherjee is a Professor at ICRIER. She has over 25 years of experience in policy-oriented research, working closely with the government in India and policymakers in the European Commission and its member states, United States (US), Association of Southeast Asian Nations (ASEAN) and in East Asian countries. She has conducted studies for international organisations, Indian industry associations, non-government organisations and companies.

Her areas of expertise include trade and investment, trade agreements, services, special economic zones, economic corridors, retail and food supply chain, start-ups and entrepreneurs, e-commerce, and cross-border labour mobility. She specialises in sector and product-specific market trends, go-to market strategies, and government policies.

Dr Mukherjee has a Ph.D in Economics from the University of Portsmouth, UK, and prior to joining ICRIER, she worked with the UK-based think tank, Policy Studies Institute, and taught at the University of Portsmouth. She has over 80 publications, including in national and international referred journals, books and book chapters and government reports. Dr. Mukherjee is a member of various government committees and policy panels and is on the editorial board of 10 journals. She has presented her work in various conferences and seminars and is on the advisory board of industry associations and non-government organisations. She is a regular contributor to newspapers and magazines.



Eshana Mukherjee is a Research Assistant at the Indian Council for Research on International Economic Relations (ICRIER). She has worked on projects for the Indian government, foreign governments, multilateral organisations and industry associations on India's trade, investment and trade barriers. She has conducted sector-specific studies covering sectors like food processing, information technology, nonalcoholic beverages and gems and jewellery. Her role in the projects include literature review, data analysis and report writing. Her research is a key input into policy making in India.

She has completed her M.Sc. in International Business Economics and Finance from the Gokhale Institute of Politics and Economics, Pune, and B.A (Hons.) Economics, from Jamia Millia Islamia, New Delhi.



Vishnu Menon is a Consultant at the Indian Council for Research on International Economic Relations (ICRIER). He has worked on projects on India's foreign direct investments, international trade and trade barriers for the Indian government, multilateral organisations and industry associations. He has undertaken sector-specific studies covering sectors like pharmaceuticals, information technology, insurance, defence and aviation. He has also collaborated in projects through drafting literature reviews, data analysis and report writing. He previously worked in corporate services in organisations such as Moody's Analytics and has been an independent political consultant focusing on agricultural economics and media strategy for a leading national political party.

He has completed his M.Sc. in International Finance and Economic Policy from the Adam Smith Business School, The University of Glasgow, United Kingdom.

About ICRIER

Established in August 1981, ICRIER is a policy-oriented, not-for-profit, economic policy think tank. ICRIER's main focus is to enhance the knowledge content of policy making by undertaking analytical research that is targeted at informing India's policy makers and also at improving the interface with the global economy.

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Food Processing will be a key sector in meeting India's goal of achieving inclusive growth as the country sets its vision for Amrit Kaal – India @2047. Non-alcoholic beverages are a key component of the food processing sector and the growth of this sector can make all its stakeholders, from farmers to small and medium producers, supply chain agents and consumers, a part of India's successful growth story.

India is the largest global producer of several raw materials used in manufacturing non-alcoholic beverages. Today, around 25 to 30 per cent of fruits and vegetables produced in the country are wasted in the supply chain. Beverage processing can help reduce this wastage, as it has in several other countries. The government has introduced schemes like Mega Food Parks and Production Linked Incentive Scheme and several start-ups with innovative products have come up in the non-alcoholic beverages sector. Yet, domestic production is below potential and that of other developing countries in the ASEAN region, and exports are low.

This report aims to understand the contribution of the non-alcoholic beverage sector towards the Indian economy, examine its strengths and best practices, identify challenges and suggest a way forward to make India one of the world's leading beverage processing hubs. The report is based on a review of global policies and best practices, secondary data and information analysis, and a primary survey of different supply chain agents, including farmers, companies, contract manufacturers and logistics providers.

The report for the first time brings forward a detailed study of the tax regimes of different countries and India's own GST regime to understand how taxes can impact the growth of the sector. Global studies show that high taxation, in the absence of complementary reforms, will not lead to positive health outcomes and can be regressive, with the tax burden falling disproportionately on lower income groups. It could also inhibit growth, innovation and investment. At the same time, moderate taxation can achieve revenue targets as well as other government objectives related to positive health outcomes, growth of food processing, investment in manufacturing and farmers' welfare. However, few studies have looked at the effects of taxation on the non-alcoholic beverage sector in India and policies are often not driven by research and evidence. This report aims to address this lacuna.

The report will help policymakers design the right policies, based on data and evidence, and align policies across different government agencies/ministries/departments. It identifies areas where industry and government can collaborate, which is a core area of the UN Sustainable Development Goal-17. It provides the academics and researchers with a comprehensive overview of the sector and the industry with an overview of the Indian market, and aims to foster debate and discussion on how India can become a world beverage processing hub.



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The Work is published by AF Press
in association with Indian Council for Research
on International Economic Relations (ICRIER),
New Delhi.

ISBN 978-93-327-0592-0

