Trade Agreements and Socioeconomic Realities and Concerns

Sub-Federal Concerns and Challenges in Product Substitutability

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India is expanding its mandate on the coverage and scope of Trade Agreements (TAs) by pacing the bilateral deals while maintaining its pace across the multilateral process. The gains would depend on specific key governance parameters, like the level of representation (feedback mechanism and interconnectedness), stage of development, and legislative strength. Trade agreements govern the rules-based commercial exchange of goods and services between two countries, primarily based on suitability, comparative advantage, and growth potential, which have significant social implications. When countries form a trade agreement, it has the potential to alter the prices. Price variations that cannot be neutralised after signing a trade agreement will alter producers' decisions on whether to source intermediaries as direct industry users or consumers. Price reductions depend on the types of cropping patterns; relatively long-gestation crops are severely impacted compared to crops with shorter gestation periods. Agricultural products can be categorised under two heads based on the impact on price and the quantum of the difference: the first being 'substitutable' products and the second being 'value-added products'. The paper provides a comparative analysis of coconut and palm oil (sole crop-dependent), assessing the livelihoods of populations in coconut-producing states.

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* The views in the paper are the views of the author alone and need not necessarily correspond to the views of the Institution. A similar paper has been presented at two different conferences, the first presentation was done at IIFT in 2017 and co-authored presentation along with Dr Rajan Sudesh Ratana and Dr Sachin Kumar Sharma and a further revised version of the paper was presented at an international conference titled "CDS Conference Kerala and the World Economy", February 4 – 5, 2021, Centre for Development Studies, Thiruvananthapuram, Kerala. It is accepted for publication as a part of the conference volume and a Chapter 3 in the edited volume by Routledge publishers titled "*Kerala Transforming: Labour and Trade Mobility in Times of Pandemic*".

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Abstract

Trade agreements do not merely deal with the rules-based commercial exchange of goods and services between two countries. However, they are also primarily based on sustainability, comparative advantage, and growth potential. When countries form a trade agreement, it has the potential to alter the price. Post-TA price variations can neutralise the will or alter final producers' decisions on sourcing intermediary products. This is particularly true when non-tariff measures, such as alternative trade policy tools, are non-existent, weak, or have low mandatory technical regulations, or are relatively lower than those of the partner country. This would alter the sourcing decisions of final producers operating within the economy regarding sourcing decisions (industry users and domestic consumers). Following a post-trade agreement, depending on its nature, depth, and scope, the two partners would establish a new equilibrium, effectively functioning as a single market for trade with a third country. When two unequal countries enter into a trade agreement (TA), the stronger of the two will prevail, and the economic structures and agents of the dominant partner will be integrated into those of the weaker partner. These could be related to value chain (VC) linkages, which would depend on the presence of organised industrial activity and its influence on the ongoing trade negotiations.

Price variations depend on the types of crops (commercial vs. non-commercial, vegetables), their relative lifespan, and their usage in upstream industries and by users. Such variation would be different across those with a longer gestation than crops with shorter gestation periods. When countries form a trade agreement, it has the potential to alter prices, and policymakers must take this into account when analysing the impact. The price of the agricultural commodity, which prevailed before the trade agreement, is based on the outcome of the balance between domestic production (supply) and consumption (demand). Price variations that can be isolated after a trade agreement is signed will alter producers' decisions as intermediaries, users, or consumers. The price of a product can change gradually over time or fluctuate significantly around the time of a trade agreement. Both these changes may impact the growers or producers. The trade agreement alters commodity prices, either upwards or downwards. Countries with relatively higher average tariffs (ad valorem) will take a more significant cut due to the elimination of these tariffs, which has the potential to alter market prices. The reduced prices could be very onerous for the population dependent on the product impacted. If it is a substitutable product which could be used without much alteration in the process and procedures, then such a decision would completely deny a reasonable price for those commodities affected by this transition.

In countries with high tariff protection, there is bound to be a shift away from traditional domestic sources of supplies. As a high-tariff country with deficient public policy barriers, India is bound to have products with such implications. Such products can be categorised under two heads based on the impact on price and the quantum of the difference, the first being raw and 'value-added products' with a list of 'substitutable' products. This paper attempts to establish and trace empirically price variations and their linkages from the global to the local level. The case of Kerala is examined, and the coconut oil case attempts to address some of the challenges, including market opportunities and governance structures regarding trade policies.

Keywords: Socioeconomic Impacts; Governance structure; channels of negotiations; agricultural products; Substitutes; Complements; free trade agreements.

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Trade Agreements and Socioeconomic Realities and Concerns

Product Substitutability Concerns and Challenges In Kerala's Agricultural Products

1 Introduction

India is expanding its mandate on the coverage and scope of Trade Agreements (TAs) by pacing the bilateral deals while maintaining its pace across the multilateral process. The hastened pace across many of the bilaterals requires additional focus on the economic activities and their associated challenges. Unlike multilateral negotiations, there is little time to generate a domestic narrative around bilateral trade deals and their impact on socio-economic activities and related challenges. The gains would depend on specific key governance parameters and built-in data-gathering mechanisms, such as the level of representation (including the feedback mechanism and the interconnectedness of socioeconomic agents), stage of development, and relative legislative strength.¹ The trade agreements often only factor in the consumer welfare gains achieved through tariff elimination or reductions, which, in practical terms, would mean increased imports under the trade agreement. Another dimension of the overall welfare from a trade agreement is the welfare of producers, which is challenging to address, as most developing economies have a significant informal economy segment. This imbalance is addressed appropriately and often compensated through a consultative process, leading to partial or biased analysis that manifests in the direction of trade flows, which is reflected in exports.

When countries form trade agreements for Goods, Services or Investments, it can potentially alter the domestic economy's delicate balance of commodity prices. The price variations that can be isolated after signing a trade agreement will alter producers' decisions as intermediaries, users, or consumers. There can be gradual changes over the years, as well as sudden changes around the signing of the trade agreements that affect a product's price. Products and commodities that experience a significant price reduction would face highly unfavourable situations compared to the prices in their partner's market.

¹ Dhar Biwajit and Murali Kallummal, Trade Policy off the hook: The Making of Indian Trade Policy since the Uruguay Round, a chapter in the edited book Process Matters: Sustainable Development and Domestic Trade Transparency, by Halle Mark and Wolfe Robert, International Institute for Sustainable Development (IISD), pp. 183-240, https://www.iisd.org/system/files/publications/process_matters.pdf.

These products can be categorised under two heads based on their impact on price and the quantum of the difference. The two categories are the 'complementary' and the 'substitutable' products. The commodity markets are said to be "more competitive" with a lower price, as most of the commodities belong to the raw materials category (FAO, 2004²).³ A direct outcome of the trade agreements, especially for consumers, is "decreasing market power" due to reduced price-cost margins. Especially in the case of India, at the global level, it is one of the top five producers of many agricultural products; however, its share in trade is not as prominent, except for a few commodities (FAO, 2000).^{4,5}

India had some significant free trade agreements (FTAs) from 2000 to 2011, and an analysis of price behaviour is essential to understanding the dynamics. An upward movement in commodity prices would mean gains for producers, while a downward movement would result in a loss for them.

This paper provides a framework for understanding international trade theories, which leads to an understanding of how substitutable and complementary products interact in global markets and their impact on the local economy, especially when trade agreements are signed. Furthermore, the paper will attempt to assess India's Free Trade Agreement (FTA) negotiations from an agrarian perspective, using the case of the Coconut and Palm oil trade, particularly under the India-ASEAN Trade in Goods Agreement. The paper is divided into three sections. The first section provides the theoretical underpinning of establishing substitutable and complementary products based on trade flows. The second section assesses the treatment of the agricultural sector under India's Free Trade Agreement (FTA). Understanding the market access issues would also involve analysing India's tariff profiles and FTAs separately. The third section deals with Kerala's economy, highlighting the importance of the agricultural sector as one of the key sources of livelihood, as the services-led source of income (remittances) has been adversely affected. This remittance economy not only boosts rural consumption but also raises the "reservation wage"—what workers are willing to accept locally. A kind of informal wage

² FAO (2004). The State of Agricultural Commodity Markets. United Nations Food and Argicultural Organisations, Rome,Italy. ISBN 92-5-105133-X. <u>https://openknowledge.fao.org/server/api/core/bitstreams/c5650298-9b97-44f6-8647-6d37678b1da2/content</u>.

³ Lower prices can be achieved by both FTA partners agreeing to reduce or eliminate tariffs across significant tariff lines. They can also be driven by easing domestic regulations, processes, and procedures, harmonising between partners, impacting costs, and indirectly reflecting prices.

⁴ FAO. (2000). Agriculture, Trade and Food Security Issues and Options In The WTO Negotiations from the Perspective of Developing Countries. Vol. II. Country case Studies: Commodities and Trade Division. Food And Agriculture Organization of the United Nations. <u>https://www.fao.org/4/x8731e/x8731e/x8731e07.htm#P4_37</u>.

⁵ Deepak, Nayar and Sen A.International Trade and the Agricultural Sector in India. **Economic and Political Weekly**.Vol. 29. No. 20 (May 14, 1994). pp. 1187-1203. <u>https://www.jstor.org/stable/4401202</u>.

standardisation, where the rural labor force compares opportunities not just locally, but also against wider regional and even global labor markets. The experience of the past FTA suggested that it is not just the agricultural products belonging to Chapters O2 to 10, which may be essential, but also some of the value-added products that make the policy effective. Value-added products have a significant influence on the pricing of raw agricultural products by creating new market opportunities, enhancing product value, and increasing farmer income. By transforming raw commodities into higher-value goods, farmers can achieve better price realisation and reduce post-harvest losses. ⁶

		ariff Bas	AIFTA Preferential Tariffs										
SN	Tariff Line			Not later than 1 January									
Э.IV			201	201	201	201	201	201	201	201	201	201	31.12
		nate	0	1	2	3	4	5	6	7	8	9	2019
1	CPO	80	76	72	68	64	60	56	52	48	44	40	37.5
2	RPO	90	86	82	78	74	70	66	62	58	54	50	45.0
3	Coffee	100	95	90	85	80	75	70	65	60	55	50	45.o
4	Black Tea	100	95	90	85	80	75	70	65	60	55	50	45.0
5	Pepper	70	68	66	64	62	60	58	56	54	52	51	50.0

Table 1: Treatment of Value Added Products under India-ASEAN

Source: Page 24, <u>https://commerce.gov.in/wp-content/uploads/2020/06/MOC_636205354502532516_ASEAN-India Trade Goods Agreement.pdf</u>.

Approximately 10 to 15 % of tariff lines under India's old FTAs are excluded from the preferential tariff treatment agreed upon between the partners. They are therefore traded on MFN tariffs, as shown in <u>Annexe Table 1.</u> This exclusion should be based on the identification of livelihood crops. In the case of Kerala, the analysis is based on agricultural value-added products, such as crude coconut oil (CCOs) and refined coconut oil (RCOs). The case highlights Kerala's concerns regarding its livelihoods from imported substitutable products, such as CPOs and RPOs, which are available at reduced tariffs under the AIFTA. India provided access to the CPOs and RPOs under special products, wherein the tariffs on these will be reduced but not eliminated.⁷ As shown in Table 1 below, the five products, most of which are products grown in Kerala or substitutable products, are covered by the trade agreement with ASEAN.

⁶ Jill K. Clark, Becca B.R. Jablonski, Shoshanah Inwood, Aiden Irish, & Julia Freedgood. 2020. A contemporary concept of the value(s)-added food and agriculture sector and rural development. Community Development. Taylor & Francis Online. Pp 186-204. December. 2020.<u>https://doi.org/10.1080/15575330.2020.1854804</u>.

⁷ Government of India, India-ASEAN Trade Agreements, Page 24, <u>https://commerce.gov.in/wp-content/uploads/2020/06/MOC 636205354502532516 ASEAN-India Trade Goods Agreement.pdf</u>.

These products experienced a surge in imports from ASEAN partners in India. (Francis, 2011; Kallummal & Ratna, 2012; Veeramani & Saini, 2012)^{8.9,10} The paper also attempts to trace some linkages from the global to the local level, in terms of price movements and market opportunities, for national states (India) and at the federal level (Kerala). Furthermore, there is an attempt to contextualise how the price of products (raw or finished) can have varying implications for agricultural products in general and at the most disaggregated levels, such as coconuts and coconut oil. Also, it points to the overall ecosystems beyond the natural and otherwise health advisories based on "scientific research."¹¹, which influenced consumption habits. It suggested that the livelihood of coconut farmers came under stress due to not just the ASEAN FTA but also the overall policies and the prevailing ecosystem. The impact is owing to the overall changes in the prices of raw coconut, nuts, and other value-added products. Therefore, in addition to FTAs, the author also identifies some connections to health advisories issued by the so-called scientific assessments on safe food.¹²

1.1 Methodology and Data Source

In the paper, we are keen to understand the content of agricultural tariff line participation in the FTA. Across most of India's FTAs until 2012, a considerable share of agricultural and allied products was not considered for preferential duty treatments through duty elimination or reduction commitments, except for the DFQF Scheme, wherein up to 97 % of tariff lines were provided with complete duty elimination. All existing literature on India has established that some farming and allied sectors have been negatively impacted, despite such products being categorised in the negative list of the FTAs. Therefore, the paper shifts its focus away from traditional calculations, such as the balance of trade or terms of trade, to the actual impact of changing prices and the challenges they pose for a largely agrarian economy, particularly one with a population heavily dependent on

⁸ Francis Smitha. (2011). A Sectoral Impact Analysis of the ASEAN-India Free Trade Agreement. Economic and Political Weekly. Vol. 46. No. 2. JANUARY 8-14. pp. 46-55. <u>https://www.jstor.org/stable/27918013</u>.

⁹ Kallummal Murali and Rajan Sudesh Ratna. (2012). ASEAN India Free Trade Agreement (FTA) and its Impact on India: A Case Study of Fisheries and Selected Agricultural Products. <u>https://freit.org/WorkingPapers/Papers/TradePolicyRegional/FREIT507.pdf</u>.

¹⁰ Veeramani C., & Gordhan K Saini. (2012). Impact of ASEAN-India Preferential Trade Agreement on Plantation Commodities: A Simulation Analysis. Economic and Political Weekly. Special Articles. Vol. 46. Issue No. 10. 05 Mar, 2011.

¹¹ Hostmark et al. (1980) compared the effects of diets containing 10% coconut fat and 10% sunflower oil on lipoprotein distribution in male Wistar rats. Coconut oil feeding produced significantly lower levels (p = <0.05) of pre-beta lipoproteins (VLDL) and significantly higher (p = <0.01) alpha-lipoproteins (HDL) relative to sunflower oil feeding. The reference is to the CDB Reports titled "Health and nutritional benefits from coconut oil and its advantages over competing oils", Coconut Development Board, <u>https://www.coconutboard.in/docs/English-Article-MaryEnig.pdf</u>.

¹² Mary T. (2020). The effect of coconut oil consumption on cardiovascular risk factors: A systematic review and metaanalysis of clinical trials, pp6-8. <u>https://coconutboard.gov.in/docs/icj/icj-2020-02.pdf</u>.

agriculture. The first possibility lies in understanding the price variations that can be isolated after a trade agreement is signed, which may alter producers' decisions as intermediaries, users, or consumers.

We are investigating the agricultural trade complementarity of the ASEAN countries.¹³ On the global agrarian market from 1997 to 2019.

The results indicate that (i) the ASEAN countries' agricultural export patterns are weakly complementary in matching the regional import demands, while (ii) they are relatively complementary in exporting agricultural products to the world market; (iii) the countries' agricultural competitiveness patterns are more affected by and benefited from the global integration than the regional integration; and (iv) **the countries, moreover, tend to become more substitutable over time.**¹⁴ (Hoang 2018)

The paper by Hoang proposes a cooperative strategy for competing in the international market, suggesting an internalisation process. Since its formation, ASEAN has initiated a process of integration guided by a single market and joint production base.¹⁵ Before entering into any trade agreement, the ten ASEAN national welfare objectives were integrated into a common regional welfare through internalisation and balancing acts. In theory, understanding International trade manifests the change in national welfare (NW); each partner negotiating a trade deal would like to see a positive movement or minimise the losses.¹⁶ However, NW aggregates the producers' and consumers' welfare; in this context, the social accounting matrix (SAM)¹⁷ becomes prime for understanding a Trade Agreement.

	Firm	Household	Government	Rest of the Economy	Net Investment	Total (Received)
Firm		С	G _F	(X-M) _K	Ι	C+G _F +(X- M) _K +I
Household	W		G _H	(X-M) _c		W+G _H +(X-M) _C
Government	T _F	Т _н				$T_F + T_H$
Rest of the Economy	(X-M) _K	(X-M) _c				(X-M) _K +(X-M) _C
Net Investment		S _H	S _G			$S_H + S_G$
Total (Expanded)	W+Т _F +(Х-М) _К	C+T _H +(X-M) _C +S _H	$G_F + G_H + S_G$	(X-M) _C +(X-M) _K	I	

Table 2: S	Social	Accounting	Matrix
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Note: Capital letters: Taxes, Wages, Imports, Exports, Savings, Investment, Consumption, Government Transfer Subscripts: Firms, Households, Government, Consumption Goods, K: Capital Goods.

¹³ One of the reasons to pick ASEAN-India FTA was the close proximity to agricultural commodities produced by the southern states of India.

¹⁴ Hoang Viet. 2018. Assessing the agricultural trade complementarity of the Association of Southeast Asian Nations countries. Agricultural Economics.64(10). October. DOI: 10.17221/253/2017-AGRICECON. <u>https://agricecon.agriculturejournals.cz/artkey/age-201810-0005_assessing-the-agricultural-tradecomplementarity-of-the-association-of-southeast-asian-nations-countries.php</u>.

¹⁵ See <u>https://investasean.asean.org/asean-economic-community/view/670/newsid/758/single-market-and-production-base.html</u>.

¹⁶ ASEAN Common Market

¹⁷ 2012-13 is the latest SAM Available for India.

Table 1 reveals that changes are required across four SAM agents to capture a firm's (producer's) welfare: the household, government, the rest of the economy (including exports and imports), and net investment. A missing data point may lead to a wrong assessment and a high possibility of error creeping into the policy suggestion. Simply put, the primary function of the input-output model (I-O model) is to track the movement of economic values from one sector to another. Furthermore, a quantitative economic model represents the interdependencies between different sectors of a national economy or regional economies. Inter-industry relationships within an economy illustrate how the output from one industrial sector can become an input to another, highlighting the interdependence between sectors as both customers of outputs from different industries and suppliers of inputs. When there is an FTA, the underlying assumption changes from one country to two countries for all economic activities, as it is considered a single entity in terms of the market. Most CGE models that use SAM or I-O models are limited when two countries form a single market.

When defined broadly, multiple factors beyond prices influence substitutability and complementarity, including seasonality and product unavailability; however, this is less familiar in the globalised and liberalised scenario (Marian Radetzki & Linda Warell, 2021). Another possibility is when an FTA and its implications fail to reach stakeholders across the nation. This is termed as the '*psychological impact*' based on largely '*FTA phobia*,' which could be built on with asymmetric information and has the potential to change its status. Due to information asymmetry, it has been observed that decisions in India are often made without logic. It was also aided by many influencers (movies and literary works) and other commoners, which negatively impacted agricultural product prices. A second possibility of FTA phobia is left for the other researcher to investigate further. This requires an expert analysis of the various streams of the humanities, rather than an economic investigation; therefore, this paper refrains from attempting such an analysis. Thus, the agricultural and allied products are categorised for the paper into the following three broad groups.

1. <u>Substitutable Products18</u>Two goods are substitutes if the products could be used for the same purpose by the user (final goods-producing industries and consumers). Users perceive both goods as similar or comparable, so having more of one good causes the

¹⁸ Mankiw, N. G. 2015. Principles of Microeconomics. Seventh Edition. Stamford. Cengage Learning. ISBN 978-1-285-16590-5.

consumer to desire less of the other good. Good 'A' is a substitute for good 'B' if an increase in the price of 'B'¹⁹ ceteris paribus leads to a rise in the demand for good 'A'²⁰

- 2. <u>Complementary products</u>: A good is a Complementary good whose appeal increases with the popularity of its complement. It displays a negative cross-elasticity of demand, meaning that it increases demand for it when the price of another sound decreases. Good 'A' is a complement for good 'B' if an increase in the cost of 'B,' ceteris paribus, leads to a decrease in the demand for good 'A.'
- 3. <u>Value Added:</u> It is the extra value created beyond the original value of a product or service. In the agricultural and allied products sector, transformation from primary to value-added products can be achieved by establishing agro-processing units. This leads to local socio-economic benefits of investments and employment. Therefore, these are independent goods, and good 'A' is independent of good 'B' if a change in the price of 'B,' ceteris paribus, does not change the demand for good 'A.' The only other means by which growth can be achieved is by way of trade creation or trade diversion in value-added goods.

Category	Characteristics	Identification / Classification
	A - Substi	tutability
A.1	Price Changes in the production process of final products	A gradual increase over 15 to 20 years (depending on a country's level of development)
A.1.a	for disruptive technologies	Five years (moving into specific sectors)
A. 2.	FTA-led	Less than a year
	B - Comple	ementary
B.1	Price Changes in the production process of final products	A gradual increase over 10 to 15 years (depending on a country's level of development)
B.1.a	for disruptive technologies	Five years (moving into specific sectors)
B. 2.	FTA-led	Less than a year
	C - Value	Added
C.1	Changes in the production process of final products	A gradual increase over 10 to 15 years (depending on a country's level of development)
C.1.a	for disruptive technologies	Five years (moving into specific sectors)
C.2.b	FTA-led	Less than a year
0 1 1		

Table 3	:	Price	Variations	in	Substitutability	and	Complementarity:	The	Changing
Dynami	CS								

Source: Author

¹⁹ Ondřej Sokol and Vladimír Holý, 2015, A Simple Measure of Product Substitutability Based on Common Purchases, <u>https://arxiv.org/pdf/2201.12140.pdf</u>.

²⁰ Substitutable products for consumers are olive oil, safflower oil, coconut oil, sunflower oil, almond oil, cottonseed oil, corn oil, soybean oil, peanut oil, and canola oil, and price would be the final determinant factor for industrial uses.

From the consumer's point of view, the agricultural products underwent very few disruptions and had little scope for the future; the concepts of substitutability would continue to be the same across the board. A limited mercantile focus is on the nineteen countries India's FTA partners for the trade balance. Furthermore, to address the agricultural and allied sectors, we would like to categorise the total products into three groups: primary products (Chapters O2 to 10), and both substitutable products and value-added products belonging to Chapters O2 and beyond, with the possibility of developing value-added products from the primary products. We assessed the trends in the ratios of export prices to import prices, and this also indicated which domestic goods a country could export or sell in exchange for imported goods.

Tariff liberalisation has consistently placed consumers (imports) at the centre of analysis across all contemporary international trade theories, with the producer (exports) excluded from the study. This one-sided focus is a popular method across all developed countries as a template for assessing trade agreements. Various models, such as the Computable General Equilibrium (CGE) and SMART Partial Equilibrium models, used for the analysis of Free Trade Agreements (FTAs), have this limitation; to support this, these models rely on the Armington Assumption of perfect substitutability between domestic and imported products. Further studies by Panagariya only addressed the impact of tariff liberalisation.^{21, 22} India's I-O table (IoT) is being provided by the OECD²³ and ADB, and is not truly developed by the MoSPI, Government of India. ²⁴ As the informal sector's contribution to India's GDP exceeds 40%, several surveys and case studies were utilised. The informal sector's contribution to India's GDP exceeds 40%. Several surveys and case studies were utilised to construct the I-O Table for India. Therefore, it lacks a complete understanding of the transactions between India's Input-Output (I-O) table matrix, which has 130 columns and 130 rows in its detailed format. Therefore, the usage of both these loTs, developed by the ADB and the OECD, would not be truly representative of the intersectoral transactions in the Indian economy. Furthermore, it is also compounded by the

²¹ Panagariya Arvind (N.D.). Preferential Trade Liberalization:The Traditional Theory and New Developments. <u>https://www.iatp.org/sites/default/files/Preferential Trade Liberalization The Traditio.pdf</u>.

²² Jaime De Melo. (1998). Computable general equilibrium models for trade policy analysis in developing countries: A survey. Journal of Policy Modeling. 10(4). Pp 469-503. December 1988. <u>https://www.researchgate.net/publication/222745227 Computable general equilibrium models for trade polic</u> <u>y analysis in developing countries A survey</u>. DOI: <u>10.1016/0161-8938(88)90017-8</u>.

²³ The OECD's India Input-Output (I-O) Table is not a direct adoption of the 2008 (2015) table prepared by the National Accounts Division (NAD). It is based on data from the 2015-16 India Input-Output (I-O) table, compiled by the Ministry of Statistics and Programme Implementation (MoSPI). This table was developed as part of the new series of national accounts statistics, with a base year of 2011-12, replacing the previous series with a base year of 2004-05, as reported by MoSPI. The 2008 System of National Accounts (SNA) was used as a guide in this process. The OECD then uses this data, along with other sources, to construct its Inter-Country Input-Output (ICIO) tables.

²⁴ The ADB's I-O Table is using the National Accounts Division (NAD) in the Central Statistical Office (CSO) of the MOSPI, which is responsible for the compilation and release of National Accounts statistics for India, adopted in 2008. The System of National Accounts (SNA) was revised in January 2015 for the new series, which began in 2011–2012. While revising the base year, efforts were made to implement the recommendations of the 2008 System of National Accounts (SNA) to the extent that data were available.

emergence of disruptive technologies, such as LED lighting and mobile phones, as well as other similar developments.

In the paper, we have employed simple statistical tools, such as moving averages, to understand the role of opportunity cost. Concepts like intra-industry trade are not suitable for analysis as the primary task, and opportunity cost is also not considered, as the agricultural sector is protected for its other functions, such as providing food and ensuring nutritional security. Therefore, the focus is on whether the FTAs lead to the loss of livelihood in Kerala or the India-Malaysia barter deal.²⁵, which predates the WTO. Other issues are establishing how trade does not enable livelihood concerns and whether they are disconnected from one another. Analysing how important internal dynamics are when it comes to trade deals.

2 The theoretical underpinning of price competitiveness

Mercantilist and neoliberal theories have focused primarily on product competitiveness from the perspective of price. Using the available theoretical framework, the trade negotiators viewed the possible variations in cost associated with the product's tariff. The reduction was primarily considered to directly alter the price, thereby further qualifying it for competitiveness. Such an approach always led the negotiators to quickly list identifiable cost-impacting variables, such as the tariffs or duties imposed when goods move from one territory to another. Under the FTA, pricing policies have been driven by the concept of a 'race to the bottom,' which does not account for all aspects or sometimes a few elements of the list of unpaid bills. Most often, such costs are social and, in some cases, economic as well.

From the point of view of intergenerational implications, land and labour costs are two factors of production that face a considerable amount of unpaid bills and are, therefore, always underpriced. Unfortunately, this is reflected in the final price of agricultural products, as the two variables dominate the main factors when calculating the price. Another example is the costs of natural products used to create products, such as water, air, soil, minerals, flora, fauna, and climate. The human effort used in production also includes technical and marketing expertise. The payment for someone else's labour and all income received from one's delivery are wages. Labour can also be classified as an

²⁵ See the details on the railway track vs palm oil barter trade. In the first deal since an agreement between India and Malaysia on barter trade, India's state-run railway construction firm, Ircon International, has won a \$124 million project to build a Malaysian rail line to the Port of Tanjung Pelepas. Malaysia will pay for the project in palm oil instead of cash. Malaysia, the world's largest palm oil producer, has suffered declining sales in recent years because of competing products and health scares.<u>https://www.joc.com/article/india-to-build-malaysian-rail-link-to-port-5318330</u>.

employee's physical and mental contribution to the production of goods. The landowner's payment includes rent, loyalty, commission, goodwill, capital, and labour.

Intellectual property rights and contracts in today's age and time are part of the capital and are an integral part of the factor of production. In the case of capital, as it is in a lesser proportion, including machinery, tools, and buildings, they are of two types: fixed and working. Fixed investments are typically one-time investments made in tangible assets, such as machinery and tools. In comparison, the working investments consist of liquid cash or money in hand and raw materials.

Global accounting systems have primarily been designed to capture investments made at the working stages. The intrinsic values of the fixed assets are not fully captured, except for the intangible property rights (IPRs) and contracts. The initiatives of developed countries triggered a discussion on cost externalisation, and the divide between the North and the South became increasingly apparent. The imbalance between the goods sector and the services sector has been highlighted by Kallummal *et al.* (2020). Further, global negotiations have favoured the services sector's non-transparent modes of transaction (Kallummal & Francis, 2020). Such unpaid bills are referred to as an 'externalisation of price'. They have continued to be integral to price fixation and have distorted domestic and international trade. (Kallummal, 2015). Although all investments faced the issue of externalisation of project costs, they received a boost with the increased flow of foreign direct investments (FDIs) to the newly industrialised countries (NICs), within which a large amount of capital was routed under overseas development assistance (ODA). All these were part of discussions and acted as supplies at least a decade ago.²⁶

In the later decades, the surge in the FDIs further accentuated traceability problems. It made matters worse with each additional flow, rendering such flows untraceable, as did the rise in Foreign Direct Investment (FDI). The untraceability has been accentuated with the increased role of the ten financial tax havens (Shaxson, 2018)²⁷

In 2002, the OECD analysed the Foreign Direct Investments (FDIs) for development and suggested that most of the negative impacts do not factor in the positive linkages with local communities and the harmful environmental effects of FDIs, especially in extractive

²⁶ Korea received ODA from foreign countries, totalling 12 billion USD for structural readjustment programs. The ODA significantly contributed to Korea's economic and social development. In the 1960s, "growth" and "foreign investment" replaced "humanitarian relief" and "reconstruction" as the primary focus in the war-torn country of Korea, which was undergoing a dramatic transformation of its economic structure.

²⁷ Tax havens collectively cost governments between \$500 billion and \$600 billion a year in lost corporate tax revenue, depending on the estimate, through legal and not-so-legal means. Of that lost revenue, low-income economies account for some \$200 billion—a larger hit as a percentage of GDP than advanced economies and more than the \$150 billion or so they receive each year in foreign development assistance. American Fortune 500 companies alone held an estimated \$2.6 trillion offshore in 2017, though a small portion of that has been repatriated following US tax reforms in 2018. See, Shaxson N. (2018). Tackling Tax Havens. Financing and Development Magazine. September 2018. International Monetary Fund. https://www.imf.org/en/Publications/fandd/issues/2019/09/tackling-global-tax-havens-shaxon.

and heavy industries. In an economy, the overall assessment and accounting of the impacts on the totality of investment flows show that FDI flows are less favourable compared to similar domestic investments. (Kallummal, 2001) Also, the FDIs are driven by the social disruptions of accelerated commercialisation in less developed countries and the effects of increased competition in national markets. (OECD, 2002).

It becomes essential to analyse and understand which income groups [countries] benefited from the growing imbalance and restructured economic activity under the new paradigm driven mainly by tariff-led price competitiveness. Based on the per capita income, the world is divided into four groups, and the WITS provides trade data regarding reporters' income groups.

The Global Case

Figure 1 below suggests a departure from the time the WTO Agreement was signed (1995), and the agricultural trade balances are analysed across the four main income groups. High-income countries experienced market access until 2008, accompanied by an increasing trade deficit, which rose from USD 20 billion in 1996 to USD 70 billion in 2008, after which it fell only to bounce back in 2015. This suggested that the high-income group, with its predictable market (as indicated by the linear trend line), provided a perfect market for the upper-middle-income countries.



Figure. 1: Global Agricultural Trade Balance (Income Category-wise) – USD Bn.

In terms of gains in the agricultural sector, upper-middle-income countries (China, Brazil, Russia, etc.) gained a trade balance of US\$ 10.5 billion in 1996 to a high of US\$ 69 billion in 2019. This is the only group that has consistently recorded a positive trade

Source: Based on the WITS online database.

balance in the agricultural sector; therefore, it can be said that the dominant countries in the group have benefited from it. The UMI category analysis revealed an increase in agricultural product exports after 2010, peaking in 2013 at USD 28 billion, after which their exports have fallen below imports. This is reflected in the decline in the trade balance from its 2013 peak (USD 28 billion) to a negative USD 3 billion in 2019 (Fig. 1). India is one of the countries that fall into this income category. Domestic production, as indicated by the increased production and yield indices, suggests an upward trend in both food and non-food crop prices. The falling trade balance could result from increased imports of agricultural and allied products or reduced exports, as products struggle to find an international market.

The LMI is the only group that has consistently recorded a trade balance in the agricultural sector; therefore, it can be said that the dominant countries have benefited from it. This is reflected in the decline in the trade balance from its 2013 peak (USD 28 billion) to a negative USD 3 billion in 2019 (Fig. 1). India is one of the countries that belong to the high-income category. It suggested an upward movement in both food and non-food crops' prices, suggesting an increase in production and yield indices. We can observe a global rise in the importation of agricultural and allied products, as well as exports not accepted in international markets.

The Indian Case

India belongs to the lower-middle-income category and mirrors the global challenges. However, the uniqueness of India lies in its being a significant market (consumption) and also an equally important producer of many agricultural commodities. This is aptly captured in the discussions below, indicating a policy focus on food security or export demand for staples in the case of the agricultural sector. At the macro level, India's indices on all crops, food crops and non-food crops indicated that during the period of 1993-94 to 2006-07 (with 1993-94 = 100), it was food crops that had the upper hand over the non-food crops in terms of production indexes, while in the second period of 2007-08 to 2019-20 (with 2007-08 = 100), the non-food crops had the upper hand over the food crops in production indexes (Fig.3). An analysis of two phases separately suggested that the yield graphs did not convey any apparent domination across both periods.

Figures 2, 3, and 4 show that India's agricultural sector (food and non-food) has shown an increase in production and yield indices. Strategically, India should have sought external markets to export its surpluses. India has FTAs with four high-income economies, two of which are small markets, and the other two are industrialised and developed, with a very high level of NTMs. (Kallummal, 2020). On the other hand, nine of India's FTA partners belong to its low- and middle-income country (LMIC) group, accounting for nearly 50% of the 19 partners—and therefore would reflect the impacts faced at the global level.



Figure. 2: Food and Non-food Corps of Agricultural Sector (Area, Production & Yield)

Note: Base-triennium ending * =1981-82=100, ** = 1993-94=100 and \$ = 2007-08=100.

Figure. 3: Total production of Food and Non-Food in India: 1993 to 2019



Figure. 4: Yield-based difference between Food and Non-Food Crops: 1993 to 2019



Note: FC = Food Crops and non-FC = non-food crops. Source: Figs 2, 3, and 4 are from the RBI database (Real Economy).

3 India's FTA and Treatment of the Agricultural Sector

Trade Agreements driven by globalisation are typically defined as increasing the volume of cross-border economic interactions and resource flows, resulting in a qualitative shift in the relationships between two or more nation-states. Therefore, such agreements must be carefully designed and analysed when a considerable proportion of the economy is in the informal sector and the data availability is primarily derived rather than from direct and verifiable sources. Price movements define economic activities; therefore, their direction determines the foundation of cross-sectoral linkages and the quality of interaction; however, such movements can also be influenced by non-economic or commercial reasons. The terms of trade between industry and agriculture, both before and after the FTA, would then become aspects for measuring the actual benefits of any trade agreement.²⁸, ²⁹, ³⁰, ³¹

3.1 WTO and Trade Agreement³²

WTO's Agreement on Agriculture came into force on 1 January 1995. The Agreement established a program for the gradual reform of agricultural trade. Members took specific commitments to reduce support and protection in domestic support, export subsidies, and market access. The Agreement also outlines procedures for addressing non-trade concerns, including food security and environmental protection. It also provides unique and differential treatment for developing countries, including improving the opportunities and terms of access for agricultural products of particular export interest to these members. The program under the Agreement on Agriculture aims to establish a "fair and equitable market-oriented agriculture trading system' by requiring countries to adopt new disciplines governing border measures and the use of export and other subsidies. The Doha Round negotiations are being held under the three main pillars (where the members have already made commitments in the Uruguay Round, which are included in their GATT schedules): Market access, domestic support, and export subsidies. The Market Access

²⁸ Jiang Hui, 2016, Free Trade Agreements and U.S. Agriculture, International Agricultural Trade Report, United States Department of Agriculture, June 24, <u>https://fas.usda.gov/sites/default/files/2016-06/2016-06 iatr_ftas.pdf</u>.

²⁹ Islam Naim and Pawan Bhandari, (2023). Economic and Long-Term Impacts of Free Trade Agreements (FTAs) with the U.S.A. Proceedings of the International Conference on Industrial Engineering and Operations Management Manila, Philippines, March 7-9, 2023, <u>https://www.wita.org/wp-content/uploads/2023/03/FTA-PDF.pdf</u>.

³⁰ US, 2018, Have Bilateral Free Trade Agreements (BFTAs) been beneficial? Lessons learned from 11 U.S. BFTAs between 1992 and 2017, Data and Graph, United States Department of Agriculture, <u>https://fas.usda.gov/data/us-agricultural-exports-pre-and-post-trade-agreements</u>.

³¹ Alghabbabsheh T.G., Alsaif S.S., Islam Md.S., Alshammari T.S., and Mahmoud A.M.A. (2022). Have Bilateral Free Trade Agreements (BFTAs) been beneficial? Lessons learned from 11 U.S. BFTAs between 1992 and 2017, April 11, 2022, <u>https://doi.org/10.1371/journal.pone.0264730</u>. < <u>Have Bilateral Free Trade Agreements (BFTAs) been beneficial? Lessons learned from 11 U.S. BFTAs between 1992 and 2017 | PLOS ONE</u>>.

³² Some portions of this subsection are credited to a conference paper presented in 2016 by Rajan R.S., Kallummal M., Sharma S.K. (2016).

disciplines, as mandated under the Doha Ministerial, were to reduce and, as appropriate, eliminate the tariffs and non-tariff barriers.

Tariff commitment negotiations under the Doha Round have remained static (also as there was no consensus on the methodology on Ad Valorem Equivalent), so all tariff commitments undertaken under the Uruguay Round are considered final. The talks in the Free Trade Agreement (FTA) are unlike the approach taken by the WTO. Under the FTA, the modalities are to 'eliminate' tariffs on almost all the items, barring a few things (the coverage of which is negotiated) that form part of a Sensitive or Negative List. The elimination of tariffs means that the reduction in duties starts on the actual MFN applied rate of duties and not on the WTO binding commitments (the gap between the WTO bound rate and the applied MFN tariff rates is also referred to as 'water' or the 'policy space'). Under the FTAs, the profound nature of tariff elimination is likely to reduce the policy space of WTO members. An alternative to the conditions under FTAs could be made by providing the proper product-process standards, such as the Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) measures. The discussions on removing non-tariff measures have not progressed well under the Doha Round. The WTO members are engaged in the WTO Committees of Sanitary and Phytosanitary (SPS) Measures and Technical Barriers to Trade (TBT) Measures. The process of transforming non-tariff measures into non-tariff barriers is lengthy and often involves legal considerations (Kallummal, 2012). The approach members follow is to seek recourse through harmonisation, equivalence, mutual recognition arrangements, conformity assessment procedures, and other measures provided under the SPS and TBT Agreements. Under the FTA, the approach is to seek bilateral or regional harmonisation, the equivalent of mutual recognition arrangements (MRAs). In some instances, FTAs provide a faster way to resolve issues relating to non-tariff barriers through harmonisation or MRAs.





Source: Modified by the author based on Rajan S. R., Kallummal M., and Sharma S.K., 2016.

The WTO Doha Round negotiation discusses how to reduce or eliminate domestic support and export subsidies. Unfortunately, the FTAs do not include any provision for disciplining domestic support or export subsidies. Thus, while the FTA aims to eliminate tariffs on agricultural goods and certain aspects address non-tariff measures through harmonisation, exchange of information, etc., it does not address trade distortions caused by subsidies.

3.2 India's FTAs

Market access for agricultural and non-agricultural products under all Free Trade Agreements (FTAs) is approximately 84 to 97% of India's total tariff lines. Compared to non-agricultural products, a substantial portion of India's agricultural tariff lines belong to the negative list – in other words, they are allowed market access only under the MFN route.

			Member Countries	Market Access in	
S. No.	Acronym	No.	Names	Tariff Lines (India's Offer)	PTAs ⁽¹⁾
1	ΑΡΤΑ	7	Bangladesh, China, India, Laos, Rep. of Korea, Sri Lanka and Mongolia	MOP (3,142 Tariff Lines)	PSA
2	AIFTA	11	Brunei, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam	Ap. 89%	FTA & EIA
4	GSTP	43	List of Countries ^{# (2)}	MOP	PSA
5	MERCOSUR India	5	Argentina, Brazil, Paraguay, Uruguay, India	MOP (450 Tariff Lines)	PSA
6	Chile	2	India and Chile	MOP (178 Tariff Lines)	
7	DFTP-2008	34+ (49)	List of Countries ^{*(2)}	Ap. 97%	Binding
8	SAFTA	8	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka	Ap. 96% ^(\$)	FTA
9	ISLFTA	2	India and Sri Lanka,	Ap. 91%	FTA
10	ISCECA	2	India & Singapore [%]	Ap. 86 %	FTA & EIA
11	IMCECA	2	India & Malaysia	Ap. 84%	FTA & EIA
12	JICEPA	2	India & Japan	Ap. 86%	FTA & EIA
13	IKCEPA	2	India & Rep. of South Korea	Ap. 84%	FTA

Table 4. India's	Trade in	Goods and FTAs	(undated in	2020)
Table 7. Illula S	I I auc m	Goods and FIAs	(upuateu m	2020j

Note 1: Partial Scope Agreement (PSA)/ Preferential Trade Agreement (PTA), Free Trade Agreement (FTA), and Economic Integration Agreement (EIA), Ap. = approximately.

Note 2: # = Algeria, Argentina, Bangladesh, Benin, Bolivia, Brazil, Cameroon, Chile, Columbia, Cuba, Democratic People's Republic of Korea, Ecuador, Egypt, Ghana, Guinea, Guyana, Iran, Indonesia, Iraq, Libya, Malaysia, Mexico, Morocco, Mozambique, Myanmar, Nicaragua, Nigeria, Peru, Pakistan, Philippines, Rep. of Korea, Romania, Singapore, Sri Lanka, Sudan, Thailand, Trinidad and Tobago, Tunisia, Tanzania, Venezuela, Vietnam, Zimbabwe, * = Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, DR of Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Gambia, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Sierra Leone, Somalia, Sudan, Togo, Uganda, Tanzania, Zambia, Afghanistan, Bangladesh, Bhutan, Cambodia, East Timor, Kiribati, Lao PDR, Maldives, Myanmar, Nepal, Samoa, Solomon Islands, Tuvalu, Vanuatu, Yemen, and Haiti, (\$) = only for LDCs in SAFTA, + = only the LDCs which seek for Market access are provided, % = Singapore had two separate India's tariff concession schedules as Singapore is a zero duty country. Source: Author, based on the Ministry of Commerce (various trade agreements).

Approximately 4% to 11% of tariff lines are traded outside the FTA rules, commonly referred to as MFN/Negative (exclusion) tariff lists under WTO rules. The WTO rules are

continuously negotiated every two years and are subject to change in response to evolving conditions. India's national tariff lines have varied from 10,000 to 12,000 during the period from 2005 to 2020. It is a lesser-known fact that India has liberalised 3,142 tariff lines under APTA, accounting for 26.2 % of its tariff lines. The margin of preference (MOP) ranges from 10% to 100% tariff concessions – it should be noted that China is an integral part of APTA. A further preference is provided under the Duty-Free Tariff Preference (DFTP) Scheme of 2008, which offers unilateral trade preferences for LDCs as mandated by the Hong Kong Ministerial Declaration of 2005. As of 2022, thirty-four LDC Countries have sought permission from the Government of India to benefit from the DFTP Scheme. An analysis of the trade balance of the DFTP scheme suggests that the agricultural and allied products trade balance increased from USD -0.3 billion in 2009 to USD 2.0 billion in 2013, after which it decreased to a marginal amount of USD 0.8 billion (Figure 6).





The AIFTA agricultural and allied sectors turned negative starting in 1997. It began with USD 1 billion and reached USD 3 billion in 2012, after which it declined and remained in negative territory, with a balance of USD 0.9 billion as of 2019. India is self-sufficient in meeting its domestic demands. However, it has witnessed considerable pressure at the sectoral level (especially in the fruits, oilseeds, fats, and oils) and other agricultural product groups. The add-on is the fall in tariffs, up to 89% of national tariff lines imposed by India on the AIFTA partners, which are either eliminated or reduced (in categories Sensitive Tracks and Special Products). It meant that for 89 % of tariff lines, the new FTA tariffs would be applicable, as shown in Table 4.

At the macro level, India's total exports and imports further exacerbated production and consumption imbalances. The trends observed in the exports-to-GDP and imports-to-GDP

Source: WITS COMTRADE.

ratios have been taken as one of the parameters to measure a country's demand. The ratio of merchandise exports to India's gross domestic product indicates the exports relative to India's GDP (Fig. 7).



Figure 7: India's Exports and Imports to GDP Current and Constant 2010.

Source: World Bank.

The merchandise exports do not account for the contribution of services to exports; on the other hand, the GDP does, and therefore, this ratio would be much lower in India's context. India's total exports of goods to GDP (in %) increased from 9.6 % in 2000 to 19.5 in 2013, after which it decreased at a secular rate to a low of 12 % in 2019, including services exports with goods (see Annexure Fig.1, p. 38) did not alter the overall trends observed in Fig.8.



Figure 8: India's Exports and Imports to GDP Current and Constant 2010.

Source: World Bank.

However, the inclusion of service increased the value by three percentage points (to 13%) in 2000. It increased by five percentage points (from 25.4 %) in 2013 and fell to seven percentage points (20%) in 2019, as shown in Annexure Fig. 1, p. 38. The potential for India's gains from exports has been a consistent decrease since 2013. This would have created increased pressure on the price of commodities; this phenomenon is more pronounced in MSMEs. It is small and scattered, and lacks global linkages and deep pockets (working capital) to address the cost-enhancing new regime established under the NTMs in 2012, following the deadlock of the Doha Development Round. When the Doha Development Round stalled, major economies shifted their focus to setting deeper bilateral and plurilateral standards, often incorporating SPS and TBT rules that smaller players struggle to meet. India's total goods imports recovered in 2017 (17.4%) and 2018 (23.4%), rebounding from a declining trend after the 2012 peak of 27.5% of GDP, which had dropped sharply to 17.2% in 2019. A similar observation can be seen in India's total imports, including services; see Annexure Fig. 2, p. 38. It suggested that the Indian economy was shrinking in terms of its trading possibilities.

3.3 Imports from India's Nineteen FTAs in Agricultural Products

India's imports of agricultural products under the nineteen FTAs have been analysed in this section to identify the surge. The terms of trade (TOT) refer to a country's quantity of imports relative to its exports. Viner (1950) introduced two concepts in his work on international trade: trade creation and trade diversion. Studies continue to give utmost importance to these concepts when analysing trade agreements. India's terms of trade appear to be adversely affected in the agricultural and allied sectors, as indicated by the analysis of exports and imports under Chapters 01 to 24. Export-to-imports ratios from the nineteen FTA partners declined from 2.2 in 2000 to 1.6 in 2019. During this period, the ratio followed a W-shape, with three peaks from 2000 to 2013. From Fig. 9, it is clear that from 2014 to 2018, the ratio remained at an average of 1.3, increasing by only 0.3 points in 2019 to a ratio of 1.6.



Figure 9: India's Total Export to Imports Ratios: Nineteen FTA Partners

Source: WITS COMTRADE.

Imports continued to flow into India from the nineteen FTA partners, with India's exports remaining either static or decreasing marginally from 2015 to 2018. The nineteen FTAs had AIFTA, SAFTA, IJCECA, and IKCEPA as significant suppliers, and there was almost complete domination of imports, with 90% from AIFTA and 10% from SAFTA during the post-FTA period. The surge in imports from AIFTA and rigidity across the nine MTN sub-product groups from the nineteen FTA partners is reflected in the growth rates. Of the nine products, only three products have negative growth rates, with sugar and confectionaries having the highest 12%, followed by fish and fish products with 3.3% and animal products at 1.3% (Fig.10). Rest of the six MTN products groups, like beverage and tobacco with 15.3 % and the other agricultural products with 14.6%, fruit, vegetable, plants with 13.9%, cereals & preparations with 10.8% and coffee, tea with 8.2%.





Source: WITS COMTRADE.



Figure 11: Average of Nineteen FTA Partners Share of Total India's Imports- %

Source: WITS COMTRADE.

Average imports from the nineteen FTA partners account for more than one-fifth (20%) of the total imports in six MTN product groups. The highest among the six was in the product groups like oilseeds, fats, and oils with 63.3%, followed by animal products with 56.2% and five other MTN products groups within the agricultural and allied sectors with shares above one-fifth of the total imports of India (Fig.11). There is increased pressure on domestic substitutable agrarian products, with more than one-fifth of the total imported products falling in seven out of the nine product groups.

Therefore, sufficient evidence suggests that imported palm oils have pressured coconut oil prices nationally. When considering tariff reduction under a trade agreement, the argument regarding substitutable agricultural products is crucial for assessing the crop's livelihood concerns and the potential impact of reducing the price of value-added products derived from the crop.



Figure 12: Trends in the Commodity Prices (Raw Materials & Value Added Products)

Note: * = per kilogram/liter # quintal @= Wholesale Price Index Sources: Various commodity boards and the INDIASTAT online database.

Furthermore, it is evident from Fig. 12 that India's FTA had a detrimental effect by indirectly suppressing the price of coconut oil, a direct value-added agricultural product. There is a widespread perception across a range of academic papers, popular media, and news outlets that the AIFTA is the primary reason for depressing the competitiveness of certain unique Kerala crops, such as pepper, coffee, and rubber. (Ratna, et al., 2010), (Francis, 2011), (Francis & Kallummal, 2013), (Ratna & Kallummal, 2013), (Veeramani & Saini, 2011) All these studies indicated that the exact nature of Kerala's agricultural product competitiveness due to the high cost of farming, linked to high labour costs in Kerala (Viswanathan, 2014). Multiple studies—including those from Kerala Agricultural University and the Centre for Development Studies—highlight high labour costs as one of the central constraints.

While the AIFTA has been blamed for the price slump in pepper, it can be observed from the above figure (Fig. 12) that the FTA with Sri Lanka led to a sharp decline in pepper prices. The price of pepper fell from a high of Rs 540 per quintal to Rs 295 per quintal in 2001. Rubber prices fell three times, from just below Rs. 300 per quintal to Rs. 100 per quintal in 2006, and continued to recover, reaching a moderate domestic market price of Rs. 150 per quintal in 2015. However, under the AIFTA, many of the primary crops are on the negative list, which means they have been traded at the MFN tariffs with no preferential concession.



Figure 13: India's Trade Balance and the Scope for Import Substitution

Source: Page 25, Exhibit 9, Gol, 2020, Growing India's agricultural exports through crop-specific, state-led plans, High-Level Expert Group on Agriculture, Submission to the XV Finance Commission, July 2020.

The trade balance across twenty-one agricultural products, as shown in Figure 13, reveals the potential value in substituting imports for a set of value chains, including vegetable oil, wood, and cashew nuts.

The case of vegetable oils has been analysed in detail, providing a livelihood dimension, as seen in Section Four, with the case of Kerala.

4 Sub-Federal Economy and India-ASEAN FTA

Negotiations and implementation of trade agreements should reflect livelihood concerns by incorporating production and livelihood linkages, as well as substitutability versus complementarity. Kerala's economy is the ninth-largest in India, with an annual gross state product (GSP) of ₹9.78 lakh crore (US\$138.88 billion) in 2020–2021. The percapita GSP of Kerala during the same period, 2020-21, is ₹205,484 (US\$2,917.97), the sixth-largest in India. The Annual Report of the Periodic Labour Force Survey (2017-18), Table 24, shows that Kerala has one of the highest unemployment rates at 11.4%, compared to the all-India unemployment rate of 6.1%. ³³ The attitude of unemployed, educated youth towards employment has been driven by high daily wages in the informal sector and the availability and abundance of food in various forms. The abundance of food and robust welfare systems—from subsidised PDS to community kitchens—add a layer of economic cushioning, reducing the urgency to settle for precarious employment far from home or beneath one's skill level. Until December 2019, Kerala's economy had received a very high share of India's total remittances. Approximately 30-40% of the state's income is derived from remittances.

The Kerala economy is faced with what is sometimes referred to as the remittance trap.³⁴ The average state remittance was Rs. 57,227 in 2008, and it has come under pressure due to numerous geopolitical developments.³⁵ Unlike other states, nature has blessed Kerala with a diverse range of horticultural crops and seasonal vegetables, which have helped cushion the population against food scarcity. Kerala can effectively utilise its large pool of educated unemployed youth to meet the modernisation needs of the agricultural sector and promote crop diversification. The Govt. of Kerala's Planning Board's survey on the changing trends in the composition of Kerala's principal crops suggested an increase over the years for other crops from 10 % (1990-91) to 23 % in 2005-06.

4.1 The Dependence on Agriculture and Livelihood

The service sector dominates the Kerala economy, accounting for 64% of the state's gross value added in the 2018-2019 period. ³⁶ 2018-19, agriculture, manufacturing, and services contributed 11%, 25%, and 64% of the GSVA, respectively. These sectors grew by 0.6%, 11.6%, and 12.6%, respectively. The dependence based on the agricultural sector population is one of the lowest across all Indian states. (Govt of Kerala, 2014) The horticultural area and production analysis from 2011 to 2018 show that the share decreased from 7.1% to 6.2% and from 4% to 3.4%, respectively. (Gol, 2011, 2018)

The area under horticultural crops decreased by 67,000 hectares, from 1.658 million hectares in 2011 to 1.591 million hectares in 2018. On the other hand, production increased by 56,574 thousand metric tonnes, from 257,277 thousand metric tonnes in 2011 to 313,851 thousand metric tonnes in 2018. A detailed analysis needs to be carried out to understand the exact reasons for this trend; however, it suggests that the

³³ Government of India, 2021, Quarterly Bulletin, Ministry of Statistics and Programme Implementation, Periodic Labour Force Survey (PLFS), , January - March 2021, <u>https://mospi.gov.in/documents/213904/301563/Quarterly%20Bulletin%20PLFS%20January%20March%202</u> 0211638269959091.pdf/7499e879-4323-78ac-b3cd-48aaa4b7567c.

³⁴ Mahalingam T.V., (2011) God's own challenges, Bussiness Today, April 03, <u>https://www.businesstoday.in/magazine/features/story/tourism-and-remittances-challenges-for-kerala-18929-</u> <u>2011-03-19</u>.

³⁵ Rajan S. Irudaya and K.C. Zachariah K.C., 2010, Remittances to Kerala: Impact on the Economy, Febraury 02, <u>https://www.mei.edu/publications/remittances-kerala-impact-economy</u>.

³⁶ Refer: https://www.prsindia.org/parliamenttrack/budgets/kerala-budget-analysis-2020-21.

probable intensification of horticultural production could be due to mechanisation. Table 3 illustrates the changes in Kerala's shares in terms of area and production across various horticultural crops, including fruits, vegetables, plantation crops, aromatics, medicinal plants, flowers (loose and cut), spices, and honey.

c	Korolo'a	Ar	ea (000 hect	ares)	Production (000 M. ton)			
э. N.	Horticultural Crops	2011- 12	2016-17	2018-19	2011-12	2016- 17	2018-19	
1	Fruits	4.4	3.9	4.8	3.2	2.8	1.9	
2	Vegetables	1.7	1.4	1.0	2.3	1.2	1.6	
3	Plantation	26.8	26.4	24.9	25.5	31.8	33.1	
4	Aromatics & medicinal		0.0	0.0		0.0	0.0	
5	Flowers - Loose		4.6	17.0		0.0	0.0	
6	Flowers - Cut					0.1	5.6	
7	Spices	7.9	4.8	3.9	1.9	1.8	2.1	
8	Honey					2.9	1.8	
Ker	ala's Share in India	7.1	6.3	6.2	4.0	3.5	3.4	

 Table 5: Kerala's Share in Total India's Horticultural Crops from 2011 to 2018

Source: Compiled from various reports of the National Horticulture Board, Ministry of Agriculture, Gol.

Kerala's share in the total area fell by up to 2 percentage points in the plantation crops (tea, coffee, coconut, areca nut, cashew, cocoa, and rubber) (Table 5). Production increased by eight percentage points from 25.5% in 2011 to 33.1% in 2018, with 26.4% of the area and 32% of the output (production) accounted for. This was followed by honey production, which accounted for a 3% share of India's total production.

C N	Cron	A	l India	K	erala	% share of Kerala in		
5. N.	Сгор	Area	Production	Area	Production	Area	Production	
1	Rubber	778.4	774	548.2	648.2	70.4	83.8	
2	Pepper	123.8	50.9	84.1	29.4	67.9	57.8	
3	Clove	2.1	1.1	1	0.1	49.0	6.5	
4	Cardamom	92.8	21.3	39.7	12.9	42.8	60.7	
5	Coconut*	2140.5	22088	808.6	5921	37.8	26.8	
6	Tapioca	228.3	8139.4	67.6	2479.1	29.6	30.5	
7	Tamarind	58.6	188.1	13.2	44.7	22.5	23.8	
8	Arecanut	451.9	622.3	100	100	22.1	16.1	
9	Coffee	409.7	304.5	85.4	66.6	20.8	21.9	
10	Cocoa	71.4	21.1	13.3	12.3	18.6	58.3	
11	Papaya	133.4	5639.3	16.6	103.4	12.5	1.8	
12	Banana	802.6	29724.6	62.3	531.3	7.8	1.8	
13	Pineapple	109.9	1736.7	8	75.6	7.3	4.4	
14	Tea	564	1208.8	35	63.5	6.2	5.3	
15	Cashew	1010.9	753.2	49.1	33.4	4.9	4.4	
16	Ginger	132.6	655.1	4.5	21.5	3.4	3.3	
17	Mango	2516	18431.3	77.2	457.1	3.1	2.5	
18	Turmeric	232.7	1189.9	2.4	6.3	1.0	0.5	
19	Paddy	43950	106540	199.6	564.3	0.5	0.5	

Table 6: Kerala's Nineteen Crops Shares in the total production - 2014

Note: * Production of coconut in Million Nuts

Source: Agricultural Statistics at a Glance 2014 & Indian Horticulture Database 2014, M/o Agriculture, Govt of India.

In terms of area, it was followed by spices, with production shares of 5% and 2%, respectively. Spices, which accounted for almost 8% of India's total area, fell by four percentage points; the observed increase was nominal, at 0.2 percentage points. Table 6 details the share of each of Kerala's nineteen crops in terms of area and production in the context of India.

The top five crops are Rubber, which accounts for 70% of the area and 84% of India's total production. It is followed by pepper, cloves, cardamom, and coconut, each accounting for more than 35% of India's total area and 27% of the production share. The only exception is the share of cloves in total production, which accounts for 7%. Six other crops occupy more than 10% of India's total cropping area, including tapioca (30%), tamarind (23%), areca nut (22%), coffee (21%), cocoa (19%), and papaya (13%).

4.2 Kerala Land Utilisation

Compared to many other states in India, Kerala is blessed with the highest annual rainfall of 3,055 millimetres, and therefore, the land is endowed with a wide range of possibilities. Agricultural land is used for multiple cropping crops like jackfruit, mango, pepper, coconut, areca nut, betel leaves, ginger, turmeric, tamarind, and tapioca. Kerala was the second-highest state, with a high urban population share of 47.7% and a total population of 33.4 million in 2011. (Gol, 2011) Therefore, labour costs are higher in agricultural activities, as many landowners are urban or semi-urban dwellers. Moreover, the land and housing in Kerala are so well-connected that the daily cost of labour is relatively high.



Figure 14: Agricultural Crops in Kerala: Area & Production 2018-19



Note: coconut production in millions of nuts.

Source: Agricultural Statistics at a Glance 2014 & Indian Horticulture Database 2014, M/o Agriculture, Gol. Due to Kerala's high mobility, once wages are set in urban centres, they become the norm across rural areas. The phenomenon described reflects how labour market fluidity and migration patterns can flatten wage differentials, even between geographically and economically distinct areas. A study by Mahesh (2002) found very high mobility of the labour force in the Kerala economy. The study also found that the infrastructural and institutional development in the village has facilitated gathering information about job availability, work environment, and access to a place of work, thus increasing their ability to move. Many of the mobile workers are daily commuters. (Mahesh, 2002)

The land utilisation in the area and total production across eleven major crops are analysed in Table 5 below, which will help us understand Kerala's dominant crops. Regarding area, 65% is accounted for by two crops - coconut, with a 42% share, and rubber, with 23%. Regarding production, the dominant crops are tapioca, with a 44% share, followed by paddy, with 11%, rubber, with 10%, mango, with 9%, banana, with 8%, and coconut, which is widespread across the State.³⁷

Some of these crops were analysed for the components, which led to the determination of cost, namely, hired human labour, animal labour, machine labour, cost towards seed/seedlings, farmyard manure & chemical fertilisers, plant protection, land tax and irrigation cess, repair & maintenance charges of implements, machinery & building,

³⁷ Needs to have harmonised approach across all crops in terms of the measurement unit. A common reference unit needs to be adopted while reporting the total production across different products, specially in coconuts.

interest on working capital, other expenses, interest on fixed capital and finally the imputed value of household labour. To address livelihood concerns, there must be an increase in the imputed value of household labour over the years of FTA-led liberalisation. This is a structural oversight in how liberalisation—especially under FTAs—tends to undervalue non-market contributions, particularly from rural and agrarian households.



Figure 15: Labour Shares in Main Kerala's Crops (2000 to 2013)

Source: 2016, An Analytical Study on Agriculture in Kerala, Monitoring & Evaluation Division, Directorate of Agriculture, Thiruvananthapuram, Government of Kerala.

Almost all of Kerala's crops are labour-intensive, and therefore, they exhibit an average share exceeding 40% across the six crops, as illustrated in Figure 15. Tapioca ranks as the most labour-intensive crop (considering both hired labour and imputed household labour), with a share of 60%. At the same time, ginger represents the least labour-intensive of the six crops, holding a 40% share from 2004 to 2013. Coconut and pepper crops require nearly 56% of labour, which includes both hired human labour and imputed household labour. The labour share consistently increased by over 2% for all agricultural products, except turmeric, which experienced a negative growth rate of 0.03% (Fig. 15).



Figure 16: Trends and Direction of Imputed Household Labour in Total Labour -%

Source: 2016, An Analytical Study on Agriculture in Kerala, Monitoring & Evaluation Division, Directorate of Agriculture, Thiruvananthapuram, Government of Kerala.

Fig. 16 suggests that the average shares of imputed household labour in total labour have increased across coconut, tapioca, banana, pepper, and ginger, with both measures—average values and growth rates—showing positive values. The highest recorded shares are in crops such as turmeric (29%), banana (28%), pepper (25%), and tapioca (24%). While market availability plays a role, the rise in imputed household labour shares across crops such as coconut, turmeric, banana, pepper, and tapioca likely reflects a more complex interplay of economic, agronomic, and institutional factors, including low market integration of certain crops, volatile or thin market structures, high labour intensity in pre- and post-harvest phases, shrinking viability of hired labor, and institutional and infrastructural asymmetries. The average share is positive for areca nut and turmeric, while the growth rates are negative. Meanwhile, coconut recorded the lowest share of labour at 15% of the crop's total cost of production. Data from the Coconut Development Board, Kerala, shows that approximately 7,65,840 hectares are under coconut cultivation. This makes it the largest coconut-growing state in India, accounting for approximately 35–45% of the country's total coconut production.

Seven labour- intensive crops of Kerala	2004-05	2005-06	2009-10	2010-11	2011-12	2012-13	2013-14	Exp. Growth Rate of Shares 2004 to 2014	% of Area
1	2	3	4	5	6	7	8	9	10
Turmeric	11.7	34.5	32.4	41.3	16.0	21.7	20.5	-1.3	4.0
Banana	31.3	22.0	25.4	30.2	30.1	33.2	28.7	2.3	2.0
Pepper	16.2	19.2	23.9	27.6	23.9	25.5	29.5	4.1	3.0
Tapioca	20.4	20.6	24.5	24.4	25.4	31.8	29.9	4.7	3.0
Ginger	7.8	24.2	19.4	24.7	20.7	21.6	20.3	5.5	
Arecanut	20.8	17.6	16.2	13.3	18.8	16.9	19.2	-1.3	4.0
Coconut	13.0	13.5	15.4	15.2	15.2	14.4	18.1	2.8	42.0
Averages	17.3	21.7	22.5	25.2	21.4	23.6	23.7	2.4	9.7

Table 7: Imputed Household Labour as a Share of Total Labour Input – 2004 to 2013

Source: 2016, An Analytical Study on Agriculture in Kerala, Monitoring & Evaluation Division, Directorate of Agriculture, Thiruvananthapuram, Government of Kerala.

The shares of imputed household labour across all tropical crops, along with studies and surveys—particularly the Situation Assessment Survey (SAS-77) by the National Statistical Office—suggest two trends. In crops such as turmeric, banana, pepper, and tapioca, these crops have shown imputed household labour shares ranging from 24% to 29% of total labour input. Other tropical crops, such as coconut and ginger, also exhibit rising trends, typically in the 15–22% range, depending on the region and seasonality. The analysis from 2004 to 2014 suggested that the average share of imputed household labour is high, ranging from a minimum of 17% to a maximum of 25%. Table 7 strongly supports this argument, as the average of seven crops indicates a 2.4 increase in the share of

imputed household labour as a portion of total labour input. Annexe Table 4 (page 39) further indicates that the number of seven crops breaching these limits has been increasing over the years. However, a two-year comparison of 2004-05 and 2013-14 shows clear trends. Except for bananas, all six other crops in Kerala registered an increase in the imputed household participation share of total labour. The farmers' reluctance to hire labour indicates an increasing strain on production, which could be reflected in price pressures.



Figure 17: Exportable Surplus of CPOs Vs. CCOs: ASEAN* and India

Note: * = ASEAN palm oil accounted for by Indonesia, Malaysia, and the Philippines. Source: Author calculation based on <u>https://apps.fas.usda.gov/</u>

Another dimension is reflected in the FAO data on the exportable surpluses. In the Indian scenario, the production of coconut oil declined from 55,000 metric tonnes to 13,000 metric tonnes, while the production of palm oil by ASEAN countries increased steadily. The fall should not be directly associated with AIFTA, but rather with the pre-AIFTA barter deal with Malaysia, which allowed the import of CPOs into India.

4.3 Kerala's Agricultural: Substitutable and Value-Added Products

Finally, to list the total crops based on livelihood concerns, some gaps in data transparency and accounting practices need to be addressed. The nature of accounting practices differs across the agriculture, manufacturing, and services sectors; therefore, the data accuracy level of the three sectors also differs. The most significant gap regarding the lack of standardisation in the agricultural sector is its extremely informal levels. In the case of national-level analysis, the data suggest that the share of informal/unorganised sector GVA to total, as shown, is more than 50% across all years; the share of the unorganised sector is highest in agriculture, as holdings are small and fragmented

(Murthy, 2020). Agriculture remains overwhelmingly informal, with over 95% of GVA from unorganised sources, while the construction, trade, and real estate sectors also show high informal shares, often exceeding 70%. The manufacturing sector has a mixed profile, with about 22–25% of GVA from informal units. Finally, sectors like finance and public administration are largely formal, but "other services" still have a significant informal footprint. As the agricultural sector provides the most significant employment, it becomes important in the context of livelihood.

A more inclusive and resilient trade strategy under Free Trade Agreements (FTAs) is essential, which involves adopting a differentiation between direct, indirect, substitutable, and value-added agricultural products. When FTAs lower barriers for imported substitutes (e.g., palm oil versus coconut oil, imported ginger versus local ginger), domestic producers may face price suppression and a margin squeeze, especially in smallholder contexts. Substitutability is highest when there are no geographic indications, weak branding, or low processing differentiation. FTA negotiations should apply sensitive product lists to crops vulnerable to high-substitutability shocks and promote Geographical Indications (GIs) or labelling for domestic retention. Another more straightforward method is to use the reduction route under the FTA, with deferred reduction from MFN tariffs, and the preferential tariffs not being reduced to zero (i.e., not eliminated). The tariff rate quotas (TRQs) can also be used judiciously, accommodating local availability and consumption within the domestic territory. The most effective method could involve considering raw, value-added, and substitute products where livelihood challenges are indicated under an FTA.

Kerala's Products	Raw Material	Substitutable Products	Value Added	Kerala No. of Tariff lines
Cassava	1		2	3
Coconut & Palm	3	32	20	55
Fisheries	176		102	278
Pepper	9		5	14
Rubber	3	128	98	229
Tea		16	9	25
Coffee		8	8	16
Milk & Dairy	16		12	28
Kerala Tariff Lines	208	184	256	648
% share	32.1	28.4	39.5	100
	India's N	ational Tariff Lines	(11.960)	

Table 8: Kerala	: Raw Material,	Substitutable	Products and	Value Added
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Source: Author.

Table 8 presents Kerala's livelihood concerns, categorised into nine products: six crops, animal husbandry (including milk and dairy products), and aquatic products (fisheries). In Kerala's case, the author listed 208 (8-digit HS-ITC) products, accounting for 32% of the total, designated for protection through trade policies under the FTAs, tariffs, and non-tariff measures. However, this also applies to an additional 68% of products, which can

be divided into two categories: 184 substitutable products, accounting for 28%, and 256 value-added products, which account for 40% of Kerala's agricultural products and have an indirect impact on price determination. Therefore, significant implications for protecting livelihoods can only be addressed if the 648 products are effectively discussed in relation to import surges and export promotion.

5 Conclusion and Policy Recommendations

The prolonged negative trade balance in India's merchandise trade has been depleting the country's foreign exchange reserves. The trade balance was USD 9.8 billion in 2000, increased to USD 294.2 billion by 2018, and fell to USD 151 billion in 2019. These enormous deficits have directly resulted from India's trade balance, which includes both exports and imports. The trade deficit leads to a direct outflow of USD 3 billion worth of production to ASEAN economies, with agricultural products being primarily responsible for generating income and supporting local economic activities.

In this context, the paper analyzes Kerala's substitutable products, such as crude coconut oil and refined coconut oil, versus imported palm oil, and their transmission mechanisms through price setting and determination for domestic consumption in India. Price suppression of primary products (such as coconut, pepper, and rubber) has resulted from imported substitutes and value-added products in India's FTA, which are replacing domestic products. Therefore, while considering the tariff liberalization of agricultural products, another element that needs to be addressed is how to support some of the livelihood crops and their substitutability in both food and non-food sectors. Given that India has a large informal economy, trade policies need to integrate this understanding into their overall tariff liberalization initiative, rather than basing it on liberalization that would lead consumers to. From this perspective, it is crucial to make a meaningful assessment of India's imports of primary crops and intermediate products, such as crude oil. By binding and eliminating tariffs, it is evident that macroeconomic tools are being used to address microeconomic issues (like substitutability vs complementarity and valueadded products). The FTAs increasingly integrate two or three economies into a single entity, wherein the impacted nation-state has minimal sovereign control over these entities. Therefore, the FTAs should include a compulsory review provision after two years.

5.1 Policy Recommendations

a. A more comprehensive database is needed to track price movements at the local mandi level across India. The Department of Commerce must incorporate the various factors that impact prices for all trade negotiations. Furthermore, with a focus on livelihood-related aspects, the performance of the economy as a wholeincluding matters of speculation, actual economic performance, and relevant inputs from all stakeholder ministries—must be collated.

- b. Data on six-digit tariff line-wise information for production, consumption, and the trade balance (Exports minus Imports) should be gathered to assess livelihood concerns across the sector. Rajya Sabha recommended that a "Livelihood Clause" should be incorporated in all trade agreements to protect the interests of small and marginal growers (India, 2017).
 - A more comprehensive network of institutions must be established to conduct this analytical work, linking tariff lines with livelihood issues. The key point is that rice can be a significant livelihood issue for ten states: West Bengal, Uttar Pradesh, Punjab, Telangana, Odisha, Tamil Nadu, Chhattisgarh, Andhra Pradesh, Bihar, and Assam.
 - ii. Similarly, the list needs to be expanded beyond the current items addressed by the Ministry of Agriculture and Farmer Welfare. This can be achieved by engaging regional universities that specialise in agriculture.
 - iii. TRQs to be adopted for substitutable products under the FTA negotiation for the upcoming developed countries, including the European Union, Canada, and the United States.
 - iv. The HS code coverage of the non-tariff measures notified by the developed countries, which are the largest users, is essential. While analysing the NTMs, it is recommended to use the stock data of these measures as notified up to the year of assessment.
- c. Considering the unavailability of recent data encountered by the author while analysing the paper (trade against economic), the author suggests establishing separate data tracking, similar to the Goods and Services Tax (GST), that records the HS codes for all transactions. A comparable mechanism will be introduced to track a harmonised set of data points for production, consumption, exportable surplus, and import surges for each of the identified negative list products, along with their substitutable and value-added products.
- d. All commitments under the FTAs should be assessed based on at least three criteria: their intergenerational impact on the dependent population, the cross-sectional ecosystem (investment opportunities, quality, technological upgrades, etc.), and, finally, the overall economy-wide impact of their implications on terms of trade (TOT) at the sectoral level or more disaggregated levels, wherever applicable.

References

- Alghabbabsheh T. G., AlSaif S. S., Islam Md. S., AlShammari T. S., and Mahmoud A. M. A. (2022). Have Bilateral Free Trade Agreements (BFTAs) been beneficial? Lessons learned from 11 U.S. BFTAs between 1992 and 2017, April 11, 2022, https://doi.org/10.1371/journal.pone.0264730.
- Dhar Biswajit & Kallummal M. (2007). Trade policy off the hook: The making of Indian trade policy since the Uruguay Round, in the edited book titled "Process Matters Sustainable Development and Domestic Trade Transparency, by Mark Halle and Robert Wolfe, International Institute for Sustainable Development, Geneva.
- Francis, S. & Kallummal, M. (2013). India's Comprehensive Trade Agreements: Implications for Development Trajectory. Economic and Political Weekly, August 48(31).
- Francis, S. (2011). A Sectoral Impact Analysis of the ASEAN-India Free Trade Agreement. *Economic and Political Weekly*, January 46(02).
- Government of Kerala, 2022. <u>https://www.prsindia.org/parliamenttrack/budgets/kerala-budget-analysis-</u> 2020-21.
- Govt of Kerala (2022), Economic Survey 2021, Kerala State Planning Board, March, <u>https://spb.kerala.gov.in/sites/default/files/2022-</u>03/ECNO %20ENG 21 %20Vol 1.pdf.
- Govt of Kerala, 2014. Agricultural Statistics at a Glance 2014 & Indian Horticulture Database 2014, Thiruvananthapuram, Ministry of Agriculture.
- Govt. of India (2011). [Online] Available at: www.censusindia.gov.in, [Accessed 20 February 2021].
- Govt. of India 2011, 2018. National Horticultural Board, Available at: <u>http://nhb.gov.in/Statistics.aspx</u>, [Accessed 01 February 2021].
- Govt. of India, 2020, Growing India's agricultural exports through crop-specific, state-led plans, High-Level Expert Group on Agriculture, Submission to the XV Finance Commission, July, <u>https://fincomindia.nic.in/writereaddata/html_en_files/fincom15/StudyReports/HLEG%20</u> <u>Report_Agriculture_vF.pdf</u>.
- Hoang Viet. (2018). Assessing the agricultural trade complementarity of the Association of Southeast Asian Nations countries. Agricultural Economics.64(10). 464-475. October. DOI: 10.17221/253/2017-AGRICECON. <u>https://agricecon.agriculturejournals.cz/artkey/age-201810-0005_assessing-the-agricultural-trade-complementarity-of-the-association-of-southeast-asian-nations-countries.php</u>.
- Islam Naim and Pawan Bhandari (2023). Economic and Long-Term Impacts of Free Trade Agreements (FTAs) with the U.S.A Proceedings of the International Conference on Industrial Engineering and Operations Management Manila, Philippines, March 7-9, 2023, https://www.wita.org/wp-content/uploads/2023/03/FTA-PDF.pdf.
- Jiang Hui (2016). Free Trade Agreements and U.S. Agriculture, International Agricultural Trade Report, United States Department of Agriculture, June 24, <u>https://fas.usda.gov/sites/default/files/2016-06/2016-06 iatr_ftas.pdf</u>.
- Kallummal Murali (2021). "Import Surge of Agricultural Products under the FTAs: Protection of substitutable products to address livelihoods concerns", paper presented at an international conference titled "CDS Conference Kerala and the World Economy", February 4 – 5, 2021, Centre for Development Studies, Thiruvananthapuram, Kerala, memo.

Kallummal Murali, Rajan Sudesh. Ratna and Sachin Kumar Sharma (2016). Centre for WTO Studies. memio.

Kallummal, M., (2012). SPS measures and possible market access implications for agricultural trade in the Doha Round: An analysis of systemic issues (No. 116). ARTNet Working paper series. https://repository.unescap.org/items/81af0fe4-1fbf-4057-bcbc-d43254d0e3c3.

- Kallummal, Murali (2001). An Alternative to Investment Promotion in Developing Countries: A Case study of the Indian primary market. New Delhi: Research and Information System for the Non-Aligned and Other Developing Countries.
- Kallummal, Murali (2015). India's Re-industrialisation at Crossroads: Developmental Issue Vs Green Challenges. Xplore - The Xavier Research Journal, 6(1), <u>https://9dec1e70-3d6c-406f-960b-</u> <u>920f18cdab25.filesusr.com/ugd/03b37e_0099f082768c450daf6917082400ceb9.pdf</u> , <u>https://www.xaviersjournal.com</u>.
- Kallummal, Murali (2020). Market Access and Issues of Data Gaps and Transparency and Information Asymmetry: A Case of RCEP Negotiations. International Finance, eJournal, 07 April 2012 (45).
- Kallummal, Murali, Francis, Smitha (2020). FDI screening: Need of the hour in the time of non-transparent capital flows. Mahalingam T.V., (2011) God's own challenges, Business Today, April 03, <u>https://www.businesstoday.in/magazine/features/story/tourism-and-remittances-</u> <u>challenges-for-kerala-18929-2011-03-19</u>.
- Mahesh, K. (2002). Labour Mobility in Rural Areas: A village-level study, Thiruvananthapuram, CDS.
- Mankiw, N. G. (2015). Principles of Microeconomics. Seventh Edition. Stamford. Cengage Learning. ISBN 978-1-285-16590-5.
- Marian Radetzki & Linda Warell (2021). A Handbook of Primary Commodities in the Global Economy. Cambridge University Press; DOI:10.1017/9781108886529.
- Murthy, S V R. (2001). "Measuring Informal Economy in India_ Indian Experience", Session II: Traditional Estimation Practices: Determining the Level and Growth of the Informal Economy, <u>file:///C:/Users/PHOENIX/Downloads/session-ii-murthy-3.pdf</u>.
- OECD (2002). Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs. s.l.:s.n.
- Ondřej Sokol and Vladimír Holý, (2015). A Simple Measure of Product Substitutability Based on Common Purchases, <u>https://arxiv.org/pdf/2201.12140.pdf</u>.
- Prakash B.A. (1978). Impact of Foreign Remittances: A Case Study of Chavakkad Village in Kerala, Economic and Political Weekly, pp 1107–1111, <u>https://keralaeconomy.com/admin/pdfs/one%20impact.pdf</u>.
- Rajya Sabha (2017). Trade with Association of South-East Asian Nations (ASEAN), s.l.: Rajya Sabha Secretariat, Government of India.
- Ratna, R. S. & Kallummal Murali, (2013). ASEAN–India Free Trade Agreement (FTA) and its Impact on India: A Case Study of Fisheries and Selected Agricultural Products. Foreign Trade Review, 48(4).
- Ratna, S. R., Kallummal Murali & Moitra Snigtha, (2010). Implications for Development Trajectory: A Case Study of Fisheries and Commercial Crops and Their Impact on the Rural Economy. Trivandrum, s.n.
- U.S. (2018) Agricultural Exports Pre- and Post-Trade Agreements, Data and Analysis, United States Department of Agriculture https://fas.usda.gov/data/us-agricultural-exports-pre-and-posttrade-agreements.
- Veeramani, C. & Saini, G. K., (2011). Impact of ASEAN-India Preferential Trade Agreement on Plantation Commodities: A Simulation Analysis. Economic and Political Weekly, 05 March 46(10).
- Viswanathan P.K. (2014). The Rationalisation of Agriculture in Kerala: Implications for the Natural Environment, Agro-economic systems and Livelihood. Agrarian South: Journal of Political Economy, 3 (63). DOI: 10.1177/2277976014530232.

		Elir	nination			Reduction	I	Not	Excluded	Total
FIAs	YO	Stage 2	Stage 3	Stage 3	Stage 1	Stage 2	Stage 3	Negotaited	from the FTA	lariff lines
A) ASEAN-India		NT-1	NT-2	-		Special Products	Sensitive Tracks	-	Negative List	
No of TLs		7,775	1,252			40	1,805		1,297	12,169
% of TLs		63.9	10.3			0.3	14.8		10.7	100
B) Indo-Singapore	Free	E-5	MOP 50 %				1	I	EXC	
No of TLs	506	2,202	2,368						6,551	11,627
% of TLs		18.9	20.4						56.3	100
C) Korea (CEPA)	E-O	E-5	E-8		RED	-	SEN	Not Negotiated	EXC	
No of TLs	460	448	7,248		941		704	14	1,895	11,710
% of TLs		3.8	61.9				6	0.1	16.2	100
D) Japan (CECA)	Α	B10	B5	B7		Pa(Note)	Pb(Note)	-	Х	
No of TLs	2,074	7,163	509	2		2	1		1,538	11,289
% of TLs	18.4	63.5	4.5	0		0	0		13.6	100

Annex Table 1: Four India's FTA and the Exclusion (Negative) List (No. and % ages)

Source: Various FTAs, Department of Commerce, .

1 Park Income			
High Income			
Antigua and Barbuda	Estonia	Kuwait	Saudi Arabia
Aruba	Faeroe Islands	Latvia	Seychelles
Australia	Finland	Lithuania	Singapore
Austria	France	Luxembourg	Slovak Republic
Bahamas, The	French Polynesia	Macao	Slovenia
Bahrain	Germany	Malta	Spain
Barbados	Greece	Netherlands	St. Kitts and Nevis
Belgium	Greenland	New Caledonia	Sweden
Bermuda	Hong Kong, China	New Zealand	Switzerland
Brunei*	Hungary	Norway	Trinidad and Tobago
Canada	Iceland	Oman	Turks and Caicos Isl.
Chile	Ireland	Palau	United Arab Emirates
Croatia	Israel	Panama	United Kingdom
Cyprus	Italy	Poland	United States
Czech Republic	Japan*	Portugal	Uruguay
Denmark	Korea, Rep.*	Qatar	
Low Income			
Afghanistan*	The Gambia	Mali	Syrian A. Rep. c
Benin	Guinea	Mozambigue	Tanzania
Burkina Faso	Guinea-Bissau	Nepal*	Тодо
Burundi	Haiti	Niger	Uganda
Central African Republic	Madagascar	Rwanda	Yemen
Eritrea	Malawi	Sierra Leone	
Ethiopia(excl. Eritrea)			
Lower Middle Income			
Angola	Egypt Arab Rep	Lesotho	Sao Tome & Principe
Bangladesh*	El Salvador	Mauritania	Senegal
Bhutan*	Eswatini	Micronesia Fed Sts	Solomon Islands
Bolivia	Em Sudan	Moldova	Tunisia
Combodio*	Chana	Mongolia	
Cameroon	Honduras	Morocco	Uzbekistan
Cape Verde	India	Myanmar*	Vapuatu
Cape verde	Indonosia*	Nicoroguo	Viotnam*
Congo Bon	Konya	Nicaragua	Zambia
Congo, Rep.	Kenya	Bakistan	Zambahwa
Cote d ivoire		Pakistan David New Colinea	ZIMDabwe
	Kyrgyz Republic	Papua New Guinea	
East Timor	Lao PDR*	Philippines*	
Otners			
Andorra	Mayotte	Occ.Pal.Terr	
Belgium-Luxembourg	Montenegro	Other Asia, nes	
Cook Islands	Montserrat	Serbia, F.R. (Ser./Mont.o)	
European Union	Netherlands Antilles	Sudan	
Upper Middle Income			
Albania	Cuba	Kazakhstan	South Africa
Algeria	Dominica	Lebanon	Sri Lanka*
Argentina	Dominican Republic	Libya	St. Lucia
Armenia	Ecuador	Malaysia*	St. Vin. & the Grenadines
Azerbaijan	Fiji	Maldives*	Suriname
Belarus	Gabon	Mauritius	Thailand*
Belize	Georgia	Mexico	Tonga
Bosnia and Herzegovina	Grenada	Namibia	Turkey
Botswana	Guatemala	North Macedonia	Turkmenistan
Brazil	Guyana	Paraguay	Tuvalu
Bulgaria	Iran, Islamic Rep.	Peru	Venezuela
China	Irag	Romania	
Colombia	Jamaica	Russian Federation	
Costa Rica	Jordan	Samoa	

Annex Table 2: WITS Grouping of Countries

Note: Shaded cells are India's 19 FTAs partners. Source: WITS Comtrade

India FTA Partners	2000	2005	2006	2007	2008	2010	2011	2012	2014	2015	2017	2018	2019	Growth %	COV- %
World	-9.8	-38.9	-54.2	-68.9	-126.0	-127.4	-153.6	-186.6	-132.8	-123.1	-148.6	-294.2	-150.7	19.5	-75.2
Singapore	-0.5	2.4	1.0	-0.4	0.7	1.9	7.6	5.9	2.8	0.6	4.4	-6.7	-4.4	16.1	275.9
Bhutan	0.0	0.0	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.5	21.0	226.6
Vietnam	0.2	0.7	1.0	1.6	2.2	2.1	2.9	2.7	4.4	2.9	4.4	-1.6	-1.6	14.6	107.3
Nepal	-0.2	0.4	0.6	0.8	1.1	1.5	2.2	2.5	4.0	3.0	5.7	7.4	6.8	22.4	104.7
Cambodia	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	15.9	74.2
Afghanistan	0.0	0.1	0.1	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.2	0.2	0.4	19.0	66.3
Bangladesh	0.8	2.0	1.8	2.5	3.8	3.1	3.5	5.3	6.8	5.4	7.3	8.3	7.3	11.7	60.7
Pakistan	0.2	0.5	1.4	1.5	1.6	2.7	1.6	1.4	1.9	1.7	1.4	1.8	1.2	13.7	59.4
Sri Lanka	0.6	1.3	1.6	2.2	2.5	2.9	4.1	3.4	6.2	4.8	4.0	3.2	3.3	11.0	58.8
Maldives	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	11.9	57.5
Philippines	0.1	0.3	0.5	0.5	0.6	0.5	0.7	0.8	1.2	0.9	0.9	1.1	1.2	10.5	53.8
Malaysia	-1.3	-1.5	-3.5	-3.8	-4.2	-2.9	-6.3	-8.7	-8.5	-6.8	-4.7	-8.0	-6.2	12.3	-62.9
Korea, Rep.	-0.3	-2.8	-2.4	-2.7	-4.2	-6.0	-7.6	-9.0	-8.2	-9.1	-11.5	-14.6	-11.1	18.9	-72.5
Indonesia	-0.9	-2.6	-2.5	-4.0	-5.5	-8.7	-11.8	-12.4	-14.1	-14.5	-17.5	-19.3	-13.6	19.6	-74.3
Japan	-0.3	-1.0	-1.7	-2.3	-3.7	-3.0	-5.0	-5.5	-4.0	-4.9	-5.8	-10.3	-7.8	20.3	-79.3
Brunei	0.0	0.0	-0.2	-0.2	-0.3	-0.2	0.2	-0.9	-0.9	-0.6	-0.5	-0.5	-0.5	38.9	-102.8
Thailand	0.2	-0.1	-0.1	-0.4	-0.5	-1.8	-2.1	-1.7	-2.2	-2.5	-2.9	-5.4	-2.7	20.4	-116.4
Myanmar	-0.1	-0.4	-0.6	-0.6	-0.7	-0.8	-0.8	-0.8	-0.4	0.1	0.6	0.9	0.5	4.5	-213.2
Lao PDR	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.2	0.0	0.0	26.6	-229.7
19 FTA Partners of India	-1.4	-0.5	-2.8	-5.3	-6.1	-8.4	-10.2	-16.4	-2.0	-10.4	-18.2	-15.1	-13.6	23.5	-112.2

Annex Table 3: India's Trade Balance with World and Nineteen FTA Partners (USD bn.)

Note: In green shades, India has a positive trade balance.

Kerala's Crops	2004-05	2005-06	2006-07	2007-08	5008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Growth Rate of Shares 2004 to 2014	% of Area
Turmeric	11.7	34.5	35.8	38.1	37.0	32.4	41.3	16.0	21.7	20.5	-1.3	4.0
Banana	31.3	22.0	26.1	21.0	27.5	25.4	30.2	30.1	33.2	28.7	2.3	2.0
Pepper	16.2	19.2	28.5	24.9	28.6	23.9	27.6	23.9	25.5	29.5	4.1	3.0
Tapioca	20.4	20.6	21.3	23.5	22.4	24.5	24.4	25.4	31.8	29.9	4.7	3.0
Ginger	7.8	24.2	19.2	19.0	22.1	19.4	24.7	20.7	21.6	20.3	5.5	
Arecanut	20.8	17.6	19.9	15.6	22.5	16.2	13.3	18.8	16.9	19.2	-1.3	4.0
Coconut	13.0	13.5	12.1	15.0	16.8	15.4	15.2	15.2	14.4	18.1	2.8	42.0
Crops faced with a high share of Imputed household labour	1	2	3	2	6	4	6	3	3	4		
Averages	17.3	21.7	23.3	22.4	25.3	22.5	25.2	21.4	23.6	23.7	2.4	9.7

Annex Table 4: Imputed Household Labour as a Share of Total Labour Input – 2004 to 2013 (% shares)

Note: Red text indicates the shares of imputed household labour share to the total labour input that are higher than the standard ranges as identified by various studies.

Source: Government of Kerala, 2016, An Analytical Study on Agriculture in Kerala, Monitoring & Evaluation Division, Directorate of Agriculture, Thiruvananthapuram, Government of Kerala.







Annex Figure 2: India's as a Market: 2000 to 2019

	Annex Table 5: Ke	rala's Agricultura	al Products & AIF	TA Tariff Conce	ession Categories
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Agricultural Crops	NL	NT-1	NT-2	Special Products	ST	HSL*	No Tariff Line#	Six-digit HS.
Coconut	4							4
Coffee	6			1				7
Fish and Fish Products	37	73	9		3			122
Natural Rubber	4	14			1			19
Pepper	1			1				2
lea	4	07	10	1				5
India	90	8/	10	5	4			159
Coffee	4	4			4			4
Eich and Eich Products	1	105			4		17	122
Natural Rubber		105					17	19
Penner		2						2
Теа	2	-			3			5
Brunei	3	132			8		17	159
Coconut	2	2			-			4
Coffee		6			1			7
Fish and Fish Products	11	103			8			122
Natural Rubber		17			2			19
Pepper		2						2
Tea		2			1	2		5
Cambodia	13	132			12	2		159
Coconut		3			1			4
Coffee		6			1			7
Fish and Fish Products	18		67		7	30		122
Natural Rubber		15			4			19
Pepper		2						2
Tea	2	1	1		1			5
Indonesia	20	27	68		14	30		159
Coconut					4			4
Coffee		102			/			/
Fish and Fish Products		103			19			122
Natural Rubber		19			2			19
Тер					5			<u>۲</u>
		122			37			159
Coconut		3	1		57			4
Coffee		7						7
Fish and Fish Products		120	2					122
Natural Rubber		8	6		5			19
Pepper		2	-					2
Теа	2	3						5
Malaysia	2	143	9		5			159
Coconut	4							4
Coffee	6					1		7
Fish and Fish Products	43	47	26		6			122
Natural Rubber	4	15						19
Pepper	1	1						2
Tea		1	4					5
Philippines	58	64	30		6	1		159
Coconut	4							4
Coffee	6	00	2		1			/
Fish and Fish Products	22	80	2		18			122
Repper	2	19						19
Тер	<u> </u>				4			Z
Thailand	4 29	00	2		20			5
Coconut	50	33 4	2		20			159
Coffee		4	3					7
Fish and Fish Products#		11	62		14	18	17	, 122
Natural Rubber		19	02			10	.,	19
Pepper			2					2
Tea					1	4		5
Viet Nam	1	38	67		15	22	17	159

viet Nam3867152217159Note: * = highly sensitive list, # = National tariff lines that do not follow HS3 (2007) standard (the first six
digits should be based on the standard subheading nomenclature of the country's HS version) are listed.Source: Based on AIFTA Tariff Schedules

Agricultural Crops	0 to 5	6 to 15	20 to 30	above 35	Specific Duties	No T.L.s#	Total 6 digit H.S.
Coconut				4			4
Coffee			2	5			7
Fish & Fish Products		1	121				122
Natural Rubber	1	14	3	1			19
Pepper				2			2
Теа			1	4			5
India	1	15	127	16			159
Coconut	4						5
Coffee	3				4		7
Fish & Fish Products	105					17	122
Natural Rubber	19						19
Pepper	2						2
Tea	1				4		5
Brunei	135				8	17	159
Coconut		4					4
Coffee		2		5			7
Fish & Fish Products	4	87		31			122
Natural Rubber		19					19
Pepper		2					2
Tea		4		1			5
Cambodia	4	118		37			159
Coconut	4						4
Coffee	/						/
Fish & Fish Products	105	1/					122
Natural Rubber	19						19
Pepper	2						2
lea	5						5
Indonesia	142	1/	-				159
Coconut			4				4
Corree			2	5			/
Fish & Fish Products	102		20				122
Natural Rubber	19						19
Pepper			2				<u> </u>
	121		20	4			5
	121		29	9			159
Coffee	5		1				4
Fish & Fish Products	0	23	1				122
Natural Rubber	11	25	8				122
Penner	2						2
Тер	2						5
Malaysia	122	25	12				159
Coconut	166	4	12				4
Coffee		1	2	4			7
Eich & Eich Broducto	24	00					122
Fish & Fish Products	34	88					122
Renner	19						19
Teo	1	1					<u> </u>
Philippings	50	95					159
Coconut	50	35	<u> </u>				159
Coffee							7
Fish & Fish Products	91	2	29				122
Natural Rubber	10	2	25				10
Penner	19		2				
Теа			5				<u>۲</u>
Thailand	110	2	46				150
Coconut		1	1	2			4
Coffee		·	2	5			7
Fish & Fish Products	5	2	84	14		17	122
Natural Rubber	19	<u>_</u>					10
Pepper			2				2
Tea				5			5
Viet Nam	24	3	89	26		17	159

Annex Table 6: Kerala's Agricultural Products & AIFTA Base (MFN - 2007) Tariffs

Note: # = National tariff lines that do not follow HS3 (2007) standard (the first six digits should be based on the standard subheading nomenclature of the country's HS version) are listed. **Source:** Based on AIFTA Tariff Schedules

Kerala Products / Category (CLMV & Philippines)	EL	NT-1	NT-2	SP	ST	6 digit Tariff Lines	% Share
EL	56					56	35.0
Coconut	4					4	7.1
Coffee	6					6	10.7
Fish and Fish Products	37					37	66.1
Natural Rubber	4					4	7.1
Pepper	1					1	1.8
Теа	4					4	7.1
NT-1		87				87	54.4
Fish and Fish Products		73				73	83.9
Natural Rubber		14				14	16.1
NT-2			10			10	6.3
Coconut			1			1	10.0
Fish and Fish Products			9			9	90.0
SP				3		3	1.9
Coffee				1		1	33.3
Pepper				1		1	33.3
Теа				1		1	33.3
ST					4	4	2.5
Fish and Fish Products					3	3	75.0
Natural Rubber					1	1	25.0
6 digit tariff lines	56	87	10	3	4	160	100.0

Annex Table 7: Kerala's Agricultural Products & India's Tariff Category (ASEAN-India FTA)

Note: # = National tariff lines that do not follow HS3 (2007) standard (the first six digits should be based on the standard subheading nomenclature of the country's HS version) are listed. Source: Based on Trade Agreement, ASEAN Indian Free Trade Agreement, DOC

Bio of Author



Dr. Murali Kallummal is the Head of Administration at CRIT and a Professor at the Centre for WTO Studies, where he has been associated since 2003.

He specializes in market access issues under both the WTO and Regional Trade Agreements and has extensively worked on tariffs and non-tariff measures

He has published papers in peer-reviewed journals and has served as a reviewer for several international and

He has also been consulted by various international bodies and agencies to conduct training programs.

His pioneering work includes conceiving and executing India's first web-based portal on SPS and TBT measures. The database provides a trade link for all the WTO-notified measures on SPS and TBT since 1995.

ABOUT CRIT

India's Foreign Trade Policy (FTP) Statement 2015-20 suggested the need to create a globallevel institution that can provide a counter-narrative on key trade and investment issues from the perspective of developing countries like India. To address this, a new institute, namely the Centre for Research on International Trade (CRIT), was established in 2016. The vision and objectives of CRIT were to significantly deepen existing research capabilities and expand them to include new and specialized areas amidst the growing complexity of globalization and its spillover effects on domestic policymaking. Secondly, enhancing the capacity of government officials and other stakeholders in India and other developing countries to deepen their understanding of trade and investment agreements.

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The Centre for WTO Studies, a constituent centre of CRIT, predates CRIT, having been established in 1999 as a permanent repository of knowledge and documentation related to WTO negotiations. Over the years, the Centre has conducted a robust research programme, resulting in a series of papers on all spheres of interest at the WTO. The Government of India has regularly called upon it to undertake research and provide independent analytical inputs to help it develop positions in its various trade negotiations, both at the WTO and other forums such as Free and Preferential Trade Agreements and Comprehensive Economic Cooperation Agreements. Additionally, the Centre has been actively interfacing with industry and Government units as well as other stakeholders through its Outreach and capacity-building programmes by organising seminars, workshops, subject-specific meetings etc. The Centre thus also acts as a platform for consensus-building between stakeholders and policymakers. Furthermore, the Centre's inputs have been sought after by various international institutions for training and studies.

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