OPEN ACCESS

Saudi Journal of Economics and Finance
Abbreviated Key Title: Saudi J Econ Fin
ISSN 2523-9414 (Print) |ISSN 2523-6563 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: http://saudijournals.com

Original Research Article

India-ASEAN Agricultural Trade: An RCA Analysis

Amina Irshad[1*], Abid Hussain[1], Jamil Ahmad[2]

[1]Research Scholar, Department of Economics, Aligarh Muslim University, Aligarh, Uttar Pradesh, India
[2]Assistant Professor, Department of Economics, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

DOI: https://doi.org/10.36348/sjef.2025.v09i05.001 | **Received:** 24.03.2025 | **Accepted:** 30.04.2025 | **Published:** 05.05.2025

***Corresponding author:** Amina Irshad
Research Scholar, Department of Economics, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

Abstract

This study investigates the trade dynamics between ASEAN and India focusing on agricultural trade between 2011 and 2023. It examines the expanding economic ties between the two regions, with particular emphasis on trade intensity, relationship, and variations. Using Revealed symmetric comparative advantage (RSCA), revealed comparative advantage (RCA), and Trade Intensity Index (TII), the research shows that India has significant competitive advantages in oilseeds and grains, offering prospects for growth in these areas. The findings highlight India's strong trade relationships with Vietnam and Myanmar as well as potential trade vulnerabilities. India's reliance on ASEAN for essential commodities, especially palm oil, is highlighted by its import dependency on Indonesia and Malaysia. This study also identifies emerging opportunities for Indian agricultural export in aquaculture and fisheries. India must focus on diversifying exports in fisheries and aquaculture to enhance its agricultural trade with ASEAN. Reducing import dependence is vital, especially through boosting domestic palm oil and alternative oilseed crops. Enhancements in trade policy and sustainable practices are necessary. Strengthening trade relations via targeted agreements and agricultural research will improve productivity and resilience, solidifying India's agricultural position in ASEAN markets.

Keywords: ASEAN, India, agricultural trade, trade dynamics, trade intensity, RSCA, RCA, TII, oilseeds.

INTRODUCTION

Trade in Agricultural goods enables India and ASEAN to improve their economics, access food security, and unlock vast markets for these regions. The evolving relationship between India and ASEAN emerges from initiative and policies on both sides, showing mutual understanding and balance between lack of converged opportunities to avail and the problem of trade imbalance. India, along with other countries in South-East Asia, is actively engaged with Southeast Asian countries regionally and at a global level through economic partnerships.

ASEAN is India's fourth biggest trading separator and a home to the most performing economies in South-East Asia. India made its first move to foster relation with ASEAN through initiation of contracts and FTA in the 2000s. Since then, there has been tremendous growth in the trade from both domains, indicating the willingness from other areas including service industry and agriculture.

India and ASEAN share core principles and outlooks which serves as a unison based on common values guiding diplomatic relations (Ogden, 2023). India deeply exercised her ties with South-East Asia historically, owing to the maritime silk nerves which brought traders from India. The Look East Policy formally started with India enhancing its initiatives with ASEAN quantitatively and qualitatively in the 90s decade (Doley, 2017; Sridharan, 1996; Sundaram, 2013; Tiwari, 2023).

India launched its "Look East" policy in 1991 to reconnect with Southeast Asia, particularly in view of China's emergence as a global power in the early 1990s. With India's policy, the most important benefit has been ASEAN's acceptance of India in the region. India was accepted as ASEAN's Regional (Sectoral) Dialogue Partner in 1992, up-graded to Complete Dialogue Partner in 1996, and gained membership in the ASEAN Regional Forum in 1996 and Summit level partner in 2002 (Bhatt, 2021; Farooq & Billore, 2019; Sharma, 2020).

With respect to trade, the India-ASEAN economic relationship has grown tremendously, with ASEAN emerging as India's 4th big trading block. The trade pattern is of a typical high intra-industry trade system particularly of manufactures (Khalid, 2024).

Trade relations between India and ASEAN are vital, paying specific attention to agriculture. The goals of research are to study the driving forces, on-the-go changes, and the unexplored potential of the agricultural trade in both regions (A. Jha & Bathla, 2021; Saikia & Gogoi, 2024).

It is an undeniable truth that agricultural trade is that part of the economic relationship between India and ASEAN that is most affected by the agreements and the changes that the trade has undergone in the recent period (Mahajan, 2020). Although India has been known to be a net exporter of food and agricultural products, the situation with the former ASEAN partner is more complex because of the trend of increasing imports from ASEAN and a necessity to diversify fully the range of the agricultural goods. The trade dynamics, the comparative advantages, and the non-tariff measures are some of the forces that configure this trade (Mandal, n.d.).

Renjini & Kar, (2016**)**; Saikia & Gogoi, (2024) has shown that ASEAN and India are the major actors in the trading sector and that while India is getting more agricultural products from ASEAN, its exports have not been following this trend, calling for a strategic refurbishment of trade policies. The Indian side of the trade balance has proven to be a persistent deficit for India from at least 2013 to 2022, which saw a 2.2% increment in the importation of agricultural commodities and a 2.11% decrease in the export of the same. India's strength is in the agricultural products such as cotton, rice, and tea, but when it comes to the fruits and vegetables sector, it has to face a strong rival in the form of China.

P. K. Jha, (2017); Saini, (2021) clarified that in addition to India, ASEAN also have the advantage of the similar level of development in the agricultural sector, while Rao, (2024) suggests that in 1997 India had the lead over China only in agricultural products forces, yet it had lost it to China by 2020 in the manufacturing sector. To Bhardwaj, (2023), non-tariff barriers, especially those that are related to food safety and plant health, are of paramount importance, and according to him, the fact that they limit India's agricultural exports to the ASEAN countries in the competitive price range and therefore, also the market share issue, is most significant.

According to Ghosh & Ghoshal, (2019); Lakshmi *et al*., (2022), the authors assert that the difference in the recurring factors of the two countries, India, and ASEAN, has a significant impact on the pace of agricultural trade. The positive effect of India's and ASEAN's GDP on trade volumes, as well as spatial peculiarities such as a common border, cannot be underestimated. For instance, Indonesia, Thailand, and Malaysia, which are the main palm oil exporting countries of ASEAN, were found to be the most competitive, while Indonesia, although being a significant palm oil producer, lost its advantage because of tariff differences, and Malaysia and Thailand continued this labor until the end of 2018.

Pandey & Choubey, (2021) highlights that trading prospects are present with multiple ASEAN nations, in particular, Brunei and the Philippines, still untapped. One standout feature of India's exports to ASEAN is their broader nature and range, unlike the imports, which shows there is a balanced export income situation. Vietnam and Indonesia are the major trading partners within the ASEAN region that shape the landscape of India's agricultural trade; hence, both are significant (Kaushik, 2018).

Even though the trade connection appears to be promising, trade deficits and non-tariff barriers still represent major roadblocks. A well-thought-out strategy to cope with these problems might bring about a more equal trade relationship between India and ASEAN (Atici & Furuya, 2008).

Gulnaz & Manglani, (2023) have observed that in 1997 India was more competitive in agriculture and related products for which it had the home factor, but in 2020, it switched to the manufactured products. Data show that India both imported and exported industrial products, however, there were only minor deviations in the export and import structure of trade between the countries. It was the period of 2020 when ASEAN and India's trade experienced only structural changes having their trade dynamics between these two regions in which the exports of India to ASEAN were not affected by the minor changes in the structure of their trade or the flow of the trading goods between these two regions in the different directions.

Saini & Aggarwal, (2021) suggest that from the geographical and strategic points of view, India-ASEAN trade has expanded with the cooperation and focus of the Indian government on open trade and investment and protection of the eastern and southern suburbs. The history of the former European colonies in the South Asian and Southeast Asian regions has played a role in the overlap of India's and ASEAN's culture. Not only did India and ASEAN expand their bilateral trade from 16.1 billion US dollar to 68.3 billion US dollar from 2004 to 2018, but also the trade volume grew steadily. Despite the steady growth in the volume of India-ASEAN trade, the import number in this case tended to be higher all the way from the year 2004 to the year 2018. It was, however, a show of commendable cooperation and progress in trading that India's relations with ASEAN had seen up to the point of USD 68.3 billion transaction during the year of 2018. The situation could have been different if the two had not stuck together. Conversely, the area of contention comes in the form of trade and verbal communications links that are to this day still obstacles without resolution. RCEP would pose a significant barrier to the sectors from the perspective of

the China plus One Strategy, through which China and India get beneficially supported in production values.

Raghuramapatruni & Chaitanya, (**2023**) through the data analysis reveals that after an exponential growth in Indo-ASEAN trade, India reached a trade volume of 79 billion USD in 2020-2021. The cooperation between India and ASEAN strengthened through a dialogue partnership in 1992 and by the end of 2012, it developed into a strategic partnership as both sides recognized the potential of cooperation in the trade area. This growth is impressive; nevertheless, there are still areas of improvement that have to be identified according to recent studies besides the Asian value chains.

According to the (*Agricultural Exports and Trade Policy Responses | Economic and Political Weekly*, 2024) in 2023, India exported agricultural products worth $48 billion to 86 countries. The biggest share of these exports was $36 billion, which went to the global South, whereas the Americas and Europe put together only accounted for $12.5 billion. Local markets of the global South primarily are Asia (58%), with the UAE and Vietnam as the major importers, with purchases amounting to $3 billion and $2.6 billion respectively. The bilateral trade flows in the field of agriculture between India and ASEAN from 2013 to 2024 can be depicted as showing some remarkable patterns, which are the chronic trade deficit of India and changing import and export rates of other countries. This study suggests that Indian agricultural product imports from the ASEAN member countries have been growing fast while Indian exports remain stagnant. This situation requires the adoption of strategic policies that will make the Indian agricultural trade more competitive (Chandran, 2018). The reasons behind the research on the trade patterns between India and ASEAN relate to the steady improvement in their political, strategic, and economic relationship more than anything else. Thus, the study aims to analyze India's factors of comparative advantage in agriculture. It is anticipated that this research will also be able to identify the commodities that the nation has the greatest potential to export and to identify the commodities that would give India an advantage, as exporting these commodities might help the country in uplifting their trade balance.

METHODOLOGY

Data Collection and Sources

The primary data source for this study is the UNCOMTRADE databases, which provide insights into trade patterns in agricultural products between India and ASEAN countries from 2011 to 2023. To ensure consistency and comparability across different nations, agricultural products have been classified using the Harmonized System (HS) 2-digit codes. This classification allows for a clear analysis of trade patterns among these nations within specified time frame.

Research Design and Analytical Techniques

The study investigates the trade pattern between India and ASEAN countries from 2011 to 2023. For this a quantitative research design has been employed, focusing on analyzing trade data. The following techniques have been used:

Revealed Symmetric Comparative Advantage (RSCA) Index:

The Revealed Comparative Advantage (RCA) was constructed by Balassa (1965). The RCA index has been employed to assess the export competitiveness of agricultural products between India and ASEAN countries. This index measures the extent to which a country specializes in a particular agricultural product compared to its trading partners. (Jagdambe, n.d.) of the view that a product with a high RCA indicates a competitive advantage and is suitable for export to countries with lower RCA values. A country with RCA > 1 for a specific product demonstrates a relative competitive position as a producer and exporter of that product compared to countries whose production and export levels are at or below the global average. Moreover, a higher RCA value for a particular product suggests a stronger export capacity for that product (UNCTAD Stat). While the original RCA framework primarily focuses on merchandise exports, this analysis specifically applies it to the context of agricultural exports. This method have the following mathematical expression:

$$RCA = \frac{U_{ij}}{U_{nj}} * \frac{V_{nAg}}{V_{iAg}}$$

(Where, RCA = Revealed Comparative advantage, Uij = Country ‘i’ (India’s) Export Volume of commodity j to world, Unj = Country ‘nth’ (ASEAN) Total Volume of Export of commodity j to world, VnAg = ASEAN Total Export Volume of Agricultural commodity, ViAg = India’s Total Export Volume of Agricultural commodity).

The RCA index measures a country's specialization in a particular sector. Its value ranges from 0 to 1 when a country isn’t specializing in a sector, and from 1 to infinity when it is specializing. Therefore, it has some problems. First, it's not symmetric, meaning values above 1 get a lot more attention than those below 1. Because changes in RCA above 1 are much bigger than those below, the results can wrongly suggest that a country has de-specialized when it has remained neutral (Laursen, 2015). Second, it doesn't handle well zero exports from a sector. To eliminate the problems, that persist in Balassa indices, Vollarth (1991) suggested the use of the logarithm of RCA. While this helped, it still didn't handle cases of zero exports in a sector. To fix both problems, Dalum *et al*., (1998) introduced a new index called the Revealed Symmetric Comparative Advantage (RSCA). This index makes RCA symmetric and accounts for sectors with zero exports.

Trade Intensity Index (TII):

The TII has been used to analyse the intensity of trade between India and ASEAN countries, particularly for agricultural commodities. However, while the total volume of exports or imports indicates the overall level of trade, it doesn't reveal specific trading partners. To gain a deeper understanding of the pattern of trade relationships, the bilateral trade intensity index is employed (Asher and Sen, 2005). Export Intensity Index and Import Intensity Index are the two components of TII, which is being used. Following are the mathematical expression:

Export Intensity Index: When EII > 1, it means that country 'm' exports more to country 'n' than country 'n' imports from other countries.

$$EII = \frac{[Vmn/Vm]}{[(Un - Unm)/(Uw - Um)]}$$

Import Intensity Index: When III > 1, it means that Country 'm' buys more from Country 'n' compared to how much Country 'n' sells to other countries.

$$III = \frac{[Umn/Um]}{[(Vn - Vnm)/(Vw - Vm)]}$$

(Where, EII = Export Intensity Index, III = Import Intensity Index, Vmn = Volume of Agricultural Exports from country 'm' to 'n', Vm = Volume of Total agricultural exports by country 'm', Un = Volume of Total Agricultural Import by country 'n', Unm = Volume of agricultural Import by country 'n' from 'm', Um = Volume of total Agricultural Import by country 'm', Umn = Volume of Agricultural Imports from country 'm' to 'n', Um = Volume of Total Agricultural Import by country 'm', Vn = Volume of Total Agricultural Export by country 'n', Vnm = Volume of agricultural Export by country 'n' from 'm', Vm = Volume of total Agricultural Export by country 'm', Vw = Volume of total Agricultural Exports in a Worldwide, Uw = Volume of total Agricultural Imports in a Worldwide)

RESULTS AND DISCUSSION

The Revealed Symmetric Comparative Advantage (RSCA) index of Indian agri-trade with ASEAN nations identifies cereals (HS-10) and oilseeds (HS-12) with relatively high RSCA values throughout these years as being highly export competitive. The highest RSCA of 0.61 was of cereals in the year 2020, whereas oilseeds consistently recorded values above 0.7 in all cases. In contrast, live animals (HS-01) and oils and fats (HS-15) posted consistently negative RSCA values, indicative of India's lack of competitiveness in these items. Fish and aquatic invertebrates (HS-03) posted a remarkable turnaround from a modest disadvantage in 2011 (-0.05) to a strong comparative advantage in 2023 (0.30), indicative of fisheries and aquaculture growth potential.

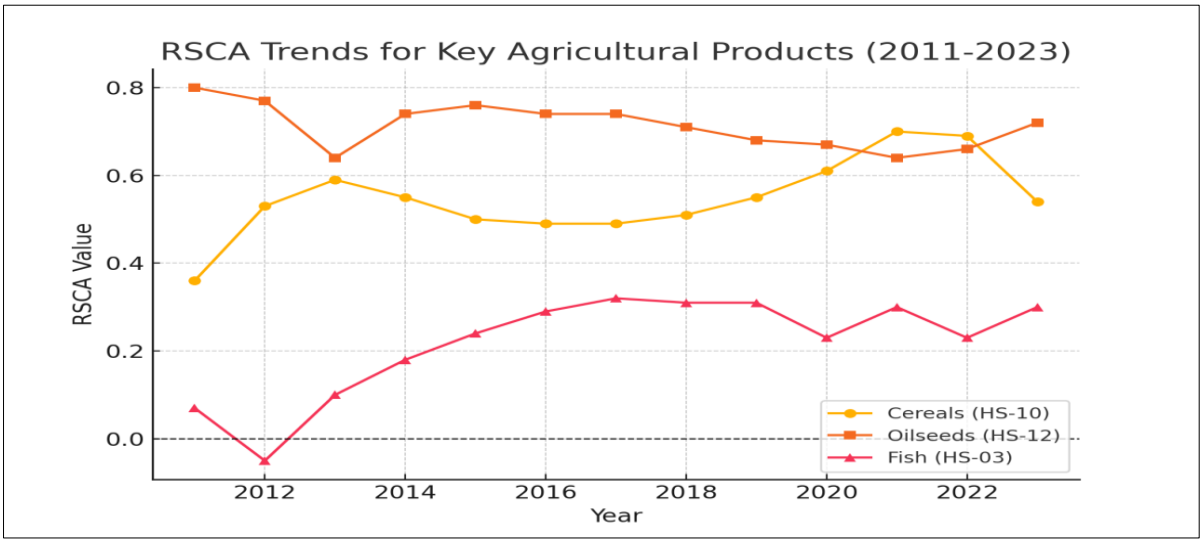

Figure 1

Source: Based on Author's Calculation

The trend of Export Intensity Index (EII) is a show of India's robust trade relationship with Myanmar, Vietnam, and Malaysia. The robust trade partner is always Myanmar, with EII at the peak of 7.37 in 2015 and falling to 6.06 in 2023. Similarly, Vietnam also enjoyed robust export intensity, with the peak being 13.95 in 2014; its decline later shows that India needs new impulses and competition. As EII values rose to 3.53 in 2023, Malaysia had stable trade relationships, while only moderate improvement was observed in Brunei and Cambodia. Thailand reported a relatively small rise to an EII of 2.26 in 2023.

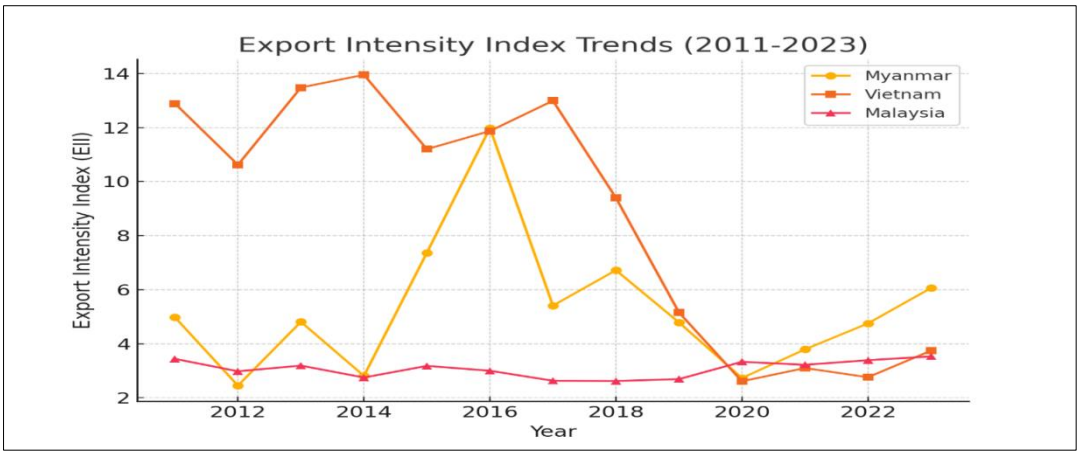

Figure 2
Source: Based on Authors Calculation

The Import Intensity Index (III) captures India's reliance on agricultural imports from ASEAN, and Indonesia is always at the top with high III scores and averaging 10.52 during the study period. This reflects Indonesia as a chief source of quality commodities like palm oil. Malaysia and Myanmar are also intensive importers with scores of 6.74 and 16.99 for 2023. Brunei and Cambodia are of moderate III but negligible as an importing source.

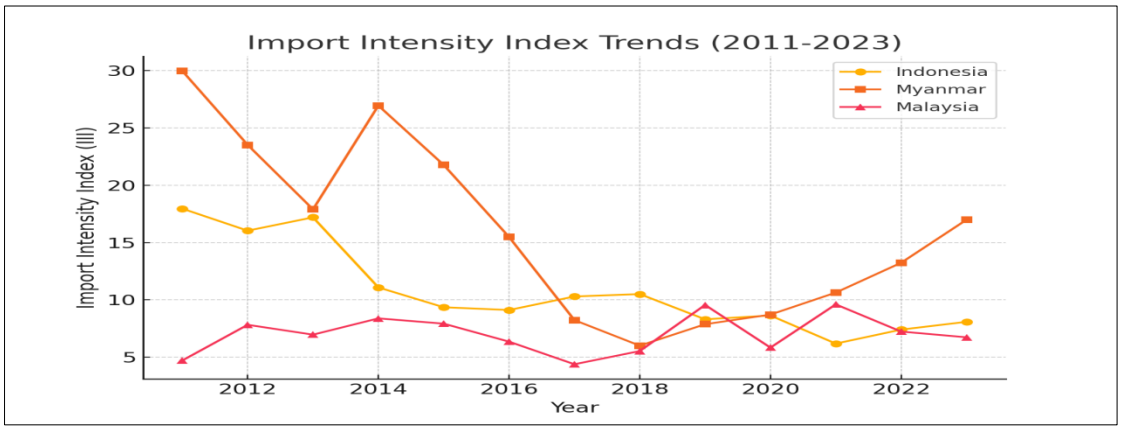

Figure 3
Source: Based on Authors Calculation

These outcomes reflect India's oilseed and grain industries, while also showing the country's potential in developing these industries. However, the negative trend with Vietnam shows trade exposure chances, which is mitigated by the strong commercial ties with Vietnam and Myanmar. These outcomes reflect India's oilseed and grain industries, while also showing the country's potential in developing these industries. However, the negative trend with Vietnam shows trade exposure chances, which is mitigated by the strong commercial ties with Vietnam and Myanmar. Dependence on ASEAN for key commodities like palm oil goes hand in hand with the dependence on imports from Malaysia and Indonesia. Growing competitiveness in aquaculture and fisheries highlights new Indian agricultural export opportunities. Dependence on ASEAN for key commodities like palm oil goes hand in hand with the dependence on imports from Malaysia and Indonesia. Growing competitiveness in aquaculture and fisheries highlights new Indian agricultural export opportunities.

Appendix

Table 1: Agricultural Product Classification with HS Codes

HS-2-Digit codes	Agricultural Products
01	Live animals
02	Meat and edible meat offal
03	Fish and crustaceans, molluscs and other aquatic invertebrates
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin
05	Products of animal origin, not elsewhere specified or included

HS-2-Digit codes	Agricultural Products
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
07	Edible vegetables and certain roots and tubers
08	Edible fruit and nuts; peel of citrus fruit or melons
09	Coffee, tea, mate and spices
10	Cereals
11	Products of the milling industry; malt; starches; inulin; wheat gluten
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal
13	Lac; gums, resins and other vegetable saps and extracts
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
15	Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats
16	Preparations of meat, of fish, of crustaceans, molluscs or other aquatic invertebrates
17	Sugars and sugar confectionery
18	Cocoa and cocoa preparations
19	Preparations of cereals, flour, starch or milk; pastrycooks' products
20	Preparations of vegetables, fruit, nuts or other parts of plants
21	Miscellaneous edible preparations
22	Beverages, spirits and vinegar
23	Residues and waste from the food industries; prepared animal fodder
24	Tobacco and manufactured tobacco substitutes

Source: World Trade Organization

Table 2: Revealed Symmetric Comparative Advantage (RSCA) Index

HS	Items	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
'01	Live animals	-0.75	-0.90	-0.85	-0.83	-0.86	-0.61	-0.64	-0.79	-0.89	-0.97	-0.92	-0.94	-0.90
'02	Meat and edible meat	0.93	0.90	0.91	0.90	0.89	0.88	0.88	0.84	0.83	0.80	0.81	0.76	0.75
'03	Fish and aquatic invertebrates	0.07	-0.05	0.10	0.18	0.24	0.29	0.32	0.31	0.31	0.23	0.30	0.23	0.30
'04	Dairy, honey, animal products	-0.26	-0.19	0.14	-0.02	-0.07	-0.11	-0.07	0.07	0.00	-0.23	-0.06	0.07	-0.03
'05	Other animal origin products	0.75	0.62	0.50	0.49	0.50	0.55	0.47	0.52	0.31	0.38	0.59	0.51	0.53
'06	Plants, bulbs, flowers	-0.07	-0.18	-0.21	-0.16	-0.11	-0.08	-0.10	-0.09	-0.11	-0.05	-0.01	-0.04	-0.14
'07	Edible vegetables and roots	0.16	-0.14	0.09	-0.02	0.05	0.11	0.13	0.23	0.24	0.19	0.10	0.16	0.19
'08	Fruits, nuts, citrus peel	0.18	-0.02	-0.07	-0.09	-0.08	-0.14	-0.22	-0.34	-0.41	-0.45	-0.47	-0.44	-0.52
'09	Coffee, tea, spices	0.35	0.12	0.15	0.13	0.25	0.26	0.29	0.34	0.41	0.46	0.44	0.36	0.40
'10	Cereals	0.36	0.53	0.59	0.55	0.50	0.49	0.49	0.51	0.55	0.61	0.70	0.69	0.54
'11	Milling products, starch, gluten	-0.53	-0.50	-0.43	-0.41	-0.39	-0.43	-0.45	-0.37	-0.37	-0.28	-0.22	-0.12	-0.11
'12	Oilseeds, grains, industrial uses	0.80	0.77	0.64	0.74	0.76	0.74	0.74	0.71	0.68	0.67	0.64	0.66	0.72
'13	Gums, resins, vegetable extracts	0.95	0.97	0.92	0.91	0.85	0.81	0.83	0.82	0.77	0.74	0.71	0.67	0.64
'14	Vegetable plaiting materials	0.23	0.27	0.10	0.03	0.06	0.17	-0.02	-0.17	-0.25	-0.48	-0.44	-0.64	-0.70
'15	Fats and oils	-0.82	-0.86	-0.86	-0.85	-0.80	-0.81	-0.78	-0.77	-0.73	-0.73	-0.80	-0.81	-0.75
'16	Meat and fish preparations	-0.86	-0.94	-0.94	-0.91	-0.84	-0.77	-0.73	-0.72	-0.71	-0.65	-0.60	-0.58	-0.62
'17	Sugar and confectionery	0.25	0.16	-0.15	0.05	0.16	0.21	-0.01	0.03	0.28	0.52	0.65	0.64	0.44
'18	Cocoa and cocoa products	-0.93	-0.89	-0.85	-0.78	-0.66	-0.65	-0.67	-0.63	-0.65	-0.72	-0.72	-0.75	-0.73
'19	Bakery and starch products	-0.44	-0.55	-0.57	-0.54	-0.47	-0.44	-0.49	-0.50	-0.51	-0.47	-0.47	-0.47	-0.44
'20	Vegetable, fruit preparations	-0.35	-0.41	-0.42	-0.33	-0.37	-0.34	-0.30	-0.22	-0.23	-0.24	-0.28	-0.25	-0.13
'21	Miscellaneous food preparations	-0.38	-0.45	-0.55	-0.53	-0.49	-0.45	-0.45	-0.55	-0.55	-0.56	-0.54	-0.52	-0.45

HS	Items	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
'22	Beverages and vinegar	-0.57	-0.61	-0.62	-0.63	-0.62	-0.64	-0.64	-0.65	-0.71	-0.60	-0.66	-0.62	-0.62
'23	Food residues and animal fodder	0.65	0.50	0.51	0.31	0.11	-0.03	0.23	0.24	0.16	0.08	0.04	-0.05	0.17
'24	Tobacco and substitutes	0.18	0.07	0.03	0.00	0.04	0.11	0.05	0.06	0.02	0.09	0.09	0.21	0.19

Table 3: Export Intensity Index

Country/Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Brunei	1.12	1.11	1.09	1.43	1.55	1.22	1.87	1.66	1.49	0.85	0.53	0.78	1.37
Cambodia	1.79	1.17	1.49	1.11	1.22	0.38	0.35	0.44	0.35	0.73	1.27	1.20	1.13
Indonesia	3.18	2.77	2.63	2.05	1.24	1.77	1.36	2.06	1.93	2.60	3.95	3.67	2.02
Malaysia	3.44	2.98	3.19	2.75	3.18	3.00	2.63	2.62	2.69	3.33	3.22	3.39	3.53
Myanmar	4.98	2.45	4.81	2.81	7.37	11.98	5.41	6.72	4.79	2.73	3.79	4.75	6.06
Philippines	2.00	1.96	1.96	1.57	1.40	1.21	1.02	1.23	0.83	0.94	1.17	1.06	0.97
Laos	0.01	2.37	3.95	6.25	4.89	0.27	0.12	0.11	0.17	0.05	0.03	0.04	0.02
Singapore	1.06	1.01	1.00	0.97	1.20	1.09	0.91	0.94	0.95	1.06	0.90	0.91	1.01
Vietnam	12.89	10.62	13.48	13.95	11.20	11.87	12.99	9.40	5.16	2.61	3.10	2.76	3.74
Thailand	2.39	2.81	3.08	2.53	2.32	1.94	1.87	2.16	2.05	1.66	1.70	2.10	2.26
ASEAN	3.76	3.37	3.98	3.85	3.66	3.91	3.82	3.37	2.43	2.09	2.48	2.43	2.46

Table 4: Import Intensity Index

Country/Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Brunei	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cambodia	2.94	0.31	0.02	0.07	0.12	0.26	1.04	0.63	0.38	0.49	1.38	1.41	0.84
Indonesia	17.96	16.04	17.20	11.09	9.36	9.12	10.30	10.51	8.31	8.64	6.19	7.41	8.09
Malaysia	4.72	7.83	6.97	8.39	7.93	6.36	4.39	5.54	9.56	5.84	9.61	7.24	6.74
Myanmar	29.97	23.52	17.90	26.95	21.77	15.49	8.24	6.01	7.88	8.72	10.64	13.24	16.99
Philippines	0.17	0.16	0.31	0.53	0.51	0.55	0.52	0.64	0.62	0.74	0.64	0.46	0.94
Laos	0.06	0.00	0.01	0.00	0.00	0.00	0.12	0.05	0.02	0.01	0.01	0.03	0.08
Singapore	0.74	0.59	0.59	0.60	0.42	0.44	0.46	2.95	3.14	2.26	2.83	2.75	0.36
Vietnam	0.72	0.72	0.88	0.99	0.86	0.86	0.78	1.17	1.13	1.12	1.05	0.87	0.94
Thailand	0.38	0.32	0.80	0.47	0.28	0.24	0.45	0.89	0.59	0.61	1.41	2.18	1.67
ASEAN	5.76	5.98	6.07	5.07	4.36	3.90	3.74	4.14	4.18	3.84	4.45	4.54	4.15

CONCLUSION

India on the one hand has been experiencing a surge in trade deficit, which stems from the continuously mounting import dependence and trade potential with under-used export capacity; while on the other, India has been a net importer in its agri-bloc. Compounded with India's bilateral trade partners, the situation is still dynamic and subject to change only if, some policy interventions are pursued to make the issues more competitive and for the unblocking of structural trade imbalances. This is what policy interventions are about - specifically, to make the ASEAN agri-bloc more important and to underscore the blocks, of course, in smaller quantities.

The trade resulting from India enjoying a comparative advantage in oilseeds and grains is one of the notable joint efforts of two countries that is materialized in the quest for new market opportunities. Meanwhile, import of palm oil from Malaysia and Indonesia by India indicates that India is ASEAN reliant while diversifying its imports. Such an import intensity reversal of Vietnam in aquaculture and fisheries suggests their potential in new moneymaking strengths in this arena, and this is a good sign for Indian exporters.

Talking about India, it has always been a significant net exporter of agricultural goods worldwide traditionally, yet, it has not been the same in terms of ASEAN trade. In the last few years, the exports to ASEAN might have increased, but certainly there were steady imports from ASEAN like palm oil from Malaysia and Indonesia, etc., but not Indian farm exports. In the 2013 - 2022 period there has been a consistent trade deficit of farm products between India and ASEAN, with imports having a 2.2% annual growth rate, while exports declining at a rate of -2.11%.

This pattern of trade is decided by several factors. India is aggressively competing with China in vegetables and fruits but enjoys a competitive advantage in items such as tea, cotton, and rice. Moreover, non-tariff measures, especially sanitary and phytosanitary measures, have restrained India from agri-export to ASEAN even at a competitive price level. Also, geographical characteristics such as contiguous

boundaries determine the volume of trade between the neighboring countries.

Research focuses on recent changes through policy improvement, trade facilitation, and bilateral collaboration targeted at balancing trade, even though India and ASEAN have demonstrated resilience and success in their trading relationship. Future attempts to balance trade liberalisation and reforms to local agriculture policies can set the stage for a more equitable agricultural trade negotiations between India and ASEAN.

Policy Implications

Policy-wise, India should diversify its trade partnership with ASEAN in the agricultural sector for a more sustainable and prosperous economy of the future. India may start by abolishing the non-tariff barriers and harmonizing the sanitary and phytosanitary standards complying with ASEAN, which certainly will give a positive impact on the trade simultaneously. The second recommended measure is to enlarge the range of agricultural products for export and intensify the quality of value-added products to neutralize the negative influences of protective trade, and through this, implement an even more proactive approach of reorganizing the value chains of ASEAN and eventually, operations of the agreements to further improve India's position in the trade ecosystem of the region. The optimization of agricultural trade with ASEAN can be supported by export diversification through an increase in production and, therefore, trading in fisheries and aquaculture products, which will help to enhance RSCA values in both sectors. With the help of technology and international trade, it is the high-value food sector that will enhance the international position of the country. A model opinion on the trade in vegetable oil is that the export of value-added products of agriculture is more likely to generate foreign currency, besides, the repercussion will be limited if the world market gets down. In addition, the move toward self-reliance is a sustainable approach. It is proposed to achieve this through, on the one hand, the increase of domestic palm oil production and on the other hand, the alternative oilseed crops to be pushed in the market rather than imports from Indonesia and Malaysia. The process of such re-look should be further developed into a deepened trade policy that initiates the negotiation of ASEAN-India Free Trade Agreement and aims at the facilitation of an agreement for the Indian agricultural sector with better conditions and of the alleviation of non-tariff barriers that have a restrictive effect. Moreover, with the availability of Sustainable trade practices that are in line with the Sustainable Development Goals also in place, these should be regarded as the two main additional measures along with the two aforementioned ones as a way of achieving the country's ambitious goal.

REFERENCES

- *Agricultural Exports and Trade Policy Responses | Economic and Political Weekly*. (2024). https://www.epw.in/journal/2024/46/global-value-chains/agricultural-exports-and-trade-policy-responses.html
- Atici, C., & Furuya, J. (2008). Regional Blocs and Agricultural Trade Flow: The Case of ASEAN. *Japan Agricultural Research Quarterly: JARQ*, *42*(2), 115–121. https://doi.org/10.6090/jarq.42.115
- Bhardwaj, N. (2023, September 8). *Boosting India-ASEAN Economic Collaboration*. ASEAN Business News. https://www.aseanbriefing.com/news/boosting-india-asean-economic-collaboration-key-highlights-from-pm-modis-12-point-proposal/
- Bhatt, A. (2021). *Study of International trade relation of India with ASEAN* (SSRN Scholarly Paper 3884883). Social Science Research Network. https://doi.org/10.2139/ssrn.3884883
- Chandran, Dr. S. (2018). Trade Impact of the India-ASEAN Free Trade Agreement (FTA): An Augmented Gravity Model Analysis. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3108804
- Doley, S. (2017). India's Look East Policy: Relationship with ASEAN and Opportunities for North East India. *FOCUS: Journal of International Business*, *4*. https://doi.org/10.17492/focus.v4i01.9535
- Farooq, N., & Billore, S. (2019, December 4). *China Factor in India-ASEAN Relations of Twenty First Century*. https://www.semanticscholar.org/paper/China-Factor-in-India-ASEAN-Relations-of-Twenty-Farooq-Billore/9de596dfdf3aa122c94be040aba93264869e4778
- Ghosh, I., & Ghoshal, I. (2019). Implications of Trade Liberalization for Food Security Under the ASEAN-India Strategic Partnership: A Gravity Model Approach. In *Urban Agriculture and Food Systems: Breakthroughs in Research and Practice* (pp. 28–48). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-5225-8063-8.ch002
- Gulnaz, S., & Manglani, H. (2023). An empirical analysis of India-ASEAN trade dynamics. *Indian Journal of Economics and Development*, *19*, 320–329. https://doi.org/10.35716/IJED-22269
- Jagdambe, S. (n.d.). *ANALYSIS OF EXPORT COMPETITIVENESS OF INDIAN AGRICULTURAL PRODUCTS WITH ASEAN COUNTRIES*.
- Jha, A., & Bathla, S. (2021). *Non-tariff Measures and India's Agricultural Exports: The Case of India-ASEAN Trade Agreement | Semantic Scholar*. https://www.semanticscholar.org/paper/Non-tariff-Measures-and-India%E2%80%99s-Agricultural-The-of-Jha-

Bathla/df238e7cf08f9b55322f436989f8bccf89c46bc6

- Jha, P. K. (2017). *India-ASEAN Relations: An Assessment*.
- Kaushik, S. (2018). India-ASEAN free trade agreement. *International Journal of Law*. https://www.semanticscholar.org/paper/India-ASEAN-free-trade-agreement-Kaushik/2818d654c8664ecca0167ce4b25efb91cfbdb560
- Khalid, N. (2024). *Intra-Industry trade in Manufactured Goods between India and Select Southeast Asian Nations: An Empirical Examination using the G-l Index*. https://www.indianjournals.com/ijor.aspx?target=ijor:eaj&volume=68&issue=3&article=006
- Lakshmi, B. T., Shivakumar, K. M., Kumar, D. S., Mahendran, K., & Suresh, J. (2022, September 26). *Trade Competitiveness of Palm Oil Export from ASEAN Countries—Institute Archives*. http://eprint.subtopublish.com/id/eprint/1338/
- Mahajan, P. (2020). Agriculture Trade Scenario in India and Its Global Comparisons. *International Journal of Agricultural Economics*, *5*(3), 63. https://doi.org/10.11648/j.ijae.20200503.12
- Mandal, S. (n.d.). *Agricultural Trade between India and ASEAN: Intensity and Composition*.
- Ogden, C. (2023). India-ASEAN Relations: The Utility and Limits of a Norm-Based Approach. *International Studies*, *60*(2), 155–175. https://doi.org/10.1177/00208817231162272
- Pandey, P., & Choubey, M. (2021). An Analysis of Determinant Factors in Agricultural Trade between India and ASEAN. *Indian Journal of Economics and Development*, 314–320. https://doi.org/10.35716/IJED/20219
- Raghuramapatruni, R., & Chaitanya, R. S. (2023). *An Empirical Analysis on International Trade between India and the ASEAN*. https://www.semanticscholar.org/paper/An-Empirical-Analysis-on-International-Trade-India-Raghuramapatruni-Chaitanya/2e19e013b17035bfa608e08c2d6f08d9fc791968
- Rao, A. (2024, September 19). *India-ASEAN Bilateral and Trade Relations*. India Briefing News. https://www.india-briefing.com/news/india-asean-bilateral-and-trade-relations-34518.html/
- Renjini, V. R., & Kar, A. (2016). Composition, Intensity and Competitiveness of Agricultural Trade between India and ASEAN. *Indian Journal of Economics and Development*, *12*(2), 249. https://doi.org/10.5958/2322-0430.2016.00133.5
- Saikia, C., & Gogoi, M. (2024). Trends and Patterns in Indo-ASEAN Agricultural Trade: Evidence from India (2013-2022). *Archives of Current Research International*, *24*, 275–284. https://doi.org/10.9734/acri/2024/v24i11969
- Saini, S. R. (2021). *India-ASEAN Trade through Reveled Comparative Advantage*. *8*(3).
- Saini, S. R., & Aggarwal, D. K. (2021). *INDIA'S TRADE POTENTIAL WITH ASEAN: AN ASSESSMENT*. https://www.semanticscholar.org/paper/INDIA%E2%80%99S-TRADE-POTENTIAL-WITH-ASEAN%3A-AN-ASSESSMENT-Saini-Aggarwal/4e58ccbee747476628a8b04979696108d4be8d33
- Sharma, V. (2020). India-asean relationship: Evolution, challenges and prospects. *Academic Discourse*. https://www.semanticscholar.org/paper/India-asean-relationship%3A-Evolution%2C-challenges-and-Sharma/cdad7042a7bcc36ab47608adc478c18c0b209754
- Sridharan, K. (1996). India and Asean: The long road to dialogue. *The Round Table*, *85*(340), 465–477. https://doi.org/10.1080/00358539608454333
- Sundaram, A. (2013). Look east policy. *International Journal of Advancements in Research & Technology*, *2(5)*, 169–185.
- Tiwari, K. (2023). Commerce and Trade between India and South East Asia since Time Immemorial (with particular reference to ASEAN Countries). *INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT*, *07*(03). https://doi.org/10.55041/IJSREM17923.