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Review of ASEAN-India Free Trade Agreement Using Revealed Comparative Advantage Index

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Abstract

This paper tries to evaluate India's concerns with AIFTA (Asean India Free Trade Agreement). The main objective of the paper is to study the Revealed Comparative Advantage Index of Indian exports in relation to ASEAN Countries. The RCA index reveals that India has comparative advantage in many product categories but we have not been able to utilize our advantage and in absolute terms is reflected by widening trade deficits with ASEAN nations. So an in depth analysis has been done to analyse India's trade with ASEAN countries and also through RCA index Industry categories have been identified where India has revealed comparative advantage.

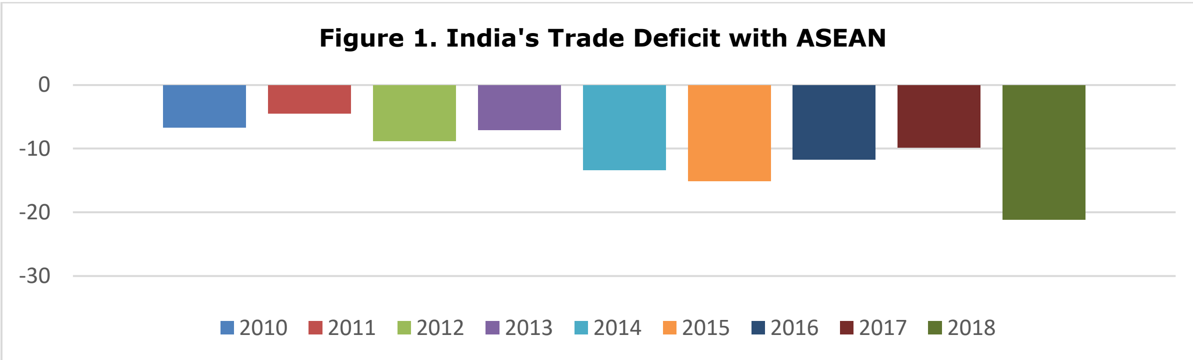
Keywords: FTA's, Trade deficit, Free Trade Agreements, ASEAN, Revealed Comparative Advantages (RCA)

JEL Classification: F31, O34, F1.

INTRODUCTION

India's FTA with ASEAN countries (Indonesia, Thailand, Singapore, Malaysia, Philippines, Vietnam, Myanmar, Cambodia, Brunei and Laos) came into effect on January 1, 2010. India & 10 member ASEAN countries met on September 2019 and decided to initiate review the AIFTA (Asean India Free Trade Agreement) at the background of growing concerns from different quarters including the industry about the efficacy of the Free Trade Agreements (FTAs) to India including AIFTA. It is important to review the progress of trade between India & its key FTA partners ASEAN has been India's one of the most important trading partners. Post AIFTA there has been a huge surge in trade between these two and bilateral trade moved from US$ 43 billion in 2009-10 to US $97 billion in 2018-19 there by increasing the share of ASEAN countries in India's total trade from 9.4% to 11.5%.

Ironically this bilateral trade between India and ASEAN has increased faster than that of India's trade with the world. The share of ASEAN in India's total trade deficit also increased from about 7% to 12% during the same period.



Source: IMF

India's exports to ASEAN countries amounted to $20 billion in 2010, which increased to $30 billion in 2018, a jump of 10 Billion dollars in 10 years (Table1). If we analyse the table below there have countries like Singapore, Brunei, Indonesia, Cambodia and Laos where India's exports increased only marginally in the ten-year period. However, India's exports grew exponentially with countries like Malaysia, Vietnam, Thailand, and Myanmar during the same period. The exports more than doubled in these countries post FTA

Table 1. India's Exports with ASEAN Countries in billion USD

Years	Singapore	Brunei Darussalam	Lao-People's Dem.Rep	Malaysia	Myanmar	Philippines	Thailand	Indonesia	Vietnam	Cambodia	Total Exports
2010	9.09	0.02	0.01	3.55	0.27	0.80	2.14	4.57	2.49	0.06	20.55
2011	16.15	0.90	0.01	3.92	0.47	1.01	3.22	6.86	3.40	0.09	33.52
2012	14.69	0.03	0.03	3.79	0.53	1.12	3.46	6.07	3.67	0.11	29.86
2013	13.48	0.04	0.05	5.05	0.67	1.37	3.91	5.20	5.30	0.12	29.92
2014	9.64	0.04	0.06	4.60	0.87	1.44	3.48	4.45	6.51	0.15	24.80
2015	7.70	0.03	0.05	4.94	0.86	1.31	3.15	2.95	5.34	0.15	21.18
2016	7.57	0.04	0.02	4.20	1.16	1.49	2.96	3.14	5.96	0.11	20.73
2017	11.59	0.05	0.02	5.55	1.06	1.59	3.59	3.76	8.12	0.12	27.38
2018	10.43	0.07	0.04	6.52	1.23	1.75	4.37	4.79	6.71	0.18	29.44

Source: IMF

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At the same time, India's imports from these countries increased substantially from $30 billion in 2010 to $57 billion in 2018, a growth of eight per cent as is evident in Table 2. On one hand our exports increased marginally with countries like Singapore, Indonesia and on the other hand our imports with these countries increased manifold. With Singapore our imports almost doubled from 7.27 billion dollars to 14.33 billion dollars.

Imports from Indonesia jumped almost 50% from 9.72 billion dollars to 16.03 billion dollars in the same period. Our imports from Malaysia, Thailand &Vietnam stood at 10.42, 7.67, 7.22 billion USD, a significant jump from preAIFTA data. With Cambodia, Lao & Brunei our imports more or less stagnated.

The faster growth in imports has resulted in a significant increase in India's trade deficit with ASEAN from less than US$ 8 billion in 2009-10 to about US$ 22 billion in 2018-19.

Table 2: India's Imports with ASEAN Countries in billion USD

	Singapore	**Indonesia**	**Lao People's Dem.Rep**	**Malaysia**	**Cambodia**	**Myanmar**	**Philippines**	**Thailand**	**Vietnam**	**Brunei Darussalam**	**Total**
2010	7.27	9.72	0.20	6.00	0.01	1.12	0.40	3.95	1.00	0.21	29.86
2011	8.23	14.00	0.67	9.12	0.01	1.26	0.45	5.07	1.54	0.72	41.06
2012	7.60	14.28	1.41	10.16	0.01	1.35	0.49	5.46	1.99	0.76	43.51
2013	7.00	15.23	1.12	9.06	0.01	1.37	0.41	5.45	2.84	0.73	43.22
2014	7.07	15.26	0.60	10.98	0.02	1.40	0.40	5.69	2.78	0.94	45.13
2015	7.41	13.88	1.43	9.56	0.04	1.02	0.52	5.66	2.68	0.61	42.82
2016	6.72	12.30	1.72	8.65	0.04	1.09	0.48	5.32	3.11	0.46	39.88
2017	7.22	16.23	2.49	8.90	0.05	0.74	0.71	6.46	4.15	0.59	47.54
2018	14.33	16.03	0.17	10.42	0.05	0.45	0.62	7.67	7.22	0.43	57.38

Source: IMF

Our deficit with ASEAN countries moved from 6 billion dollars in 2010 to 21 billion dollars post free trade agreement. We have marginal surplus with only three countries ie Philippines, Laos & Cambodia. And we are running huge deficit with rest of the ASEAN nations

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Table 3: India's Balance of trade with ASEAN countries in billion USD

Years	Thailand	Philip pines	Malaysia	Myanmar	Vietnam	Lao People's Dem.Rep	Indonesia	Cambodia	Brunei Darussalam	Singapore	Total
2010	-1.80	0.41	-2.45	-0.85	1.49	-0.01	-5.15	0.05	-0.19	1.82	-6.67
2011	-1.84	0.56	-5.20	-0.79	1.86	-0.05	-7.14	0.08	0.18	7.92	-4.43
2012	-2.01	0.62	-6.37	-0.82	1.68	-0.11	-8.21	0.10	-0.72	7.09	-8.75
2013	-1.55	0.96	-4.01	-0.70	2.46	-0.07	-10.03	0.11	-0.70	6.48	-7.04
2014	-2.20	1.03	-6.37	-0.53	3.73	0.00	-10.81	0.14	-0.90	2.57	-13.33
2015	-2.51	0.79	-4.62	-0.16	2.65	-0.09	-10.93	0.10	-0.58	0.30	-15.04
2016	-2.35	1.02	-4.45	0.07	2.85	-0.15	-9.16	0.07	-0.42	0.85	-11.69
2017	-2.87	0.87	-3.35	0.32	3.97	-0.22	-12.47	0.07	-0.54	4.37	-9.85
2018	-3.30	1.13	-3.90	0.79	-0.51	0.02	-11.24	0.13	-0.37	-3.90	-21.14

Source: IMF

LITERATURE REVIEW

According to Chandran, D. (2011) for any free trade agreement to be successful it's important to have favourable trade structure between partner countries. He used two indexes namely Trade Intensity Index (TII) and Revealed Comparative Index (RCA) to analyse comparative advantage between India & ASEAN countries. His study found that that India's had its comparative advantage in food grains, minerals, chemicals, gems and jewellery while ASEAN countries had comparative advantage mainly in electrical goods, electronic products, vegetable oils, rubber products and agricultural products.

Barry and Hannan (2001) in their study not only studied the predictive power of Revealed Comparative Advantage but also tried to evaluate RCA under certain country-specific conditions. They tested the comparative advantage prediction for 10 manufacturing sectors. They commensurate the efficacy of RCA index for future trade.

However they found that post-EU developments were instead driven by the economy's ability to get FDI. Bender and Li (2002) studied exports in manufacturing between Asian and Latin American countries between 1981 to 1997. They used revealed comparative advantage indices and found that East Asian economies though showed strong export performance, they were losing their comparative advantage to the lower-tier countries in Southeast Asia and Latin America. Ferto and Hubbard (2003) applied both Balassa (1965) RCA indices and Vollrath (1991) to study the revealed comparative advantage for Hungary's food sector for a 15 year period from 1992 to 1998. They studied 22 product groups and found that Hungary had revealed comparative advantages in only eleven product groups.

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Seyoum (2007) used RCA index to evaluate comparative advantages in developing countries vis-à-vis rest of the world in services for a period between 1998-2003. The results of indices showed that though there is a strong comparative advantage for many developing countries in service industry especially transport, and travel services there is scope of improvement in financial and business services. Trade liberalization without much preparation resulted in losing their comparative advantage over the years though their RCA did not indicate any structural shift.

Shinoj and Mathur (2008) studied RCA between India & ASEAN post reform period from 19991-2004.They found though India was able to retain its revealed comparative advantage in some commodities like cashew and oil meals but has been losing its revealed comparative advantage on majority of agricultural products to other Asian competitors during the period after economic reforms especially in the case of tea, coffee, marine products, spices, etc

Pradhan and Das (2014) analysed India's trade relations with the Gulf region comprising six member countries. They also calculated RCA for India and Gulf region. They found that India had moderate revealed comparative advantage in several SITC categories and also had a strong revealed comparative advantage (>14) in rice(2005-2008). The Gulf regions on the other hand RCA predominantly in hydrocarbon, petrochemicals and other chemicals.

In later studies, Bender and Li (2002) studied RCA index for select Asian and Latin American Countries in the manufacturing sector and they found that despite an increase in the volume of trade between these countries Asian countries were fast losing their Revealed Comparative advantage. Acharya (2008) studied Revealed Comparative advantage for top seven developed economies accounting for nearly 80% of world commodity exports (1996-2007).They found out that out of seven countries only three that is Canada, USA, and Japan lost their Revealed Comparative advantage in the period of study and China on the other hand increased Revealed Comparative advantage almost three times in the same period. Abidin, Loke (2008) studied Revealed Comparative advantage in the manufacturing sector for Malaysia. The results showed that there was a structural change in Malaysia's export and it shifted from non-resource based to resource-based exports in manufacturing industries. Over the years Malaysia now has a comparative advantage in the electric and electronic goods and machinery. The findings of Fetscherin et al. (2012) in their study on India showed the growth rate of Indian Industries was much higher than the world average between the period 2001-2005 using multi-dimensional framework for measuring India's export advantage. Kathuria, (2013) in his study on textile export competitiveness between India and Bangladesh using RCA index found that India's revealed comparative advantage in textile sector has increased from 23 to 29 products groups. However, for Bangladesh's it increased from 21 to 29 products groups.

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METHODOLOGY

Various indices like Trade Intensity Index, Intra Regional Trade Intensity Index, and Revealed Comparative Advantage Index etc are used to evaluate effectiveness of Free trade agreements and possibility of enhancing the trade. This paper uses Revealed comparative advantage indices (RCA). It identifies the sectors in which an economy has a comparative advantage, by comparing the country of interests' trade profile with the world average. The method used to determine in what sectors, industries or commodities a country has comparative advantage. The origin of "Revealed Comparative Advantage" (RCA), can be traced to Liesner (1958) and later developed by Balassa (1965). Bella Balassa argued that the adequate indicator of an industry's comparative advantage would be the revealed performance of that industry's trade pattern (Hamilton & Svensson, 1984). Through international trade, that country can import other commodities at a lower price, in exchange for the good in which it has a comparative advantage (Thompson, 2006).

The index is calculated by the formula as follows:

$$RCAij = \frac{Xij/Xwi}{Xi/Xw}$$

Where,

RCAij d= Revealed Comparative Advantage index for country i of commodity j
Xij is the i^{th} country's export of commodity j
Xi is the total exports of country i
Xwj is world exports of commodity j
Xw is total world exports.

The numerator is the share of a country's total exports of a particular commodity to its total exports. The denominator is share of world exports of the same commodity. RCA is based on observed trade patterns. The RCA measures a country's exports of a commodity relative to its total exports and to the corresponding export performance of a set of countries. This index takes values between 0 and +1.

A Country is said to have a **revealed comparative advantage** if the value is more than one. If RCAi>1, then country j has a comparative advantage in good i. If RCAi<1, then country j has a comparative disadvantage in good i.

The analysis of competitiveness indicators on 13 product groups, in table-4 based on the index of revealed comparative advantages (RCA) shows that out of 13 broad industry groups, India enjoys relative trade advantage in 6 product groups with Singapore,9 with Thailand,5 with Laos,4 with Brunei,4 with Canbodia,8 with Indonesia,8 with Malaysia, 3 with Myanmar, 9 with Philippines.

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Ironically our trade deficit with Indonesia stands at whopping 11.24 billion dollar and with Thailand stands at 3.30 billion dollars. With both these countries India has revealed comparative advantage in 8 & 9 industry group respectively. That means India has not been to fully utilize its comparative advantage. Our total exports with Philippines stands at meager 1.3 billion dollars when we have revealed comparative advantage in 9 industry groups. So one can see the potential India has in exports with ASEAN nations.

Table 4: India's Revealed Comparative Advantage with ASEAN Countries (Average of 2000-2018)

	Animal	Chemicals	Food Products	Footwear	Fuels	Hides and Skins	Mach and Elec	Metals	Minerals	Miscellaneous	Plastic or Rubber	Stone and Glass	Textiles and Clothing
Singapore	0.82	**1.36**	0.71	0.79	**2.11**	0.77	0.24	**1.89**	**1.25**	0.36	0.56	**4.50**	**2.38**
Thailand	**2.81**	**2.00**	**3.61**	**1.30**	0.30	**1.42**	0.39	**1.29**	**2.23**	0.38	0.52	**4.25**	**2.00**
Vietnam	**4.21**	**2.13**	**6.31**	0.08	0.14	**1.95**	0.33	0.91	**2.85**	0.22	**1.16**	0.76	0.74
Laos*	0.51	**3.83**	0.26	**29.37**	0.87	0.55	**1.48**	0.06	0.09	**3.66**	**2.57**	0.21	0.83
Brunei**	**4.59**	0.37	0.44	0.34	0.06	0.53	0.47	0.63	**2.97**	0.26	0.39	**1.04**	**2.07**
Cambodia***	0.07	**7.72**	**1.31**	0.02	0.08	**3.29**	0.72	0.37	**2.70**	0.59	0.43	0.04	0.61
Indonesia	0.89	**2.28**	**2.92**	**1.26**	0.29	**1.97**	0.52	**1.34**	**1.62**	0.29	0.64	**1.09**	**1.13**
Malaysia	**9.55**	**2.16**	**1.26**	**2.07**	0.94	**5.44**	0.30	**1.83**	**1.97**	0.40	0.43	0.87	**3.09**
Myanmar	0.44	**3.58**	**3.16**	0.38	0.11	0.32	0.65	**1.56**	0.41	0.73	0.59	0.36	0.53
Philippines	**8.11**	**2.74**	**1.74**	0.36	0.40	**1.85**	0.29	**2.22**	**1.00**	0.40	**1.22**	**1.12**	**1.51**

Source: IMF

* Average of the years trade was done
** There was no trade data of 2000
*** For some products there was no trade in some years

RCAI in broad categories reveal that India has comparative advantage in export of Intermediate goods with majority of ASEAN countries and we do not have comparative advantage in export of Capital goods. International trade theories like Ricardo's comparative Advantage theory also advocates a country to concentrate on those products for which we have comparative advantage and not try to be self-reliant and exploit the gains of globalisation. We have highest trade deficit of 11 billion dollar with Indonesia and looking at the table-5 we have comparative advantage in exports of Intermediate goods.

Table 5: India's Revealed Comparative Advantage with ASEAN Countries (Average of 2000-2018)

	Capital goods	**Consumer goods**	**Intermediate goods**	**Raw materials**
Singapore	0.27	**2.27**	**1.90**	0.27
Thailand	0.49	0.78	**2.20**	0.44
Vietnam*	0.34	0.76	**1.37**	2.83
Laos**	**1.04**	0.94	**1.25**	0.11
Brunei***	0.41	0.82	0.68	**7.94**
Cambodia****	0.65	**1.43**	0.70	**4.65**
Indonesia	0.58	0.58	**1.75**	0.97
Malaysia	0.31	**1.23**	**1.69**	2.81
Myanmar*****	0.63	**1.29**	**1.03**	**1.28**
Philippines	0.42	**1.24**	**1.72**	**1.97**

Source: IMF

* No data available for 2018
** Data was available for only 7 years
*** No data was available for 2000 & 2005
**** No data was available for 2018 & 2019s
***** No data was available for 2002 to 2009 & 2000

Conclusion

India has always viewed FTAs as an important tool to increase its trade and investment and henceforth signed a number of trade agreements with number of countries or regional blocks. In fact, India is one of the top few countries in Asia with the maximum number of FTAs operative or in the process or under negotiation .India has 42 trade agreements (including preferential agreements) either in effect or signed or under negotiation or proposed. Out of this, 13 are operative. Majority of these FTA's are with Asian Countries which are at different stages of development. Trade with ASEAN, which had consistently seen the best growth for Indian exports, sank 10 per cent in 2019-20. Exports to the bloc stood at $31.54 billion, down by more than 15 per cent from $37.4 billion in 2018-19. Imports however remained much higher at $55.36 billion, albeit reducing from $ 59.32 billion, a 6.6 per cent fall. Imports from the region had recently been on the upswing since 2018-19 due to Chinese shipments being moved through the region, particularly Vietnam, government estimates say. A stricter rule of origin can tackle some of the problems that India is facing.

Revealed comparative index has identified the areas where India has comparative advantage vis-a-vis ASEAN nations. Need is there to evaluate the present FTA's and to fully exploit India's potential of exports with ASEAN countries. Revisiting FTA's and exploration of the reasons for under utilization of potential is a beginning in the right direction. Not being part of regional block is not an option. In the present globalised world countries should maximise trade gains. Need of the hour is to evaluate the reasons for unutilization of FTA and not scrapping of the FTA's.

References

Alam, M. I. (2015). Indo-Asean Trade relation: An Analysis. Journal of International Economics (0976-0792), 6(1).

Ashish, A., & Kannan, E. (2015). Analysis of India's Revealed Comparative Advantage in Agro-Processed Products. Indian Journal of Economics and Business, 14(1).

Balassa, B., & Noland, M. (1989). "Revealed' Comparative Advantage in Japan and the United States. Journal of International Economic Integration, 4 (2), 8-22.

Batra, Amita; Khan, Zeba (2005): Revealed comparative advantage: An analysis for India and China, Working Paper, No. 168, Indian Council for Research on International Economic Relations (ICRIER), New Delhi.

Bilas, V., & Bošnjak, M. (2015). Revealed comparative advantage and merchandise exports: The case of merchandise trade between Croatia and the rest of the European Union member countries. Ekonomska misao i praksa, (1), 29-47.

Chandran, D. (2011). Trade Complementarity and Similarity between India and ASEAN Countries in the Context of the RTA. Available at SSRN 1763299.

Coxhead, I. (2007). A new resource curse? Impacts of China's boom on comparative advantage and resource dependence in Southeast Asia.
World Development, 35(7), 1099-1119.

Francis, S. (2011). The ASEAN-India Free Trade Agreement: A sectoral impact analysis of increased trade integration in goods. Economic and Political Weekly, 46(2), 46-55.

Granabetter, D. (2016). Revealed comparative advantage index: an analysis of export trade in the Austrian district of Burgerland. Review of Innovation and Competitiveness: A Journal of Economic and Social Research, 2(2), 97-114.

Ohlan, R. (2012). ASEAN-India free trade agreement in goods: An assessment. Available at SSRN 2798026.

Panchamukhi, V. R. (1973). Revealed Comparative Advantage: India's Trade with the Countries of the ECAFE Region. Economic and Political Weekly, 65-74.

Raghurampatruni, R. (2012). REVEALED COMPARATIVE ADVANTAGE: AN ANALYSIS FOR INDIA AND ASEAN. Global Management Review, 6(4).

Sanidas, E., & Shin, Y. (2010, October). Comparison of revealed comparative advantage indices with application to trade tendencies of East Asian countries. In 9th Korea and the World Economy Conference, Incheon.

Saraswat, D. V., Priya, P., & Ghosh, A. (2018). A note on free trade agreements and their costs. NITI Aayog https://niti.gov.in/writereaddata/files/document_publication/FTA-NITI-FINAL.pdf

Seyoum, B. (2007). Revealed comparative advantage and competitiveness in services. Journal of Economic Studies.

Sikdar, C., & Nag, B. (2011). Impact of India-ASEAN Free Trade Agreement: A cross-country analysis using applied general equilibrium modeling (No. 107). ARTNet Working Paper Series.

Tewari, M., Veeramani, C., & Singh, M. (2015). The potential for involving India in regional production networks: analyzing vertically specialized trade patterns between India and ASEAN (No. 292). Working Paper.

Vollrath, T. L. (1991). A theoretical evaluation of alternative trade intensity measures of revealed comparative advantage. WeltwirtschaftlichesArchiv, 127(2), 265-280.

World Bank. 2020. South Asia Economic Focus, Spring 2020: The Cursed Blessing of Public Banks. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/33478 License: CC BY 3.0 IGO.