Business, Management and Economics Engineering
ISSN: 2669-2481 / eISSN: 2669-249X
2022 Volume 20 Issue 2

EXAMINING INTRA INDUSTRY TRADE BETWEEN INDIA AND CHINA

Bikhipta Saikia and Biswajit Saikia
Lecturer, Department of Economics, Dimension Academy, Tezpur, Sonitpur, Assam
Assistant Professor, Department of Economics, Rangapara College, Rangapara, Assam
Email ID: saikiabikhipta@gmail.com, biswajitsaikia123@gmail.com

ABSTRACT

China and India, the world's most populous country, have seen tremendous economic growth in recent years. Massive growth in Industrialization and Gross Domestic Product and a stronger relation between India and China have led to an increase in bilateral trade between the two countries. IIT can be broadly defined as a trade where a country exports and imports the products of same industry. This concept is in contrast to inter-industry trade where trading of products takes place belonging to different industries. This paper examines the intensity of Intra Industry Trade between India and China. Also, the study examines trade patterns of commodities traded between the two countries and how have they changed over the years.

1. INTRODUCTION

Intra-Industry Trade (IIT) can be broadly defined as a trade where a country exports and imports the products of same industry. This is totally a new concept to explain the reason for international trade and it has been identified in the late 1960s. This concept of trade is in contrast to inter-industry where trading of products takes place belonging to different industries.

For a long time, trade between any two countries was explained by the Ricardian model or Heckscher-Ohlin model, which emphasized trade to be driven by differences in technology and factor endowments. Therefore, the classical and neo-classical models emphasized on inter-industry trade, where each country would specialize in the production of a particular commodity in which it has comparative/absolute advantages/disadvantages. If a country is having absolute/comparative advantages/disadvantages for producing a product, it is very much possible that the country is having similar advantage of all the products belonging to that industry. Similarly, different countries may have advantages in different industries and if they get engaged in the international trade with other countries, they will export the products in which they are having advantages and import the products in which the other countries are having an advantage.

However, lately it has been established that with increased industrialization, industrial economies increasingly involves in within industry trade i.e., similar goods or goods broadly belonging to the same industry. This type of trade is called Intra-Industry Trade (IIT). David Ricardo in 1817 formulated the popular 'Theory of Comparative Advantage' which assumed trade involving homogeneous products, with perfect competition. Ricardian model of trade showed that countries can take advantage of each other due to differences in the factor endowments between them i.e., countries are benefitted by better allocation of scarce resources.

Thus, according to these theories countries should export products which are most suited to its factor endowments like natural resources, labour, technology etc. while importing the goods which have high factor endowment cost and are least suited to the natural characteristics of a particular region or country. Thus, countries primarily trade between goods belonging to different industries. This is known as inter-industry trade. Thus, with the development of research on trade theories, it was found that countries also exchanges products of same industry and this finding surprised the world because earlier it was never thought of. Initially research in intra-industry trade focused on the trading patterns of developed economies. Economists such as Verdoon (1960) and Balassa (1963) observed the changes in patterns of trade in European countries after the formation of Benelux and the European Economic Community (EEC). They found that developed countries showed an increasing proportion of intra-industry trade rather than inter-industry trade. This pattern was repeatedly observed in most developed countries.

2. INTRA-INDUSTRY TRADE: SIGNIFICANCE

Intra-Industry Trade represents a major portion of world trade and is supposed to be more important than inter-industry trade because it stimulates innovations and exploits economies of scale (Ruffin 1999). Some of the points which highlights the importance of intra-industry trade have been discussed below:

- Comparative advantage is not a necessity- the classical and neoclassical theory emphasizes the importance of comparative advantage of a country to reap the benefits of international trade and did not explain that what will happen to a country not having the advantage in any sector. According to the theory they will lose the ground with their participation in international trade. But the theory of intra-industry trade does not support this argument. Since in this case, countries will trade in more or less similar products (i.e., differentiated products of an industry) therefore even-if two countries are producing the same products, they can enter into international trade with each other and getting benefitted out of it.

- Equitable Income Distribution- Since classical and neo-classical theories emphasizes that factor abundance is the reason for international trade therefore the outcome of the trade would be the transfer of income from a factor scarce country to factor abundant country and this would lead to concentration of wealth in already rich countries. Intra-Industry Trade does not support this form of international trade and emphasizes that trade between the two countries are possible even if they are endowed with the same level of factors of production because in this case both of the countries would produce and trade similar products. Therefore both the countries will be benefitted from international trade which leads to equitable income distribution in both the countries.

- Promotes Innovation- In case of intra-industry trade, since firms are producing different varieties of a product therefore to capture more market share a firm would like to make innovations in the product. This is not the case with traditional theories of international trade because there the focus was producing altogether different products of different industry therefore the firms were focusing on producing a different set of products rather than trying to innovate in the same product line.

- Focus on Economies of Scale- Intra-Industry Trade focuses on the gains from trade by exploiting economies of scale and this is possible because firms are producing different varieties of a product using the same infrastructure. As the level of output will increase and firm reaches towards economies of scale, the average cost of the product decreases and this decrease in the cost then is passed on to the consumer by charging less price from them.

Therefore looking at all these points it can be said that intra-industry trade represent world trade in a better way. Apart from this, the benefits of intra-industry trade will reach to each partner rather than getting concentrated in few hands.

3. STUDY BACKGROUND

Traditionally economists found that countries ventured into international trade primarily to export goods which were most suited to its own factor endowments and technology while importing the goods which have high factor endowment cost and were least to the natural characteristics of the country. As this type of trade involves exports and imports of different type of commodities it is called intra-industry trade.

However, lately, it has been established that with increased industrialization, industrial economies increasingly involves within industry trade i.e., similar goods or goods broadly belonging to the same industry. The primary reason for this is: enhancing industry specialization and gets economies of scale. This type of trade is called intra-industry trade (IIT) and involves trade within the same industry.

4. DIFFERENCE BETWEEN INTRA-INDUSTRY TRADE AND INTER-INDUSTRY TRADE

Inter-Industry Trade	Points of Difference	Intra-Industry Trade
1.Different provisions of ountries with product factors	Conditions of trade development	1.Equal or very similar provision of countries for production factors
2.Comparative advantage of countries in production of goods	Trade reflects	2.Differentiation of goods
3.By theory of production factors proportions	Trade explained	3.By theory of economy of scale
4. Of owners of comparatively surplus production factors	Trade increased the income	4.Of owners of all trade factors

5. Homogeneous goods	Structure of goods traded	5.Differentiated goods

Source: Bernatonyte and Normantiene

5. INDIA AND CHINA: TRADE RELATIONS

Contribution of India and China in global trade has been increasing in recent years. As China and India are increasingly becoming industrialized, it is expected that the intra-industry trade would have increased over the years.

The majority of exports from India to China are primary in nature, which includes predominantly raw materials and some semi-finished goods. The commodities mainly exported by India to China includes Ores, Slag, Ash, Organic chemicals, Iron and Steel, Cotton etc. China's exports to India includes primary products like Organic Chemicals, Iron and steel, Silk, but also secondary and manufactured goods like Electrical Machinery, Nuclear Reactors, and Boilers etc. It has been seen that in recent years India's export of furniture, bedding, mattress, pearls and semi precious stones, mineral fuels and copper have increased sporadically. However, the items which contribute the majority of share to export include ores, slag, ash, cotton, and copper. However, India still does import finished goods from China the majority of being electrical equipments, nuclear reactors etc. Although India understands the need to build internal competence to reduce reliance on exports for manufacturing goods and the incumbent government has introduced initiatives like "Made in India", India is still an import lead when it comes to manufactured goods. The trade deficit between India and China has reduced by more than US $10 billion in the year 2019, as India got access to export sugar, rice, pharma, grapes, fish, meal, fish oil, tobacco etc. to China. Nevertheless, India needs to build its competitiveness in industrial products.

In years to come, the pattern of Indo-China trade will depend on several factors. These includes economic growth trajectories of the two countries, government policies, negotiations with WTO, external economic outlook, the competitiveness of exports of the two countries in each other's markets and the effectiveness of tariff and non-tariff barriers in curbing the exports. Moreover, the specialization between industries and the commodities traded between the two countries should increase. Given that India and China are set to become the world's largest economies in next few years, enhancing trade relationship which enables both the countries at a global level would help the countries in the long run. Moreover, the global trade environment would also play a major role in the relationship and the bilateral trade relationship between the two countries.

INDIA-CHINA BILATERAL TRADE *(Figures in $Bn)*

Year	India's Export to China	India's Import from China	Trade Deficit	Total Trade
2015	13.4	58.26	44.86	71.66
2016	11.75	59.43	47.68	71.18
2017	16.34	68.1	51.76	84.44
2018	18.83	76.87	58.04	95.7

2019	17.97	74.92	56.95	92.9
2020	20.87	66.78	45.91	87.65
2021	28.03	97.58	69.56	125.62
2022 (Jan-May)	7.76	46.23	38.45	54.00

(Source: General Administration of Customs, China)

6. **RESEARCH OBJECTIVES**

i) To analyze the nature of commodities which are traded between both the countries (viz., India and China)

ii) To analyze the changes in the pattern of trade and share of intra-industry between the countries (analysis will be done for two decades i.e., from 2002 to 2011 and 2012-2021)

iii) To analyze the growing trade deficit between India and China.

7. REVIEW OF LITERATURE

In the field of international economics many empirical and theoretical works on intra-industry trade have been done by economists since 1966 (Balassa, 1966). In the present context we would like to make a brief review of the existing literature on IIT especially relevant for our purpose.

Balassa (1986) has tested various hypotheses as to the determinant of IIT in some thirty-eight developed and developing countries exporting and importing manufactured goods. The econometric model clearly shows that the extent of IIT increases with the level of economic development, size of domestic markets etc. The analysis shows that the existence of trading patterns with common borders further contributes to intra-industry trade. This study in fact supports and complements ten relevant theoretical literatures. The estimates made in this study have separated the countries into developed and developing country groups.

Kulkarni and Ishizaki (2001) intended to inspect the intra-industry trade index for Japanese manufacturing trade was a whole and then dividing it into commodity groups and in different time blocks. There is no evidence that intra-industry trade is completely absent in any commodity groups and in different time blocks. There has been an increasing evidence of intra-industry trade for Japanese manufacturing. After investigation, it is proved that Japanese manufacturing trade is completely intra-industry oriented.

Helpman, Krugman and Lancaster (1979) argue that modern trade in automobiles, computer, defense equipment and so on is primarily in terms of intra-industry.

Husted-Melvin (1999) recognized that "some intra-industry trade is purely a statistical phenomenon, one that would go away if economists had access to highly detailed data on trade". In such a case, intra-industry trade could just be an illusion.

According to Havrylyshyn and Civan (1985), India's intra-industry trade in 1978 was 37.4% of total trade with the world as compared to 15.6% in 1968.

S.V. Hariharan (1998) examines the export performance of Indian economy and compares its performance with other countries of the Asian region in recent year. He focused the growth of exports of India for a period of fifty years from 1947 to 1996. The export performance of India has been compared with other Asian countries viz., Bangladesh, Bhutan, China, Indonesia,

Korea, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka and Thailand. The relative performance of India is assessed through linear growth rate of export, export-GDP ratio, per capita exports, etc. Most of the Asian countries have registered higher growth rate of exports than India.
Satish C. Jha (1996-97) investigates the changing pattern of intra-regional trade in the Asian region. One of the important characteristics of Asia is its rapid growth in international trade. During the period from 1980 to 1992, the average rates of growth of Asian merchandise exports and imports were 9.6 and 6.1 percent respectively, compared with the world average of 5.5% for both exports and imports. Consequently, Asia's share in world trade rose sharply from 15.9% in 1980 to 25.3% in 1991 for exports and from 17% to 21.5% for imports over the same period.
Jitendar Kumar Dhanwal and Moneet Kumar (1995) investigates the trade relationship between India and some of the Asian countries. The data on trade during the period 1985-86 to 1992-93 have been used for this study. The Asian countries taken for investigation are SAARC countries and East Asian countries including Japan and China. India has been consistently enjoying a favorable balance of trade with this region and her exports and imports are growing. Bangladesh is India's largest trading partner in the region followed by Sri Lanka. India has adverse balance of trade with East Asia. India has traditionally strong trading relationships with most of the countries in this region, which accounted for 1.5% of India's global trade during the period April-October 1992.

8. METHODOLOGY

The study will be both exploratory and descriptive in nature. Primary data related to international trade will be collected from government officials handling foreign trade, trade bodies etc. Secondary data will be collected from diverse online and offline national/international research publications, books, journals etc.

The study will be requiring an index for calculating the volume of intra-industry trade. As many indices have proliferated since identification and theorizing of IIT, we will be choosing the Grubel-Lloyd index for the purpose of actual measurement. The major reasons for such a choice are- the index accurately captures the true essence of intra-industry trade with minimum mathematical complexity and the value of such an index is easy to be interpreted.

9. FINDINGS AND DISCUSSION

Contribution of China and India in global and Asian trade has been increasing in recent years. In this paper, we examined the nature and volume of bilateral trade between India and China. Motivated by IIT theory, the objective of this paper is to understand if India and China have started trade in specialized products, best leveraging the factors of endowment. As India and China are increasingly becoming industrialized, it was expected that the intra-industry trade would have increased over the years.
Nevertheless, we find that India and China are still predominantly trading in different commodities and are majorly involved in Inter-Industry Trade. Further, the majority of exports from India to China are primary in nature, which includes predominantly includes raw-

materials and some semi-finished goods. The commodities majorly exported by India to China includes Ores, Slag, Ash, Organic Chemicals, Iron and Steel, Cotton etc. China's exports to India included primary products like Organic Chemicals, Iron and Steel, Silk; but also secondary and manufactured goods like Electrical Machinery, Nuclear Reactors and Boilers etc. Moreover, the proportion of intra-industry trade over the two decades was inconsistent. Studies have shown that as countries develop and become more industrialized the volume and proportion of IIT increases. However, in the context of China and India, though the intra-industry trade increased along with an increase in overall trade, the proportion has not increased. Moreover, the proportion of IIT was inconsistent, where some year had more than 20% of the trade as inter-industry years, while other years had less than 10%.

Another area of concern is the growing trade deficit between India and China. The trade deficit has specifically increased from 2014, as the exports from India to China decreased while the exports have increased. For the four year period from 2014 to 2018, the trade deficit increased by 1.7 times. The growing trade balance is a cause of concern for policymakers and is much debated at an international level. For example, though India was keen to join RECP initially, lately there is resistance as this will lead to further reduction of import tariffs making the situation even worst. However, economists feel joining RECP would limit India's trade trade with its South Asian countries and increase the role of China. Further, realizing that India needs to increase its share of exports to China, more ways in which trade between the two countries can be increased are being sought.

In years to come, the pattern of Indo-China trade will depend on several factors. These include economic growth trajectories of the two countries, government policies, negotiations with WTO, external economic outlook, the competitiveness of exports of the two countries in each other's markets and the effectiveness of tariff and non-tariff barriers in curbing the exports. Moreover, the specialization between industries and the commodities traded between the two countries should increase. Given that India and China are set to become the world's largest economies in next few years, enhancing trade relationship which enables both the countries at a global level would help the countries in the long run.

10. REFERENCES

1. Dwesar, R., and Kesharwani, A., (2019) Examining Intra-Industry Trade between India and China: Is India on the Right Track, Theoretical Economics Letters, January 2019, ISSN Online: 2162-2086, ISSN Print: 2162-2078

2. Grubel, H.G. and Lloyd, P.J. (1975) Intra-Industry Trade. The Theory and Measurement of International Trade in Differentiated Products. Macmillan, London.

3. Grubel, H.G. (1967), Intra-Industry Specialization and the Pattern of Trade, The Canadian Journal of Economics and Political Science, Vol. 33, No. 3, August, pp. 374-388

4. Kumar, S., and Ahmed, S. (2014) Growth and Pattern of Intra-Industry Trade between India and Bangladesh: 1975-2010, The Journal of International Economic Policy, 2, 21-30.

5. Laha, S.S., (2007) A Study of India's Intra-Industry Trade, University of North Bengal

6. Salvatore, D., International Economics Trade and Finance, Eleventh Edition, Wiley, ISBN: 978-81-265-5234-4

7. Srivastava, A., Intra-Industry Trade of India with Special Reference to Few selected Sectors, Jaypee University of Information Technology, Solan (2011)

8. Tripathi, K.R., (2018) A Study of Foreign Trade of India during the Globalization Era, Deen Dayal Upadhyaya Gorakhpur University

9. Veeramani, C., (2002) Intra-Industry Trade under economic liberalization: an analysis of India's manufacturing sector, Jawaharlal Nehru University