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Mamta
Research Scholar, Department
of Economics, Kurukshetra
University, Kurukshetra,
Haryana, India

Pardeep S Chauhan
Professor, Department of
Economics, IIHS,
Kurukshetra University,
Kurukshetra, Haryana, India

Corresponding Author:
Mamta
Research Scholar, Department
of Economics, Kurukshetra
University, Kurukshetra,
Haryana, India

Bilateral Trade between India and Japan: A Trade Intensity Approach Analysis

Mamta and Pardeep S Chauhan

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Abstract

Over time, India and Japan have continued to conduct bilateral trade. However, compared to the size of their economies, the level of trade between them is minimal. This essay makes an effort to assess the nature and strength of the two countries' bilateral trade connections. Trade connections between two countries can be evaluated using a variety of statistical metrics. Trade intensity is one such index that is utilized in this work. Indicators of trade intensity have been calculated for the years 2009 through 2020. It is possible to gauge the degree of trade intensity between the two countries by looking at their bilateral trade relationship as expressed by intensity indices.

Keywords: Trade Intensity, Bilateral, Trade Connections, Variety

Introductions

The growth rate and development potential of developing countries were greatly enhanced by international economics after the 19th century. The sharing of knowledge and the adoption of novel ideas are made possible through international trade. While one country may focus on producing a particular type of good, another country may focus on something completely different. They can share ideas and strengthen the economy of both countries by working together. On the basis of trade, economic, and technological collaboration, India and Japan have sustained bilateral agreements and warm relations. Iron ore imports replaced pre-war cotton imports as the mainstay of Japan's economic ties with India after World War II. The level of relations improved as trade between Japan and India grew. Additionally, there have always been warm and cordial ties between India and Japan, and Indians have favorable attitudes toward it. Since the early 1990s, the development of trade treaties (FTAs) has emerged as a significant trend in the international trade arena. Over time, the nations have held fast to these ideals and developed a solid alliance founded on high ideals and common sense.

Because of the evolving Asian environment, the new power balance, and the economic momentum moving eastward, the two countries' close bilateral connections have significantly increased in strategic importance in the contemporary era of globalization (Mathur & Arpita). The convergence of the nation's protracted economic and political goals and objectives has also contributed to the rise in importance of this issue. Both nations have participated in significant summits since then in order to deepen their efforts to strengthen their ties in this direction. Along with other initiatives like strategic dialogue meetings consultations on disarmament, ministerial-level economic dialogue partnership summits, and most importantly the Comprehensive Economic Partnership Agreement (CEPA) signed in the year 2011 to intensify the economic and trade relations between the two nations, both countries have been involved in important summits since the year 2005 to further strengthen their relationship along these lines. Additionally, Japan is assisting India in strengthening its application to join the crucial Wassenaar Arrangement, Australia Group, Missile Technology Control Regime, and Nuclear Suppliers Group multilateral forums of international export control regimes, as well as the Asia Pacific Economic Cooperation (APEC) group. Japan is currently India's fourth largest investor with a bilateral trade value of US\$ 14513 million during the year 2015–16 and a cumulative figure of US\$ 19.43 billion in Japanese foreign investments sourced in India between 2000 and 2015. As a result, the bilateral trading regimes between Japan and India have significantly increased over the past few years. The "India Japan Comprehensive Economic Partnership Agreement"

(CEPA), which aims to eliminate 94% of the tariffs between India and Japan during the next 10 years, was signed in 2011 and was another significant economic initiative between the two nations.

Review of Literature

Joseph M. & Bera S. (2012) ^[4] India's trade with Japan has declined dramatically. Japan's share of Indian exports is gradually increasing. Since India liberalized its economic policy in 1991, FDI inflows have increased. In 2000-01, India's FDI outflow was \$829 million, and in 2010 it was \$25802 million. Kanungo A. (2013) ^[12]. The primary goals of Japanese businesses are to improve quality and customer satisfaction. They attempt to meet this commitment by incorporating Japanese management practices into their operations. The success stories of Japanese companies should help India attract more Japanese investment. Raj S. & Ambrose B. (2014) ^[21] analyzed India-Japan bilateral trade with secondary data through trade intensity indices during the time 2001 to 2011. He concluded that the intensity between the two countries has declined over the years. In 2001 the import intensity index was 53.15, expected during the period between 2005 and 2010 this has been maintained. From 2001 to 2011 export index declined from 63.38 to 38.76. India's export to Japan has been declined over the years. The overall trade intensity has declined over the period. He found that India-Japan has huge potential to increase trade between them. Seshadri R. (2016) ^[24]. The primary goals of Japanese businesses are to improve quality and customer satisfaction. They attempt to meet this commitment by incorporating Japanese management practices into their operations. The success stories of Japanese companies should help India attract more Japanese investment. Sarkar R. (2018) ^[23] Japan's long-standing unwillingness to invest in India appears to have ended, and Japanese FDI flows into India have increased. India's investment in Japan is expected to skyrocket in the coming years, particularly in biotechnology, information technology, and pharmaceuticals. India-Japan trade has never seen such a surge as it has in recent years. Japanese businessmen have made significant investments in a variety of industries. Japan is resisting investments in India due to the country's poor infrastructure, unfair taxation, and inefficient administrative procedures.

Objectives

To analysis trade intensity between India and Japan
To evaluates trade opportunities between them

Methodology

The trade relationship between India and Japan is examined in this paper. Data for the years 2009 through 2020 is collected from the IMF statistics database. The basic method known as the trade intensity index, created by K. Kojima, has been applied. The share of trade between two countries as a percentage of the latter's global trade share has been calculated using the trade intensity index.

Trade Intensity Index

The trade intensity index can be compared to a consistent export share. In other words, the figure indicates whether a region export more to a particular country than the global average. It is interpreted similarly to how an export share is. Since there is no size bias, we may compare the statistics

between regions and across time, even during periods of strong export growth.

Definition

The ratio of two export shares is known as the "trade intensity statistic. The numerator represents the percentage of the study region's exports that go to the destination of interest. The share of the target destination in global exports serves as the denominator.

Value in the range

The trade Intensity Index has a value between 0 to 1. (0 to 100 when multiplied by 100). There is no trade tie between partner countries if the value is 0. In contrast, a rating of 1 denotes strong commercial relations. If the import intensity is higher (or lower) than 100, it means that India is importing more (or less) from Japan than would be predicted based on its percentage of global commerce. In terms of export, a value of 0 denotes that there is no significant link between these two nations' exports, a value close to 100 denotes significant performance, and a value greater than 100 denotes that India is exporting to Japan more than would be predicted based on that nation's percentage of global trade.

Limitations

The study is hampered by the limited applicability of the trade intensity indexes for estimating potential trade between nations.

Mathematical Definition: The export intensity index of India with respect to Japan (XIIijt) is shown as follows;

$$XIIijt = [Xij/Xi]/[Mj/(Mw-Mi)] * 100 \dots\dots\dots (1)$$

Where: Export intensity index of trade of India with Japan
 Xij = Exports of India to Japan
 Xi = Total Exports of India
 Mj = Total Imports of Japan
 Mw = Total World Imports
 Mi = Total Imports of India
 T = 2009 to 2020

Import Intensity Index (MIIijt) can also be measured in the similar way:

$$MIIijt = [Mij/Mi]/[Xj/(Xw-Xi)] * 100 \dots\dots\dots (2)$$

Where: MIIijt = Import intensity index of India with Japan
 Mij = Imports of India from Japan
 Mi = Total Imports of India
 Xj = Total Exports of Japan
 Xw = Total World Exports Xi = Total Exports of India t = 2009 to 2020

The Export Intensity Index of Japan with respect to India (XIIjijt) is shown as follows:

$$XIIjijt = [Xji/Xj]/[Mi/(Mw-Mj)] * 100 \dots\dots\dots (3)$$

Where: XIIjijt = Export intensity index of trade Japan with India
 Xji = Exports of Japan to India
 Xj = Total Exports of Japan
 Mi = Total Imports of India
 Mw = Total World Imports Mj = Total Imports of Japan t = 2009 to 2020

Import intensity index (MIIjijt) can also be measured in the similar way:

$$MIIjijt = [Mji/Mj]/[Xi/(Xw-Xj)] * 100 \dots\dots\dots (4)$$

Where: MIIjijt = Import Intensity Index of trade of Japan with India

Mji = Imports of Japan to India
 Mj = Total Imports of Japan
 Xi = Total Exports of India
 Xw = Total World Exports Xj = Total Exports of Japan t = 2009 to 2020

Result and Analysis

The import and export intensity indices used to describe bilateral trade relations between Japan and India aid in determining how actively the two nations trade with one another. The analysis shows that the two countries have a lot of opportunities for trade if the intensities between them are much below 100.

Table 1: Trade Intensity Index between India and Japan, 2009-2020

Year	XIijit	MIIjit	XIIjit	MIJjit
2009	43.58	52.21	51.97	41.29
2010	46.99	45.96	45.28	44.91
2011	38.52	52.23	51.12	37.39
2012	45.87	57.07	55.86	44.56
2013	47.36	57.95	56.72	46.39
2014	41.02	57.92	56.83	40.19
2015	44.40	63.38	62.60	43.26
2016	38.00	66.73	66.52	36.59
2017	39.15	58.22	57.74	38.05
2018	37.29	63.19	62.67	36.31
2019	38.18	69.21	68.94	37.05
2020	39.89	74.12	73.39	38.83

Source: Author Estimation

Table 1 shows the import and export intensity between India and Japan from the time -period 2009-2020. Over time India, and Japan both experienced an irregular trend in their export and import intensity. The export index was 43.58 in 2009 and 39.89 in 2020. It indicates a steady reduction in India’s export intensity relative to Japan over time. This downward trend implies that India has not diversified its exports to Japan throughout the years. India exports the same goods whose demand has been declining. This indicates that India’s exports have a higher concentration of commodities than its imports from Japan. The trade intensity index has continued to maintain its position on the import front as well. From 2009 to 2020, the import intensity index showed no signs of ceasing to rise. India’s import intensity index for Japan climbed from 52.21 in 2009 to 74.12 in 2020. It shows that India’s reliance on Japanese imports has grown significantly. In 2009, Japan’s export intensity index for India was 51.97; in 2020 it increased to 73.39. However, its import index declined significantly from 41.29 in 2009 to 38.83 in 2020. These statistics clearly show that Japan’s imports from India have decreased. That may be because, in comparison to its exports to India, Japan’s imports from India are mostly primary and intermediary goods. Japan’s import and export intensities are both below 100. It indicates that its trade with India is much less compared to Japan’s global trade. This suggests that Japan has a lot of potentials to expand its trade with India. The study explains that total trade intensity has decreased throughout the investigation.

Conclusion

India’s export index has decreased from 43.58 in 2009 to 39.89 in 2020. This downward trend indicates that India has

not diversified its exports to Japan over the years. India exports primary goods, whose demand is falling. This suggests that India’s exports are more concentrated on commodities than its Japanese imports. India’s import intensity index for Japan increased from 52.21 in 2009 to 74.12 in 2020. These figures clearly illustrate that Japan’s imports from India have fallen. It demonstrates that its trade with India is far less than Japan’s total trade. Overall, Japan has a greater trade intensity than India.

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