International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Trade Intensity Between India and China

Deshraj Verma[1], Dr. Nafees Hashim Rizvi[2]

[1]Research Scholar, Department of Economics, (Shia P.G College Lucknow), University of Lucknow, Lucknow 226007
[2]Assistant Professor, Department of Economics, (Shia PG College Lucknow), University of Lucknow, U.P, Lucknow 226007

Abstract

Foreign trade serves as a fundamental driver of economic growth and prosperity, facilitating the exchange of goods, services, technology, and capital across borders. As two of the world's most rapidly expanding economies and emerging global giants, India and China present a compelling case study for understanding evolving trade dynamics. Both nations have undergone significant economic liberalization, leading to their deeper integration into the global economy. Despite their historical similarities and large populations, a notable disparity exists in their trade performance, with China emerging as the world's largest exporter and India's share in international trade, though growing, remaining comparatively smaller. This paper investigates the nature, extent, and potential of trade between India and China from 2000 to 2023, employing a structured analytical framework that includes quantitative modeling and key trade indices. The primary objectives of this study are to analyze historical bilateral trade trends, assess India's trade potential with China, and specifically apply the Trade Intensity Index (TII), Export Intensity Index (EII), and Import Intensity Index (III) to determine the relative importance of each country's trade with the other in the context of global trade. The Trade Intensity Index (TII) measures how intensively a country trades with a particular partner compared to the world average, with a value greater than 1 indicating stronger-than-expected trade. The Export Intensity Index (EII) assesses the relative importance of a country's exports to a specific partner, while the Import Intensity Index (III) gauges the importance of a particular country as a source of imports. Analysis of the data from 2000 to 2023 reveals distinct patterns in the bilateral trade relationship. From India's perspective, the Export Intensity Index (EII) with China showed an initial growth phase, peaking at 1.10 in 2005, indicating China's growing importance as an export destination. However, this trend reversed, with the EII generally declining thereafter, reaching its lowest point of 0.29 in 2022 and standing at 0.33 in 2023. This significant reduction underscores a diminished importance of China as an export market for India over time. In contrast, India's Import Intensity Index (III) from China demonstrated consistent growth, reaching 1.25 in 2007 and largely remaining above 1.0 throughout the period, peaking at 1.27 in 2016 and ending at 1.21 in 2023. This highlights India's persistent and increasing reliance on China for imports. The overall Trade Intensity Index (TII) for India with China consistently remained below 1.0, peaking at 0.58 in 2007 and stabilizing in the 0.40s range in recent years. This suggests that despite the absolute growth in trade volumes, the bilateral trade relationship from India's standpoint has been less intense than expected based on their global trade shares, largely driven by the growing import dependence. From China's perspective, the Export Intensity Index (EII) to India showed a generally upward trend, often remaining above 1.0, and reaching 1.20 by 2023. This indicates that India has consistently been an important, and often more intense than the global average, export market for China. Conversely, China's Import Intensity Index (III) from India exhibited a different trajectory. After

an initial surge, peaking at 1.63 in 2004 and 1.55 in 2008, signifying a substantial reliance by China on imports from India, a sharp decline followed. The III consistently fell below 1.0 from 2009 onwards, dramatically dropping to 0.33 in 2022 and 0.38 in 2023. This significant reduction suggests that India's importance as a source of imports for China has considerably waned, possibly due to diversification of China's import sources or decreased demand for specific Indian goods. The Trade Intensity Index (TII) for China with India peaked at 0.66 in 2007 but consistently remained below 1.0 throughout the entire period. This implies that while trade volumes might have increased, the overall trade relationship from China's standpoint has always been less intense than would be expected based on their respective shares in global trade.

In conclusion, the study reveals a clear and increasing trade imbalance in favor of China. While China maintains India as a sustained priority for its exports, India's role as a major import source for China has substantially diminished. India's growing import dependence on Chinese goods, coupled with a declining intensity of its exports to China, underscores a complex and increasingly imbalanced trade dynamic. Despite geopolitical tensions, trade volumes have continued to grow, reflecting India's deep manufacturing dependence on China. Addressing this imbalance will require significant structural changes in India's domestic manufacturing capabilities and a strategic diversification of its import sources.

Introduction

Foreign trade is an extension of internal trade, driven by the inability of a single country to produce all necessary goods and services efficiently. This inability stems from variations in natural resources, skill sets, and other factors. Consequently, countries find it profitable to engage in international trade, exporting goods they produce cost-effectively and importing goods that other nations can produce at a lower cost.

Beyond mere exchange, foreign trade fosters the dissemination of technical expertise, the exchange of ideas, and the import of knowledge, skills, managerial talent, and entrepreneurship. It also encourages the flow of foreign capital, significantly impacting an economy's development in areas like production, employment, technological advancement, and resource utilization. Therefore, foreign trade is a crucial pillar of economic prosperity, directly influencing a country's economic growth and development. Developed nations generally exhibit a greater contribution to global trade and a higher trade-to-GDP ratio compared to developing or underdeveloped countries. For less developed countries, importing advanced plant and machinery through foreign capital is a primary method of industrialization. This advanced equipment enables specialization in goods and services that can be produced more cheaply than elsewhere, thereby promoting growth and development. The importance of foreign trade has surged in recent years, serving as an "engine of growth" by providing essential raw materials, technology, and capital for industrial production. Both the World Bank and the International Monetary Fund (IMF) highlight trade as a pivotal element in the development of developing countries. The World Bank projects that improved access for poor countries to global export markets could lead to increased income and significantly boost annual GDP growth rates. India and China, two of the world's fastest-growing economies, present an intriguing case for economic collaboration. Both nations have undergone significant economic liberalization over the past two to three decades, facilitating their integration into the global economy. Assessing their recent macroeconomic performance and current trade patterns is vital for enhancing economic cooperation. As the two largest developing countries and emerging giants in the global economy, their economic strength can be gauged through their macroeconomic indicators. According to the World Bank, China's GDP experienced substantial growth since 2000, reaching approximately $17.79

trillion in 2023, while India's GDP stood at about $3.55 trillion during the same period. China is currently the world's largest exporter, accounting for a significant portion of global exports. In contrast, India's share in international trade is smaller but has shown rapid growth over the past decade. This disparity in export performance between China and India is a noteworthy point of inquiry, given their historical similarities. Both countries have the world's largest populations (around 1.4 billion each), gained independence in the mid-twentieth century, initially adopted heavy industry-oriented development strategies with some central planning, and began trade liberalization in the 1980s, reducing their reliance on import substitution. China is globally recognised as one of the most important trading partners for India. Over the past twenty years, it has consistently maintained its position as the most prominent source of imports for India and an important destination for exports, thereby forging a multifaceted and essential economic partnership. The volume of bilateral trade has grown significantly. From a relatively modest baseline, total trade is projected to grow from $5 billion in fiscal year 2001-02 to a peak of $135.98 billion in 2022 (Ministry of Commerce, India; General Administration of Customs, China). While India's exports to China have grown significantly – from $1.8 billion in fiscal year 2003-04 to $15.32 billion in 2022 – imports from China have grown at an even more rapid pace, reaching $118.50 billion in 2022. This pronounced trade deficit remains a prominent feature of the bilateral relationship. Despite the presence of fluctuations and geopolitical tensions, the partnership has shown considerable resilience. For example, bilateral trade surpassed $136 billion in 2023, evidence of improved and sustained connectivity, while India has implemented strategies aimed at reducing import dependence (Reuters, various sources). China consistently represents a large share of India's global trade, accounting for around 15-16% of India's total merchandise imports and around 3-4% of India's exports in recent years (Department of Commerce, India). In contrast, for China, India is an important and expanding market, particularly in the areas of manufactured goods, electronics and machinery. Although India represents a smaller share of China's broader global exports compared to China's share of Indian imports, it is still one of the largest export destinations in Asia and a strategically important market for the Chinese industrial sector.

Literature Review:

We have used some research articles, magazines, government site and weekly economics and political for this research paper. Some are mentioned here.

Sandhu &Kaur (2023) This study focuses on analyzing India's trade potential with China, employing a gravity model approach. The research utilizes secondary data and time series analysis spanning from 2001 to 2021 to achieve its primary objective: to understand the impact of bilateral trade on India's economic size, particularly in relation to its neighbouring country, China. The study implicitly builds upon existing literature that employs gravity models to explain bilateral trade flows, a widely accepted framework in international economics.

TABASSUM (2021) The paper "Trade Intensity and Trade Complementarity between India and Bangladesh" explores the trade dynamics between the two countries using various intensity indices. It finds that India's exports to Bangladesh are significantly higher than expected, while Bangladesh's exports to India are relatively low and insignificant. The study highlights strong trade complementarity from Bangladesh's import requirements to India's export supplies, but low complementarity in the opposite direction. The trade complementarity index (TCI) from India to Bangladesh has seen an increase, reaching 0.53 in 2015. The trade data spans from 1972 to 2018, obtained from IMF DOTS and UNCOMTRADE. The indices used include TII, MTII, EII and III. The paper also builds on earlier studies analysing India's

trade relations with Asia and major global partners. The findings suggest untapped potential for deeper bilateral trade.

Batra(2004) The literature survey reviews the extensive use of gravity models in estimating trade potential in regions such as South-Eastern Europe and Iran. It highlights the impact of development stages on bilateral trade flows between developing and industrialised countries. Studies typically use static cross-sectional and panel data, focusing on long-term trade relationships. Economic factors such as currency blocks and exchange rate stability affect bilateral trade patterns. Recent advances include the Trade Sim model by UNCTAD-WTO for countries with limited trade history. The gravity model is particularly useful for analysing trade in developing countries. The theoretical underpinnings of the model support its application. Overall, the survey establishes a strong basis for analysing India's trade potential.

Singh (2005) The paper "China-India Bilateral Trade: Strong Fundamentals, Bright Future'The paper traces the growing economic partnership between China and India, driven by rapid growth and active political and business engagement. It highlights a boom in trade, which is aimed at reaching $30 billion by 2010, despite historical and political tensions. India's economic reforms under Prime Minister Manmohan Singh and its skilled labour force are seen as key drivers of growth. Regional analysis shows that India maintains a favourable trade balance with China, unlike other South Asian countries. The paper highlights deep cultural ties as a potential catalyst for trade expansion. It also emphasises the role of innovation, with India excelling in software and China in engineering. Both countries are encouraged to leverage their strengths to maintain momentum. Overall, the study shows a promising outlook for China-India trade relations.

Objectives and Methodology

The study main aims to examine the nature, extent and potential of trade between India and China. It adopts a structured analytical framework to assess bilateral trade dynamics through both quantitative modelling and trade indices. The primary objectives include analysing historical trade trends, assessing India's trade potential with China and applying the Trade Intensity Index (TII) to determine the relative importance of India's exports to China in the context of global trade.

TRADE INTENSITY BETWEEN INDIA AND CHINA

The trends and patterns of trade between India and China have been analysed based on the data of 2000-2023. CAGR is used to analyse the trends of India's bilateral trade with China. Trade intensity, import intensity and export intensity indices have been used to study the pattern of India-China trade. The purpose of the gravity model of trade is to analyse India's trade potential with China.

The Trade Intensity Index (TII) elucidates a country's significance in global trade by measuring how intensively a country trades with a particular partner compared to the world average. It is mathematically expressed as follows:

$$TII_{ij} = \frac{\left(\frac{X_{ij}}{X_i}\right)}{\left(\frac{X_j}{X_w}\right)}$$

Where:

- TII_{ij} = Trade Intensity Index of country i with country j
- X_{ij} = Exports from country i to country j

- X_i = Total exports of country i
- X_j = Total imports of country j
- X_w = Total world exports

A TII value greater than 1 (or 100 when expressed as an index) indicates that a country exports more to a specific partner than would be expected based on the partner's share in world imports, signifying a relatively strong trade relationship. Conversely, a TII less than 1 (or 100) suggests weaker-than-expected trade intensity.

The **Export Intensity Index (EII)** measures the relative importance of a country's exports to a specific partner compared to the partner's share in global imports. It helps assess whether a country exports more or less to a particular destination than expected based on the destination's global import demand.

Formula for Export Intensity Index (India to China):

$$EII_{India\text{–China}} = \left(\frac{X_{India\text{–China}}/X_{India\text{–World}}}{M_{China\text{–World}}/M_{World\text{–World}}}\right)$$

Where:

- $X_{India\text{–China}}$ = India's exports to China
- $X_{India\text{–World}}$ = India's total exports to the world
- $M_{China\text{–World}}$ = China's total imports from the world
- $M_{World\text{–World}}$ = Total global imports

The Export Intensity Index (EII) is a useful tool for assessing the strength of trade links between countries. When the EII is greater than 1, it indicates that India exports more to China than would be expected based on China's share of global imports, suggesting a strong and potentially strategic export relationship. An EII value equal to 1 means that India's exports to China are proportionate to China's role in global trade, indicating a balanced or expected trade pattern. Conversely, an EII of less than 1 suggests that India exports less to China than would be expected, highlighting a relatively weak trade link and possibly pointing to untapped export potential or trade barriers.

Import Intensity Index (III) Formula & Explanation

The **Import Intensity Index (III)** measures the relative importance of a country's imports from a specific partner compared to the partner's share in global exports. It helps assess whether a country imports more or less from a particular source than expected based on the source's global export supply.

Formula for Import Intensity Index (India from China):

$$III_{India-China} = \left(\frac{M_{India-China}/M_{India-World}}{X_{China-World}/X_{World-World}}\right)$$

Where:

- $M_{India-China}$ = India's imports from China
- $M_{India-World}$ = India's total imports from the world
- $X_{China-World}$ = China's total exports to the world

$X_{World-World}$ = Total global exports

The Import Intensity Index (III) provides information on the trade relationship between India and China. This index measures the actual imports by India compared to the expected import level based on China's global export share. When the value of III is greater than 1, it indicates that India imports from China in a

greater quantity than expected, which indicates India's greater dependence on Chinese goods. If the value of III is equal to 1, it means that trade between India and China is balanced, and India's imports are in line with China's global export share. On the other hand, if the value of III is less than 1, it indicates that India imports less from China than expected, which makes it clear that India's dependence on China is comparatively less. This index is helpful in assessing the strength and nature of bilateral trade.

Table 1: India China Bilateral Trade relations.

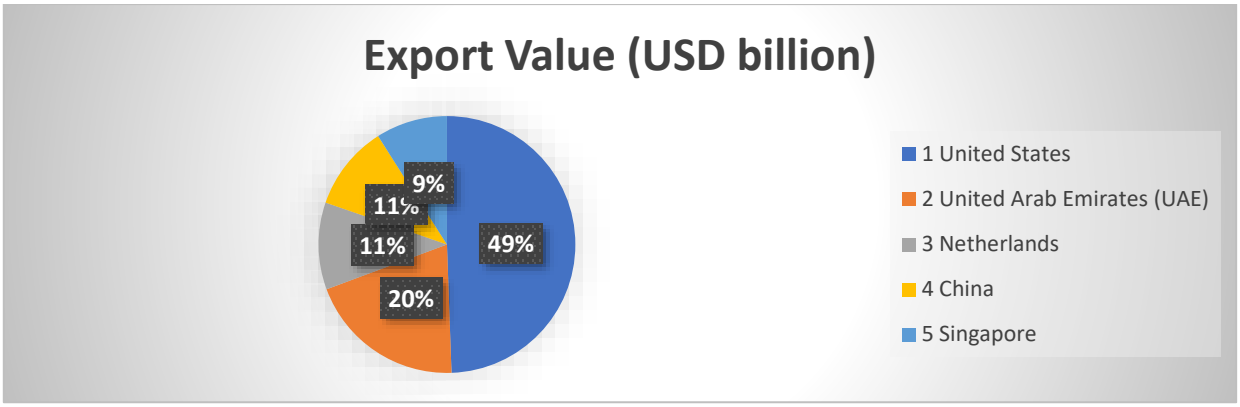
(US$ million)	**India Export to China**	**India Import from China**	**China Export to India**	**China Import from India**
years	primaryValue Xic	primaryValue Mic	primaryValue Xci	primaryValue Mci
2000	734.89	1477.58	1560.74	1353.48
2001	922.54	1827.55	1895.83	1699.09
2002	1531.60	2619.85	2671.16	2273.87
2003	2567.16	3615.13	3343.23	4251.38
2004	4098.51	6051.26	5936.01	7678.03
2005	7183.79	10167.06	8934.28	9766.22
2006	7829.17	15639.06	14581.30	10277.45
2007	9491.98	24575.77	24051.38	14617.16
2008	10093.93	31586.02	31585.38	20258.89
2009	10370.05	30613.37	29666.56	13714.29
2010	17439.99	41249.12	40913.96	20846.31
2011	16717.79	55483.03	50536.42	23372.28
2012	14729.32	54140.46	47677.45	18797.19
2013	16416.83	51635.44	48432.41	16970.27
2014	13434.25	58230.55	54217.42	16358.69
2015	9576.58	61604.43	58228.03	13368.55
2016	8916.07	60483.10	58397.76	11764.13
2017	12495.23	71922.75	68042.25	16345.37
2018	16376.00	73605.38	76675.66	18833.35
2019	17278.83	68402.09	74825.30	17985.88
2020	19008.27	58798.82	66719.47	20977.29
2021	23036.60	87535.14	96367.05	28124.03
2022	15084.40	102249.18	118501.52	17482.82
2023	16245.42	121967.41	117678.76	18540.71
CAGR(23YEARS)	0.14	0.21	0.21	0.12

Source: Author Calculations Based On Un COMTRADE Database

Over the past 23 years, India-China trade has grown rapidly, but it is heavily tilted in favour of China. India’s exports to China rose from $735 million in 2000 to $16.2 billion in 2023—representing a growth rate of 14% per annum. However, India’s imports from China grew much more than this. They rose from $1.5 billion to $122 billion in the same period—an annual increase of 21%. As a result, India’s trade deficit

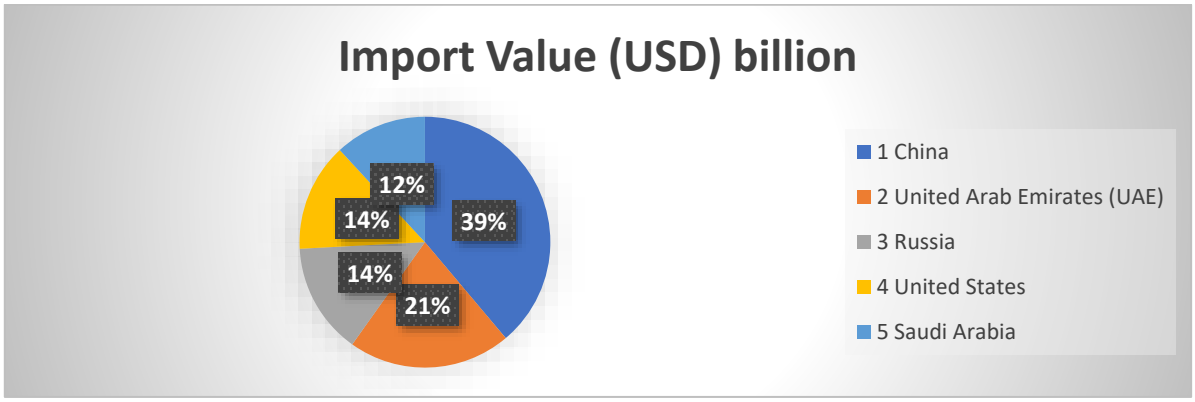
with China grew from just $743 million in 2000 to a record $105.7 billion in 2023, making China the largest contributor to India's trade imbalance. In the early 2000s, India exported raw materials such as iron ore and cotton to China, while importing machinery and electronics from China. After 2010, India's exports stagnated due to a drop in Chinese demand for commodities and a decline in global prices, while imports of high-value Chinese goods continued to grow. Despite geopolitical tensions, including the 2020 border conflict, trade reached new peaks, reflecting India's deep manufacturing dependence on China. Although India has introduced policies such as the production-linked incentive (PLI) to reduce dependence, the growing deficit suggests that rebalancing trade will require strong domestic manufacturing and diversified import sources. Without significant structural changes, China is likely to continue to dominate India's trade landscape.

Figure 1: India's top Five Export Partner Countries



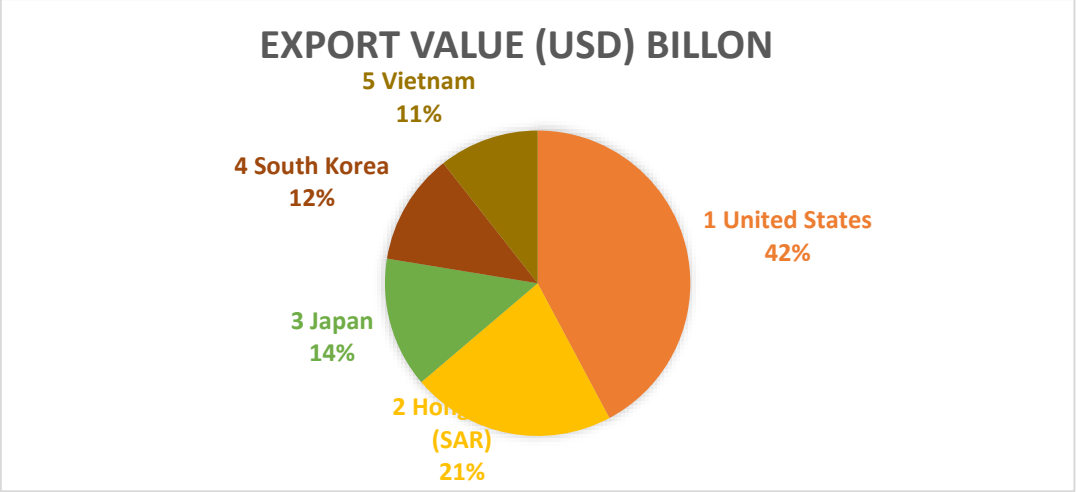
This pie chart shows the distribution of India's exports to the top five trading partners, highlighting significant dependence on a few key markets. The United States accounts for 49% of the total export value of these countries, reflecting strong trade ties driven by sectors such as IT services, pharmaceuticals and textiles. The United Arab Emirates is second with 20%, benefiting from being a major re-export hub and its historic trade ties with India. The Netherlands and China contribute 11% each, with the Netherlands acting as a gateway to Europe and China showing limited export penetration despite being a major import source for India. Singapore, with 9%, plays a significant role in India's trade with Southeast Asia. Overall, the chart highlights India's over-dependence on a few key markets, especially the US, emphasising the need for greater diversification to enhance trade resilience and reduce vulnerability to external shocks.

Figure 2: India's Top Five Import Partner Countries



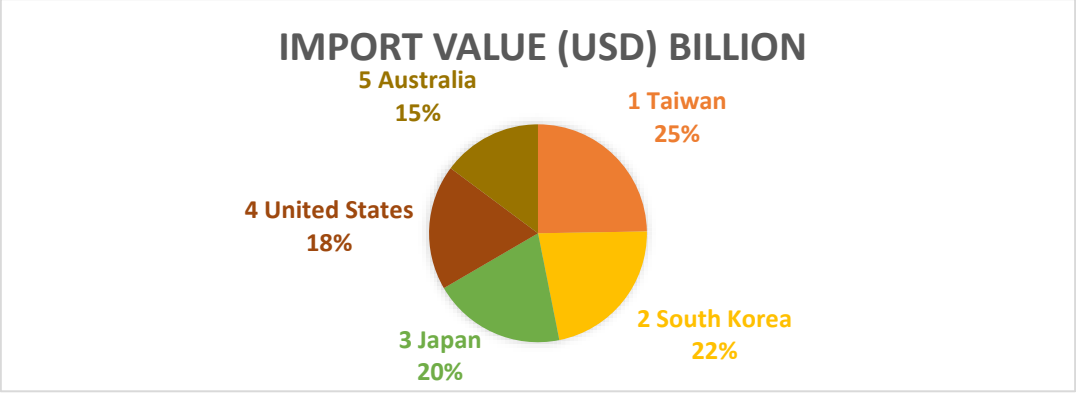
This pie chart shows the distribution of imports from India's top five trading partners, which reveals that India depends heavily on a few key countries. China is the largest source of imports for India, accounting for 39% of the total import value from these countries. This reflects India's heavy dependence on Chinese goods in sectors such as electronics, machinery and intermediate manufacturing inputs. The United Arab Emirates (UAE) is second with a 21% share, indicating a strong correlation in energy and gold imports. Russia and the United States each contribute 14%. Russia's share is likely related to oil and defence equipment, while the US provides commodities such as technology and high-value equipment. Saudi Arabia accounts for 12%, mainly due to crude oil imports. Overall, this chart highlights India's strategic vulnerability due to the concentration of its import structure, especially to the dominance of China. It emphasises the importance of diversifying sources to strengthen economic resilience.

Figure 3: China's top Five Export Partner Countries



The pie chart in Figure 3 shows the export value distribution (in billion US dollars) of China's top five export partner countries. The United States is the main destination of China's exports, contributing 42%. This reflects China's trade dependence. Hong Kong (SAR) is in second place with 21%, serving as a major re-export and trade hub for Chinese goods. Japan is in third place with 14%, highlighting strong economic ties in East Asia.South Korea contributes 12%.and Vietnam contributes 11%, underlining China's growing trade ties in the Asian region.This data reflects China's export landscape, which is heavily influenced by both regional neighbors and the US market.

Figure 4: China's Top Five Import Partner Countries

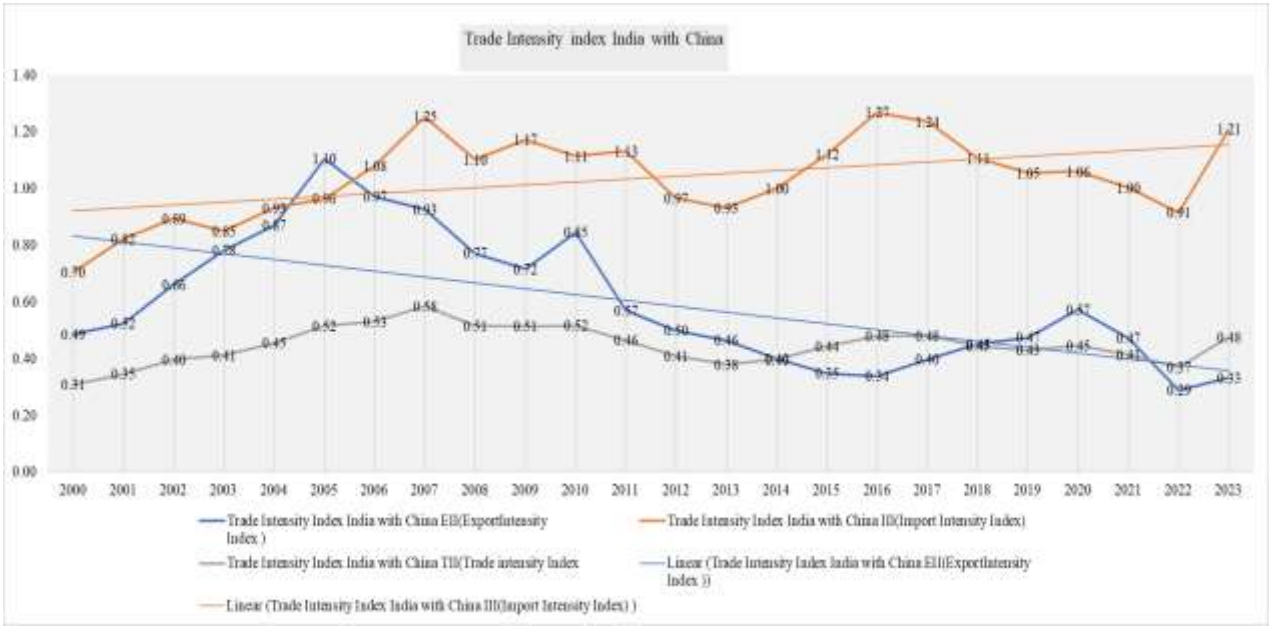


The pie chart in Figure 4 shows the distribution of China's import value (in billion US dollars) among China's top five trading partners. Taiwan leads as the largest import source, contributing 25% of total import value, highlighting its important role in the supply of high-tech components, particularly semiconductors. South Korea ranks second with 22%, highlighting close industrial supply chain integration. Japan ranks third with 20%, further reflecting strong regional trade ties. The United States contributes 18%, indicating continued trade importance despite geopolitical tensions. Australia contributes 15%, driven mainly by resource-based exports such as iron ore and coal. This chart underlines China's diverse import sources, particularly within the Asia-Pacific region.

Table 2: India's Trade Intensity Index with China

Trade Intensity Index India with China			
Year	EII(ExportIntensity Index)	III(Import Intensity Index)	TII(Trade intensity Index
2000	0.49	0.70	0.31
2001	0.52	0.82	0.35
2002	0.66	0.89	0.40
2003	0.78	0.85	0.41
2004	0.87	0.93	0.45
2005	1.10	0.96	0.52
2006	0.97	1.08	0.53
2007	0.93	1.25	0.58
2008	0.77	1.10	0.51
2009	0.72	1.17	0.51
2010	0.85	1.11	0.52
2011	0.57	1.13	0.46
2012	0.50	0.97	0.41
2013	0.46	0.93	0.38
2014	0.40	1.00	0.40
2015	0.35	1.12	0.44
2016	0.34	1.27	0.48
2017	0.40	1.24	0.48
2018	0.45	1.11	0.45
2019	0.47	1.05	0.43
2020	0.57	1.06	0.45
2021	0.47	1.00	0.41
2022	0.29	0.91	0.37
2023	0.33	1.21	0.48

Source: Author Calculations Based On Un COMTRADE Database



Understanding the Indices:

Export Intensity Index (EII): Measures the importance of a particular market (China) for a country's (India) exports. An EII greater than 1 indicates a higher intensity of exports than the global average, implying a strong export relationship. An EII less than 1 suggests lower intensity.

Import Intensity Index (III): Measures the importance of a particular country (China) as a source of imports for another country (India). An III greater than 1 indicates a higher intensity of imports from that country than the global average, implying a strong import relationship. An III less than 1 suggests lower intensity.

Trade Intensity Index (TII): This is a combined measure that reflects the overall trade relationship between two countries. A TII greater than 1 suggests that the two countries trade more with each other than would be expected based on their share of world trade, indicating a strong bilateral trade relationship. A TII less than 1 suggests a weaker or less intense trade relationship.

Interpretation of Trends (2000-2023):

Export Intensity Index (EII): Initial Growth (2000-2005): EII started at 0.49 in 2000 and showed a significant increase, peaking at 1.10 in 2005. This indicates a period where China was becoming an increasingly important destination for India's exports, surpassing the global average in 2005. **Fluctuation and Decline (2006-2017):** After 2005, EII experienced fluctuations, generally declining. It dropped to 0.57 in 2011 and continued to fall, reaching a low of 0.34 in 2016. This suggests a weakening intensity of India's exports to China relative to its global exports during this period. **Modest Recovery and Recent Decline (2018-2023):** There was a slight recovery from 2017 to 2020, with EII reaching 0.57 in 2020. However, it again declined significantly to 0.29 in 2022, the lowest in the period, and stood at 0.33 in 2023. This recent trend indicates a substantial decrease in the importance of China as an export market for India.

Import Intensity Index (III): Consistent Growth (2000-2007): III started at 0.70 in 2000 and consistently rose, reaching 1.25 in 2007. This demonstrates that China was rapidly becoming a crucial source of imports for India, with import intensity exceeding the global average from 2006 onwards. **Sustained High Intensity (2008-2023):** Throughout most of the period from 2008 to 2023, III remained above 1, indicating that India's imports from China were consistently more intense than the global average. It reached its peak at 1.27 in 2016 and remained high, ending at 1.21 in 2023. This highlights India's continued reliance on China for imports. **Minor Fluctuations:** While generally high, there were minor dips, such as in 2012 (0.97), 2013 (0.93), and 2022 (0.91), where the index temporarily fell below**Trade Intensity Index (TII): Initial Strength (2000-2007):** TII increased steadily from 0.31 in 2000 to its peak of 0.58 in 2007. This suggests a period of strengthening overall trade relations between India and China, although the TII remained below 1, indicating that their bilateral trade was still less intense than what would be expected based on their global trade shares. **Period of Decline and Stability (2008-2023):** After 2007, the TII generally declined and then stabilized at lower levels. It dropped to 0.41 in 2012 and reached its lowest point (0.37) in 2022. It rebounded slightly to 0.48 in 2023. The TII consistently remained below 1 throughout the entire period, indicating that despite growing trade volumes, the overall trade intensity between India and China was consistently lower than what would be expected if their trade patterns were perfectly aligned with their global trade shares. The data reveals a clear trend of **increasing import dependence on China** for India, as evidenced by the consistently high and often increasing Import Intensity Index (III). In contrast, India's **export intensity to China (EII) has shown a significant decline** after an initial peak in 2005, indicating that China has become a relatively less important market for India's

exports over time .The **Trade Intensity Index (TII) for India with China has consistently been below 1** throughout the entire period, suggesting that while trade between the two nations has grown in absolute terms, their bilateral trade relationship is still *less intense* than what would be expected given their respective shares in global trade. The peak TII of 0.58 in 2007 highlights a period of maximum trade complementarity within the observed timeframe. The recent decline in TII and EII, coupled with a continuously high III, underscores a growing trade imbalance and a decreasing relative importance of China as an export market for India, while China remains a significant import source.

Table 3: Table 2: China's Trade Intensity Index with India

	Trade Intensity Index China with India		
Year	EII(ExportIntensity Index)	III(Import Intensity Index)	TII(Trade intensity Index
2000	0.76	0.89	0.41
2001	0.88	0.96	0.45
2002	0.93	0.98	0.47
2003	0.80	1.29	0.51
2004	0.94	1.63	0.61
2005	0.87	1.50	0.56
2006	1.03	1.28	0.56
2007	1.26	1.43	0.66
2008	1.13	1.55	0.64
2009	1.15	0.95	0.54
2010	1.12	1.01	0.54
2011	1.04	0.80	0.48
2012	0.86	0.64	0.39
2013	0.87	0.48	0.36
2014	0.93	0.49	0.39
2015	1.07	0.49	0.45
2016	1.23	0.45	0.48
2017	1.18	0.52	0.48
2018	1.17	0.52	0.47
2019	1.17	0.49	0.47
2020	1.22	0.63	0.50
2021	1.12	0.58	0.47
2022	1.11	0.33	0.43
2023	1.20	0.38	0.47

Source: Author Calculations Based On Un COMTRADE Database

Initially, China's **Export Intensity Index (EII)** to India showed a fluctuating but generally upward trend in the first decade, peaking at 1.26 in 2007 and remaining mostly above 1.0 through 2023. This indicates that India has consistently been an important, and often more intense than the global average, export market for China, particularly from 2006 onwards. Even with minor dips, such as in 2012 and 2013, the EII quickly recovered, reaching 1.20 by 2023, suggesting China maintains a strong focus on exporting to India relative to its overall export activities. In contrast, China's **Import Intensity Index (III)** from India exhibited a different trajectory. It started below 1.0 in 2000, surged significantly from 2003 to 2008, peaking at 1.63 in 2004 and 1.55 in 2008. This period highlights a substantial reliance by China on imports from India, exceeding the global average. However, a sharp decline followed, with the III consistently falling below 1.0 from 2009 onwards, and dramatically dropping to its lowest point of 0.33 in 2022 and 0.38 in 2023. This significant reduction indicates that India's importance as a source of imports for China has considerably diminished over the latter half of the period, suggesting a diversification of China's import sources or a decrease in demand for specific Indian goods. The **Trade Intensity Index (TII)**, a composite measure reflecting the overall bilateral trade intensity, peaked relatively early at 0.66 in 2007.

Despite initial growth, the TII for China with India has consistently remained below 1.0 throughout the entire period. This suggests that while trade volumes might have increased, the overall trade relationship between China and India, from China's standpoint, has always been less intense than what would be expected based on their respective shares in global trade. The TII saw a notable decline after 2008, reaching lows of 0.36 in 2013 and 0.39 in 2012 and 2014, before stabilizing in the 0.40s range in recent years. This overall pattern underscores a trade relationship where China's exports to India are a sustained priority, but India's role as a major import source for China has substantially waned, leading to an overall less intense and likely more imbalanced trade dynamic from China's perspective.

Conclusion

Looking at the way India and China have traded from 2000 to 2023, it is clear that there is a huge difference between the two: China consistently sells far more to India than India sells to China. For China, India is a very important buyer, and China's sales to India are steadily growing. However, when it comes to India selling things to China, the volume has decreased. This means that India is increasingly buying a lot from China, but China is less dependent on buying from India. Even though they trade a lot overall, their partnership is not as balanced as you might think for two large global economies. This imbalance shows that India relies heavily on China for manufactured goods. To make this trade relationship more fair and robust, India needs to boost its production of goods and find more countries to trade with for both buying and selling**.**

Reference:

1. Kaur, H., & Sandhu, A. (2023). India's Trade Potential with China: A Gravity Model Approach. *Eur. Chem. Bull.*, *12*(10), 1339-1358.
2. Tabassum, A. (2021). Trade Intensity And Trade Complementarity Between India And Bangladesh. *Webology*, *18*(5), 325–334.
3. Batra, A. (2004). *INDIA'S GLOBAL TRADE POTENTIAL: THE GRAVITY MODEL APPROACH*. Indian Council for Research on International Economic Relations. [If accessed online, add: Retrieved from www.icrier.org]
4. Tyagi, S. (2014). *Composition, Intensity and Revealed Comparative Advantage in Sino-Indian Bilateral Trade: A Preliminary Study*. The Institute of Chinese Studies.
5. **Li, K.** (2018). China and India trade competition and complementary: Analysis of the “Belt and Road” background. *Modern Economy, 9*(9), 1213–1227. https://doi.org/10.4236/me.2018.99077
6. **https://comtrade.un.org/**