

The Composition of India's Merchandised Exports: 2014-22

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Abstract

Taking the importance of export led growth strategy for Indian economy, and the changed political regime since 2014 into consideration, the present study intended to assess the changing composition of India's exports since 2014., with passing reference to its volatility during the said period. Using World Bank (2024) data the study analysed composition in terms two key dimensions i.e. stages of processing and broad group of industries. The study has found that in terms of the former, the composition of India's exports during the 2014-22 period has remained more or less intact. Hierarchically, consumer goods, is followed by intermediate goods, capital goods and raw materials. Moreover, it's the export of capital goods have been subject to a high degree of volatility. But when viewed in terms of latter, i.e. the broad group of industries, India's exports of manufactured goods have been robust while export of chemical goods, machinery and transport equipment grew consistently, highlighting India's manufacturing advancements. Interestingly, fuel exports rebounded post-2020, driven by energy demands. In the rebound of fuel exports, particularly since the beginning of Russia-Ukraine conflict, thanks to the pragmatic policies of the Modi Govt. Nevertheless, the growth of India's exports in the coming years depend upon the continuance of the various policy measures, from make in India to FTA, adopted by Modi Government from time to time, since 2014.

1. Introduction

In any economy, exports play a vital role in the generation of employment and output. The fundamental principles of macroeconomics states that the Aggregate Demand (AD) broadly comprises of Consumption (C), Investment (I), Government expenditure (G) and Net Exports (NX) i.e. Exports (X)-Imports (M). In other words, $AD = C + I + G + X - M$. Thus, in simple Keynesian terms, an increase in exports leads to an increase in aggregate demand which in turns leads to rise in employment and output. According to Keynesian theory, higher aggregate demand drives economic growth and employment (Mankiw, 2021). Additionally, export-led growth has been a key strategy for many emerging economies, such as China and South Korea (Krugman & Obstfeld, 2018), underscoring its importance in economic development. These countries invested in infrastructure, education, and innovation to support competitive export industries (World Bank, (1993); Rodrik, D. (1995). Export-led growth also fosters structural transformation, shifting labor from low-productivity sectors like agriculture to higher-productivity manufacturing and services. Relying on the export-led growth strategy, many countries in the last 3 decades especially since 1991, have liberalised their trade. Krueger, A. O. (1997) argues that the successful economies in recent years have adopted the strategy of trade liberalization and export promotion. Similarly, Edwards, S. (1993) provides empirical evidence on the positive relationship between trade openness (including exports) and economic growth. Of course, it is not as straight forward as it is perceived. It is not just the quantity of exports but the type of exports matters for long-term economic growth, with more complex exports being more beneficial (Hausmann, R., Hwang, J., & Rodrik, D. (2007).

After independence India adopted the strategy of import substituting industrialization but after a pretty long time, around late 70s or early 80s, India displayed its inclination towards export led industrialization, thanks to consistent emphasis on export led growth by economist and policy makers. The literature such as Singh (1964) Desai (1972), Bhagwati (1972), Bhagwati and Srinivasan (1980), etc. However, since 1991, India has formally adopted the export led growth strategy for economic development. The said export led growth strategy has been manifested in the form of broader economic

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liberalization that includes industrial reforms, trade, fiscal, banking reforms, etc. This shift marked a departure from the earlier inward-looking, import-substitution model. The government reduced trade barriers, liberalized foreign investment policies, and promoted competitiveness in manufacturing and services. Special Economic Zones (SEZs) were established to boost exports, and sectors like IT, textiles, and pharmaceuticals gained global recognition.

As we know there has been a change in regime since 2014, with the advent of the Modi Government. Since 2014, India's export-led growth strategy has gained further impetus under the Modi government. The "Make in India" initiative aimed to boost manufacturing and attract foreign investment, enhancing export capabilities. Apart from the "Make in India" initiatives the policy measures include introduction of Foreign Trade Policy (FTP) 2015-20, introduction of Remission of Duties and Taxes on Exported Products (RoDTEP), Production-Linked Incentive (PLI) Scheme, Ease of Doing Business Reforms (EDBR), Infrastructure Development, Free Trade Agreements (FTAs) and Market Diversification, Export Credit and Financial Assistance, Promotion of MSME Exports, etc.

Given the aforesaid facts, analysing the composition of India's exports is crucial for understanding economic trends, identifying growth sectors, and addressing vulnerabilities. It helps the policymakers in designing strategies to diversify export markets, enhance value addition, and reduce reliance on specific products or regions – leading to better economic stability, strengthening global competitiveness. Further, the contemporary changes in world trade order by USA under the Trump regime, necessitates the aforesaid analysis.

Hence, against the aforesaid backdrop, arises the following major research question.

1.1 Major Research Question

The major research question that arises is “ how have the composition of exports changed since 2014? Of course, an answer to this broad question requires a detailed empirical study of India's exports in the recent years. But before that it is essential to delve into available literature, identify the research gaps and trace the objectives of the present study.

1.2 Review of Literature

The composition of India's export basket has undergone significant transformations since independence. In the aftermath of independence, India's export basket was predominantly composed of primary commodities and traditional goods. Key exports included jute, tea, cotton textiles, and minerals, reflecting the colonial legacy of raw material exports. The manufacturing sector was underdeveloped, and the economy followed an import-substitution strategy, limiting export diversification. Agricultural products constituted a large share, with minimal value addition. India's trade policy was inward-looking, with a focus on self-reliance rather than global integration. As a result, export growth was slow, and the country struggled to expand its presence in international markets during the early decades of independence. Early analyses, such as those by Nayyar (1976), emphasized the dominance of primary commodities in India's export basket, including jute, tea, and cotton textiles. During the 1950s to 1980s, exports were largely stagnant and heavily reliant on agricultural and semi-manufactured goods, with minimal diversification. The inward-looking trade policies and import substitution strategies limited India's export competitiveness (Bhagwati & Srinivasan, 1975).

However, the turnaround was experienced with the adoption of export led growth strategy during the post-liberalisation phase of the Indian economy i.e. after 1991. The evolution reflects structural changes in the economy, global trade dynamics, policy shifts, and technological advancements. Numerous studies have examined these developments, highlighting both diversification and concentration trends in India's export composition. With the economic reforms of 1991, the composition of India's exports began to shift markedly. Studies by Joshi and Little (1994) and Panagariya (2004) found that India experienced an increase in the share of manufactured goods and a relative decline in traditional exports.

Several studies point to a gradual transition from primary commodities to manufactured and high-tech goods. Taneja and Bimal (2016) noted an increase in engineering goods, pharmaceuticals, and chemicals in India's export basket. This shift

has been attributed to government initiatives like *Make in India*, which aim to boost manufacturing competitiveness. While merchandise exports are diversifying, services—particularly IT and IT-enabled services—continue to be a dominant component.

Banerji and Suri (2017) focused on the pharmaceutical sector, examining the global competitiveness of Indian pharmaceutical exports. They found that while India remains a leading exporter of generic drugs, challenges such as stringent regulatory requirements and intellectual property issues impact the sector's growth.

Mukherjee (2019) highlights how software exports have consistently contributed over 40 per cent of India's total services exports, supported by skilled labor and strong global demand. Despite modernization, traditional exports such as textiles, gems and jewellery, and agricultural products remain key contributors.

In recent years, the composition of India's exports has further diversified. Studies by EXIM Bank (2018) and NITI Aayog (2020) suggest a growing share of pharmaceuticals, automobile components, and renewable energy technologies. India has also started exporting more value-added products, particularly in engineering and processed foods, moving up the global value chain.

Kumar and Sen (2020) found that while their relative share has declined, these sectors still provide crucial employment and foreign exchange, and have shown resilience even during global downturns. Recent trends include the rise of niche sectors such as organic food, renewable energy equipment, and medical devices. According to EXIM Bank (2021), exports in green technologies and sustainable products are becoming increasingly important due to shifting consumer preferences and environmental regulations in key markets.

Khurana (2015) analyzed the textile and apparel industry, highlighting that while the sector has a strong historical presence in global markets, it faces increasing competition from other emerging economies. Their research suggests that innovation in product design and diversification of markets are critical for sustaining export growth.

Thus, the recent literature on Indian exports highlights a compositional change Indian exports since the liberalisation and credit the success of the former to the latter.

1.3 Research Gaps

Although, the extant literature highlights a compositional change in Indian exports owing to liberalisation, it is silent as far as, changing composition in the context of changed political regime since 2014 is concerned. Hence, the present research intends to contribute to literature by attempting to fill the aforesaid research gaps. However, since composition of exports is a multidimensional concept and in order to have a focused research, the present study intends to analyse the emerging trends in composition by classifying Indian exports into two exclusive categories; one is by stages of processing and the other is by broad group of Industries as per SITC and ITC classifications. Accordingly the detailed objectives are outline below.

1.4 Objectives

The followings are the major objectives of the proposed study.

- (1) To analyse the changing composition of India's exports since 2014 by stages of processing.
- (2) To analyse the changing composition of India's exports since 2014 by broad group of Industries.
- (3) To assess the volatility of India's export in terms of both stages of processing and broad group of industries.

1.5 Hypothesis

The followings may be considered as the hypothesis of the present study.

- (1) There has been no significant change in the composition of India's exports since 2014 when exports are viewed in terms of stages of processing.
- (2) There has been no significant change India's exports since 2014 when exports are viewed in terms of broad group of Industries.
- (3) The Indian exports since 2014 have been more or less stable.

1.6 Data Source and Methodology

The study is based on secondary data. The data used in this study is published by World Integrated Trade Solution (WITS) by World Bank(2014). Moreover, taking the availability of data into account, the period from 2014 to 2022 is considered for the present study. As far as methodology is concerned, the compositional changes is analysed through changing shares, summary statistics and data visualisation techniques using R software. And the volatility for each of the categories of Indian exports is analysed by computing their respective Coefficient of Variation (CV) in percentage terms.

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

σ : Standard Diviation

\bar{X} = Mean

Importantly, the composition and volatility of India's export basket is analysed from two exclusive perspectives and they are; stages of processing and broad group industries as per Standard International Trade Classification (SITC) revision 3 at two digits level. Accordingly, apart from the current introductory section, this paper is broadly divided into three sections. In the second section, we analyse the composition of India's exports in terms of stages of processing. In the third section, we analyse the same in terms of the broad group of industries at SITC 2-digit levels. And in the fourth and final section the entire discussion is aptly summarised with suitable policy suggestions.

2. Composition by Stages of Processing

India's exports when viewed in terms of stages of processing may be classified in to four exclusive categories and they are intermediate goods, capital goods, raw materials and consumer goods. Each of these categories have their importance in the export basket of India. The changing share of each of these categories in total exports along with their respective summary statistics is presented in table 2.1. In this section we will analyse each of these aspects in turn.

Table 2.1: Composition of India's Exports by Stages of Processing

	Intermediate Goods	Capital Goods	Raw materials	Consumer Goods
Year	Shares in Percentage			
2014	29.56	13.08	9.08	47.98
2015	32.56	13.82	8.26	44.5
2016	32.52	13.67	8.35	45.14
2017	33.2	13.78	8.63	44.02
2018	32.56	15.01	7.43	44.92
2019	31.09	16.52	7.16	45.15
2020	32.77	16.35	8.24	42.58
2021	34.39	15.59	7.59	42.38
2022	29.78	15.55	6.07	48.04
Summary Statistics				
Minimum	29.56	13.08	6.07	42.38
1st Quartile	31.09	13.78	7.43	44.02

Median	32.56	15.01	8.24	44.92
Mean	32.05	14.82	7.868	44.97
3rd Quartile	32.77	15.59	8.35	45.15
Maximum	34.39	16.52	9.08	48.04
CV	18.74	24.43	12.35	22.14

Source: *Computed from WITS, World Bank (2024)*

<https://wits.worldbank.org/CountryProfile/en/Country/IND/Year/LTST/TradeFlow/EXPIMP/Partner/WLD/Product/All-Groups>

(a) Intermediate goods

Intermediate goods play a crucial role in India's export basket, highlighting the country's integration into global value chains. These include components such as automotive parts, electronics, chemicals, and textiles. India's competitive advantage in labour-intensive and cost-effective manufacturing enables it to supply essential components to industries worldwide.

The table 2.1. shows the share of intermediate goods in India's total exports from 2014 to 2022. Over this period, the share exhibited moderate fluctuations, with values ranging from a low of 29.56 per cent in 2014 to a peak of 34.39 per cent in 2021. The average share across these years is approximately 32.05 per cent, indicating the significant contribution of intermediate goods to India's export basket. From 2014 to 2017, the share showed a gradual increase, reaching 33.20 per cent in 2017. It remained relatively stable around 32.5 per cent until 2018, followed by a slight decline to 31.09 per cent in 2019. The graph 2.1 presented below provides a much clear picture of the trend.

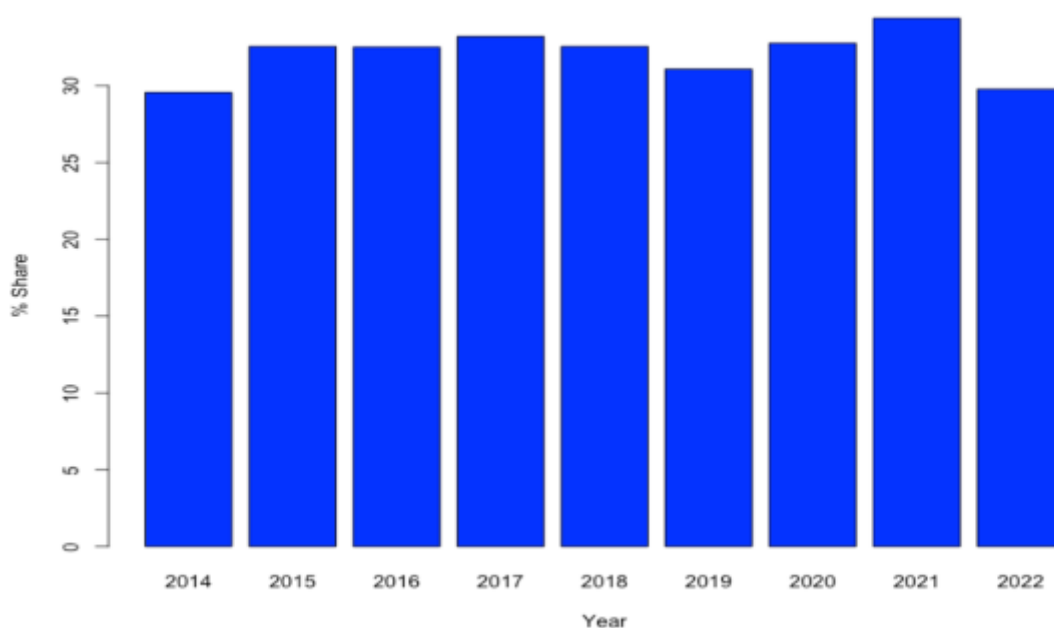


Figure 1.1: India's Exports of Intermediate Goods

As shown in the above graph 2.1, a recovery in 2020 (32.77 per cent) and a sharp rise in 2021 (34.39 per cent) highlight India's strengthened global supply chain position post-pandemic. However, a notable drop to 29.78 per cent in 2022 suggests potential challenges such as reduced demand, supply chain disruptions or increased domestic consumption of intermediate goods. This variability underscores the need for policies to stabilize and enhance this segment's export performance.

(b) Capital goods

Capital goods, such as machinery, tools, and equipment, underscore India's industrial and technological advancement. These exports represent India's ability to meet global infrastructure and industrial development needs. Indian capital goods manufacturers cater to sectors like construction, energy, and agriculture, providing cost-effective and durable solutions. Growth in this segment reflects investments in innovation and a focus on engineering excellence. However, competition from advanced economies and technological gaps pose challenges. Increased R&D investment, quality improvement, and trade agreements can help India expand its share of capital goods exports, promoting industrial growth domestically and strengthening its footprint in international markets. The share of capital goods in total exports in India since 2014 is analysed and presented in table 2.1

As shown in table 2.1 the share of capital goods in India's total exports from 2014 to 2022 presents both upward and downward fluctuations, offering insights into the evolving dynamics of India's export sector. The share starts at 13.08 per cent in 2014 and steadily increases until 2019, reaching its peak of 16.52 per cent. This upward trend reflects a consistent rise in the importance of capital goods in the overall export basket, with a notable surge from 2018 to 2019 (1.51 per cent).

The range of the data spans from a minimum of 13.08 per cent in 2014 to a maximum of 16.52 per cent in 2019, indicating a variation of 3.44 per cent across the years. The period from 2014 to 2019 saw a gradual increase, with the most significant rise occurring between 2018 and 2019. However, after 2019, the share declines, falling to 15.55 per cent in 2022. This represents a decrease of 1.17 per cent from the 2019 peak. The fall is most prominent between 2019 and 2020, where it dropped by 0.17 per cent, and the subsequent dip is minor but steady through 2021 and 2022. The trend is also depicted in the following figure 2.2

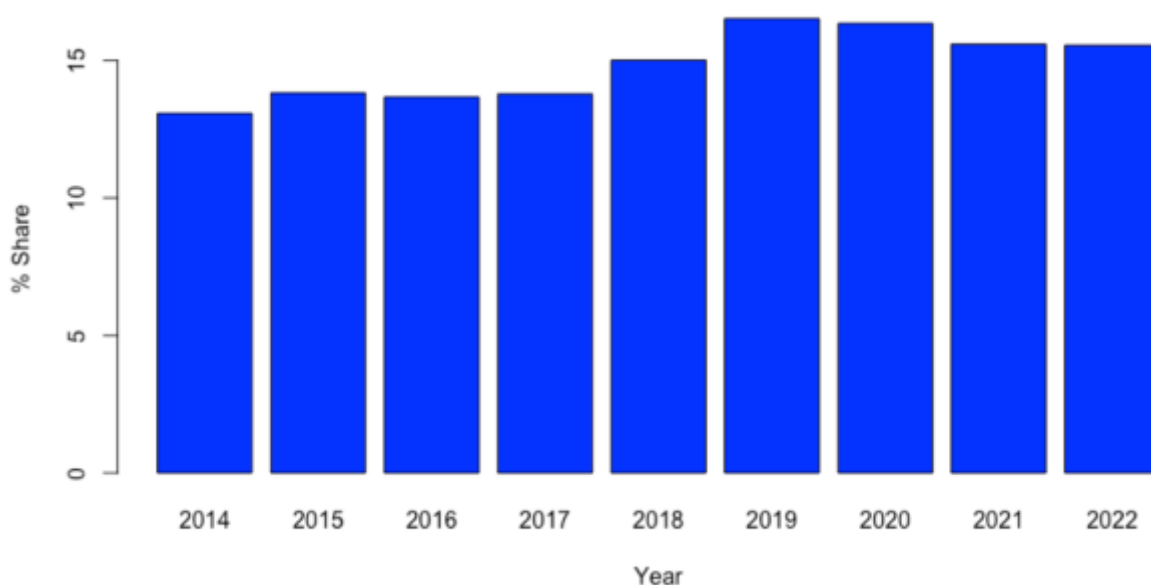


Figure 2.2: India's Exports of Capita Goods

Thus, while the data shows a positive trajectory until 2019, the slight decline post-2019 suggests a potential stabilizing phase for capital goods in India's exports, though it still maintains a relatively strong share overall.

(c) Raw Materials

Raw materials, such as minerals, agricultural produce, and unprocessed goods, are a foundational component of India's exports. This category showcases the country's natural resource wealth and agricultural productivity. Key exports include

iron ore, cotton, spices, and crude petroleum. While raw material exports generate revenue, they also expose India to global price volatility and resource depletion. Enhancing value addition by processing raw materials domestically can create jobs and improve export revenues. Policies encouraging beneficiation and sustainable resource management can shift the focus from raw material exports to finished goods, boosting India's industrial capabilities and global competitiveness. The share of capital goods in total exports in India since 2014 is analysed and presented in table 2.1. The table 2.1 depicts the share of raw materials in India's total exports from 2014 to 2022 reveals a generally declining trend. The share starts at 9.08 per cent in 2014 and experiences a steady decline until 2022, with a few fluctuations in between. The maximum share is observed in 2014 at 9.08 per cent, while the minimum is recorded in 2022 at 6.07 per cent, indicating a drop of 3.01 per cent over the period.

Between 2014 and 2018, there are minor fluctuations, with the share slightly decreasing in 2015 (8.26 per cent) and 2016 (8.35 per cent), before rising to 8.63 per cent in 2017. However, from 2018 onward, the share consistently decreases. Notably, there is a significant fall between 2018 (7.43 per cent) and 2019 (7.16 per cent), followed by a slight increase in 2020 (8.24 per cent), but this uptick is short-lived. The share declines again in 2021 (7.59 per cent) and drops to its lowest value of 6.07 per cent in 2022. The trend is also presented in the figure 2.3

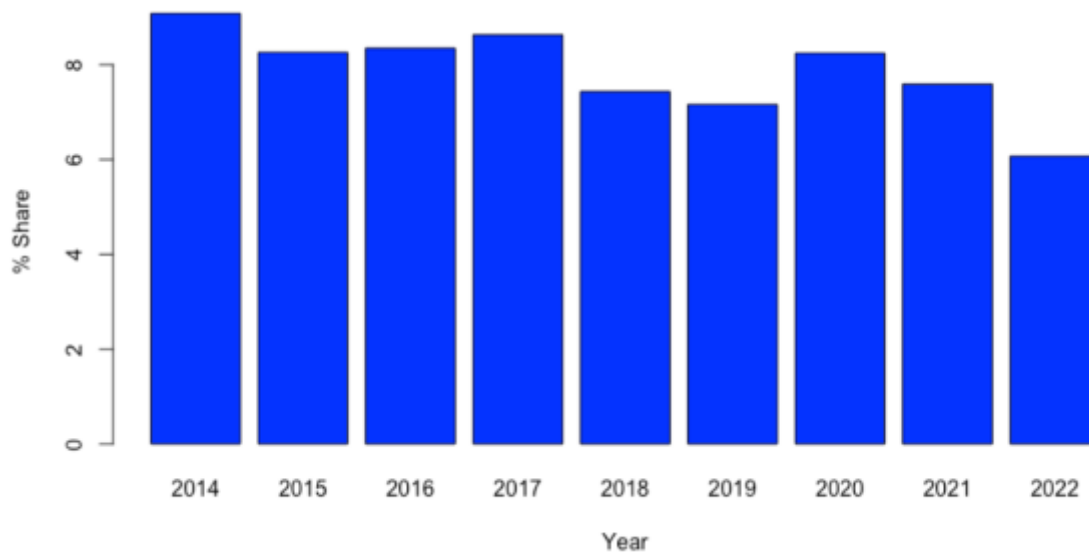


Figure 1.3: India's Exports of Raw Materials

Overall, the data reflects a downward trend in the importance of raw materials in India's export composition, with a few temporary rebounds. This suggests that India's export portfolio has been diversifying away from raw materials toward other sectors, potentially due to shifts in global demand and export priorities.

(d) Consumer Goods

Consumer goods, including apparel, jewellery, pharmaceuticals, and processed foods, represent India's ability to cater to global end-user markets. Indian consumer goods are valued for their quality, affordability, and cultural uniqueness, such as traditional textiles and spices. Pharmaceutical exports particularly highlight India's dominance in generic drug manufacturing. This segment is driven by consumer demand, branding, and market accessibility. However, it faces challenges such as stringent quality standards, high competition, and evolving consumer preferences. By investing in product innovation, enhancing branding strategies, and exploring new markets, India can expand its consumer goods exports, solidifying its reputation as a global supplier. The share of consumer goods in total exports in India since 2014 is analysed and presented in table 2.1. The table 2.1. shows the share of consumer goods in India's total exports from 2014

to 2022 shows a relatively stable trend with some fluctuations. The share starts at 47.98 per cent in 2014, with the highest recorded value of 48.04 per cent in 2022. The maximum and minimum values reflect a range of 3.54 per cent, with the lowest share of 42.38 per cent in 2021.

From 2014 to 2015, there is a noticeable decline, dropping from 47.98 per cent to 44.5 per cent. However, the share recovers and gradually rises again, reaching 45.15 per cent in 2019. Between 2017 and 2019, the share remains relatively stable, hovering around 44-45 per cent. In 2020, the share dips to 42.58 per cent, likely due to global disruptions caused by the COVID-19 pandemic, but this decrease is short-lived. By 2022, the share climbs back to 48.04 per cent, the highest value during the period, suggesting a post-pandemic recovery and a resurgence in demand for consumer goods in India's export markets. The trend is also presented in the figure 2.4

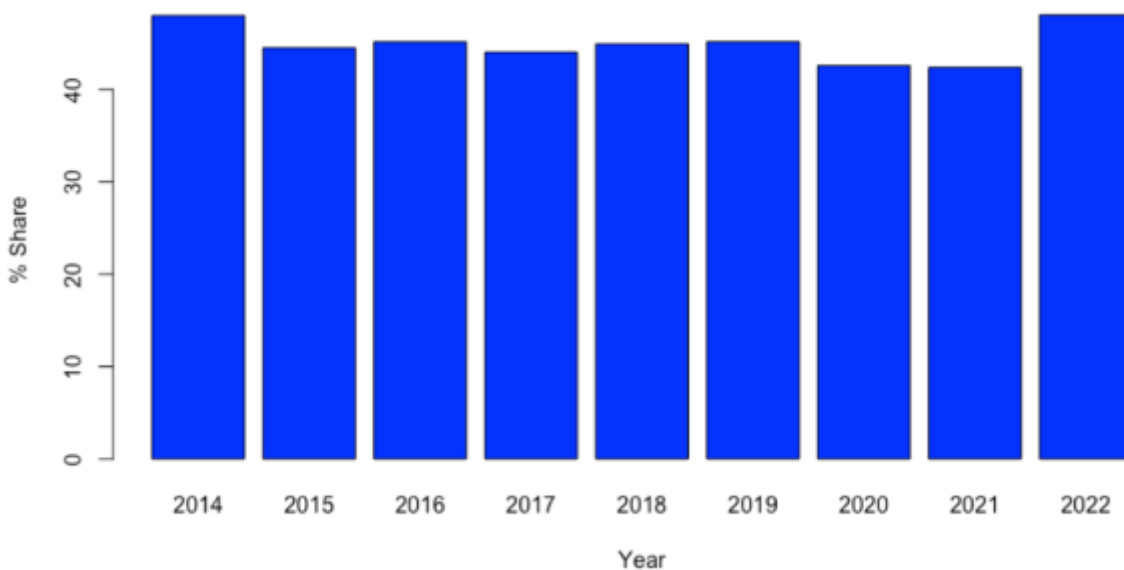


Figure 1.4: India's Exports of Consumer Goods

Thus, the data reveals an overall resilience in India's export of consumer goods, with fluctuations mainly driven by external factors. Despite the occasional dip, the share remains strong, reflecting the continued prominence of consumer goods in India's export portfolio.

Thus, the emerging trends in the composition of India's exports, in terms of stages processing, since 2014 appears to be more or less stagnant. Of course, the capital goods may be considered as some sort of exception. The export of capital goods appears to be mildly rising and it has been more or less to Covid-19 shocks. On the contrary, the export of raw material shows a declining trend. Probably it indicates a compositional shift of India's exports towards high value commodities. Besides it can't be denied that the measures adopted by Modi Govt. has not or yet to produce the desired result, thanks pandemic related disruptions. However, as far as volatility is concerned, India's exports of capital goods is highly volatile. It is followed by consumer goods, intermediate goods and finally raw materials.

3. Composition by Broad Group of Industries

In this section we analyse Indian exports in terms of broad categories of industries as per SITC Revision 3 at the two-digit level. The major industries in the broad categories of industries include Food and Live Animals (00), Textiles (26), Manufactured Goods (60), Chemical (59), Fuel (30), Ores and Metals (28), Agricultural Raw Materials (27) and Machinery and Transport Equipment (70). The figures in the parenthesis indicates the SITC codes assigned to these industries. The

changing share of each of these industries in total exports of India between 2014 and 2022 and the summary statistics are presented in table 2.2. And emerging trends in the shares of each of these industries is discussed in turn.

Table 1.2: Composition of India's Exports by Broad Group of Industries

	Food and live animals	Textiles	Manufactured Goods	Chemical	Fuel	Ores & Metals	Agricultural Raw Materials	Machinery Transport Equipment
Year	Shares in Percentage							
2014	8.15	9.01	45.46	8.83	14.13	2.28	1.11	11.02
2015	7.99	10.22	48.67	9.76	8.38	2.38	1.05	11.55
2016	7.81	9.81	50.16	9.96	7.46	2.21	0.94	11.64
2017	8.16	9.1	48.92	9.84	8.53	2.8	0.88	11.78
2018	7.23	8.12	47.86	10.79	10.38	2.42	0.91	12.3
2019	7.08	7.68	48.46	11.24	9.38	2.4	0.65	13.11
2020	8.59	7.44	47.87	12.89	6.76	3.15	0.82	12.49
2021	7.86	7.48	47.35	10.96	9.93	3.33	0.94	12.15
2022	7.89	6.17	44.32	10.23	15.42	2.62	0.57	12.79
Summary Statistics								
Min.	7.08	6.17	44.32	8.83	6.76	2.21	0.57	11.02
1st Qu.	7.81	7.48	47.35	9.84	8.38	2.38	0.82	11.64
Median	7.89	8.12	47.87	10.23	9.38	2.42	0.91	12.15
Mean	7.86	8.34	47.67	10.50	10.04	2.62	0.87	12.09
3rd Qu.	8.15	9.1	48.67	10.96	10.38	2.8	0.94	12.49
Max.	8.59	10.22	50.16	12.89	15.42	3.33	1.11	13.11
CV	18.97	8.74	16.25	22.19	46.96	28.76	18.90	22.76

Source: Same as table 1.1

(a) Food and Live Animals (01)

India prominently exports spices, tea, rice, and seafood, catering to global culinary demands. India's exports of food and live animals have grown significantly in recent years, driven by high global demand for rice, spices, seafood, and fresh produce. Major export markets include the Middle East, the United States, and Europe. The country also leads in buffalo meat exports, catering to diverse international dietary needs. The table 2.2 displays a more or less stagnant trend in its exports. The percentage share of it in total exports ranges between a minimum of 7.08 per cent in 2019 and a maximum of 8.59 per cent in 2020. The median value of 7.89 per cent suggests a balanced distribution. As far as the volatility is concerned, it has been more or less moderate, when compared with the other industries.

(b) Textiles (26)

India's textile exports have surged in recent years, driven by demand for cotton, readymade garments, and home furnishings. Key markets include the U.S., Europe, and the Middle East. As shown in table 1.2, India's textile exports have experienced a gradual decline from 2014 to 2022, with the percentage share ranging from a high of 10.22 per cent in 2015 to a low of 6.17 per cent in 2022. The median share is 8.12 per cent, while the mean is slightly higher at 8.34 per cent, reflecting a steady yet decreasing trend over the years. Further the low CV percentage in comparison to other industry group endorses its steady decline. It probably suggests that besides the pandemic, India has lost out to its competitors like Vietnam and Bangladesh in terms of textile exports.

(c) Manufactured Goods (60)

India's manufactured goods exports have expanded recently, including automobiles, machinery, pharmaceuticals, and electronics. Key markets include the U.S., Europe, and Southeast Asia. Government initiatives like "Make in India" and Production-Linked Incentive (PLI) schemes have enhanced competitiveness. As shown in table 2.2, India's exports of manufactured goods have shown a mix of growth and stabilization over the years 2014 to 2022. The share ranged from a peak of 50.16 per cent in 2016 to a low of 44.32 per cent in 2022, indicating some fluctuations in global demand or competitiveness. The median share of 47.87 per cent and mean of 47.67 per cent reflect the sector's consistent contribution to India's export portfolio. The first quartile (47.35 per cent) and third quartile (48.67 per cent) demonstrate limited variability, showing that exports remained robust, particularly during the mid-decade. This is endorsed by low CV in comparison to other industries. However, the decline in recent years, especially the dip in 2022, suggests potential challenges such as rising competition, supply chain disruptions, or changing trade dynamics. Strengthening manufacturing capabilities, fostering innovation, and diversifying export markets can help India regain momentum and enhance its global presence in this crucial sector.

(d) Chemicals and Related Products (59)

Exporting chemicals and related goods is crucial for India's economy, fostering global trade relationships and driving industrial growth. Pharmaceuticals, agrochemicals, and specialty chemicals meet global demands, solidifying India's role as a trusted supplier. These exports generate significant revenue, support domestic industries, and enhance India's position in international value chains. As shown in table 1.2, India's exports of chemicals have shown a steady upward trend from 2014 to 2022, with the percentage share rising from 8.83 per cent in 2014 to a peak of 12.89 per cent in 2020. This growth reflects the sector's increasing global competitiveness and demand for Indian chemical products. The median share is 10.23 per cent, with a mean of 10.5 per cent, indicating a sustained rise over the years. The first quartile (9.84 per cent) and third quartile (10.96 per cent) highlight consistent improvement, especially between 2018 and 2020. Although there was a slight decline after 2020, India's chemical industry remains a significant contributor to exports, driven by innovation and strong industrial performance.

(e) Fuel or Inedible Crude Materials (30)

Under this category refined petroleum products are key exports. Fuel exports are vital for India's economy, contributing significantly to foreign exchange earnings. Refined petroleum products dominate, meeting global energy demands in markets like Asia, Africa, and Europe. These exports bolster India's trade balance, support the energy sector, and leverage the country's refining capacity to strengthen its global economic presence. As shown in table 1.2, India's fuel exports which was otherwise somewhat declining except for 2018, got a fillip in 2022, owing to sanctions imposed on Russia following its Ukraine invasion. Here, the proactive policies of Govt. of India played an important role. However, since it was one of opportunity, the fuel exports shows remarkable volatility. In fact, it is the highest, among the various industries.

(f) Ores and Minerals (28)

India's export of ores and minerals is crucial for its economic growth, leveraging rich natural resources like iron ore, bauxite, and mica. These exports meet global industrial demands, particularly in steel and aluminum production. Contributing to foreign exchange earnings, they support mining communities and reinforce India's role in international trade.

As shown in table 1.2, India's exports of ores and metals constitute a miniscule portion of the total exports and it has remained more or less stagnant over the years. Further, it also exhibit considerable volatility. The peak in 2021 suggests a temporary surge in demand, likely influenced by global commodity cycles. Overall, ores and metals remain a niche yet stable part of India's export profile.

(g) Agricultural Raw Materials (27)

India's export of agricultural raw materials, such as cotton, jute, and raw tobacco, is vital for its economy. These exports support global industries like textiles and manufacturing while generating significant revenue. By leveraging its agricultural resources, India strengthens rural livelihoods, enhances trade balances, and reinforces its position in international supply chains. As shown in table 1.2, India's exports of agricultural raw materials have experienced a gradual decline from 2014 to 2022, with the percentage share falling from a high of 1.11 per cent in 2014 to a low of 0.57 per cent in 2022. The drop in recent years, particularly after 2019, may reflect reduced global demand or a shift toward processed agricultural products. Nevertheless, it also exhibits some sort of volatility, though less pronounced in comparison to the others. Revitalizing this sector could involve value addition and market diversification.

(h) Machinery and Transport Equipment (70)

In recent years, exporting machinery and transport equipment has become crucial for India's economic growth. These exports boost the manufacturing sector, enhance technological advancements, and create job opportunities. Additionally, they strengthen India's position in global trade, promote foreign exchange earnings, and contribute to the country's industrial development. As shown in table 1.2, India's exports of transport equipment have shown steady growth from 2014 to 2022, reflecting the sector's increasing prominence. The percentage share rose from 11.02 per cent in 2014 to a peak of 13.11 per cent in 2019, followed by slight fluctuations, ending at 12.79 per cent in 2022. The median share of 12.15 per cent and mean of 12.09 per cent indicate consistent performance over the years. The first quartile (11.64 per cent) and third quartile (12.49 per cent) demonstrate a stable upward trend. This growth highlights India's evolving capabilities in manufacturing and exporting transport equipment, supported by innovation and global demand. Continued focus on quality and technology can enhance its competitiveness further. However, one of the major concerns is the degree of volatility associated with this sector, which is no less.

The figure 2.5 depicts a clear trend of changing share of India's exports by broad group of industries between 2014-22.

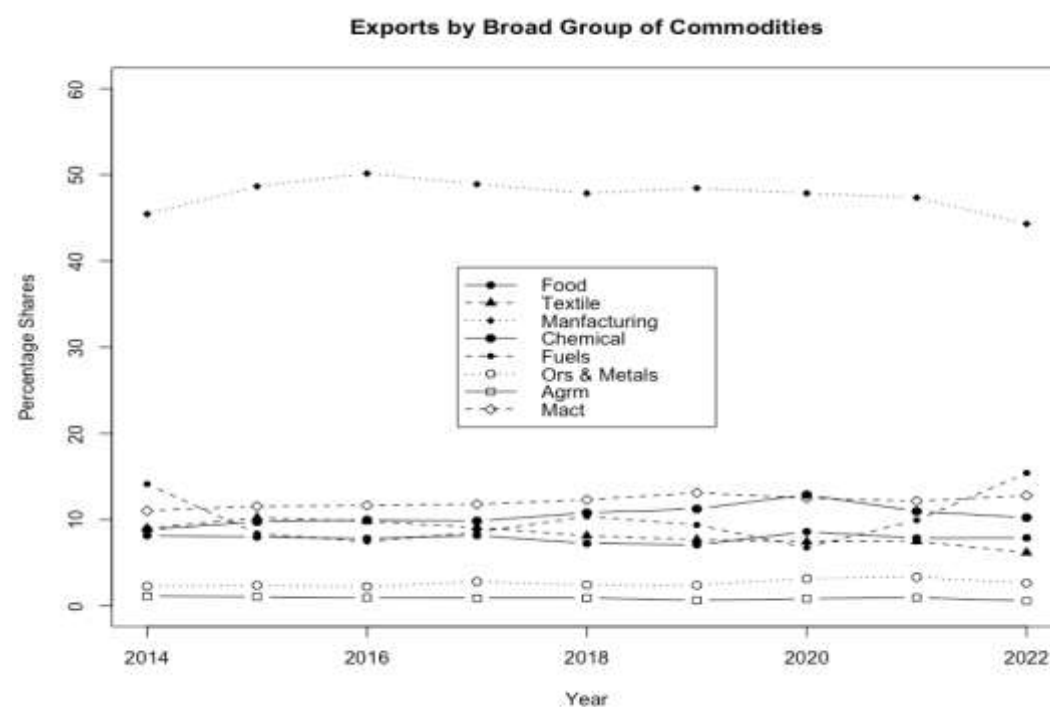


Figure 1.5: India's Exports by Broad Group of Industries

Thus, the India's exports in terms of the broad group of industries show some interesting trends. India's exports from 2014 to 2022 show varied trends across sectors. Food and live animals saw fluctuations, peaking in 2020. Textiles declined due to global competition, while manufactured goods remained robust but faced recent challenges. Chemicals grew steadily, reflecting global demand. Fuel exports rebounded post-2020, driven by energy demands. Ores and minerals remained stable but niche. Agricultural raw materials declined, signalling a shift to processed goods. Machinery and transport equipment grew consistently, highlighting India's manufacturing advancements. Overall, India's export performance reflects global demand, policy impacts, and sector-specific dynamics, with opportunities for innovation and market diversification to sustain growth.

4. Conclusion

Taking the nature, extent and potential of Indian exports in the extant literature, the changed political regime since 2014 and the absence of the latter in the context of the former, into account, the present study intended to examine, the composition and volatility of India's exports during 2014-22 period, with the help of World Bank data and using appropriate research methodology.

The study has observed some interesting facts pertaining to its objectives. To begin with as far as the stages of processing are concerned, the composition of India's exports during the 2014-22 period has remained more or less intact. Hierarchically, consumer goods, is followed by intermediate goods, capital goods and raw materials. From the development perspective one should expect the export of capital and consumer goods to dominate the other sectors. Although capital goods shows signs improving its share but it does not appear to be perceptible. Moreover, it's the export of capital goods have been subject to a high degree of volatility. Although it appears the improvement in the share of capital goods, even if mild, has been at the cost of raw materials, certainly it has. not been at the cost of intermediate goods. Nevertheless, India's exports of capital goods and consumer goods remained resilient, underscoring the adaptability of India's export portfolio amid global changes.

Secondly, in terms of the broad group of industries also, India's exports of manufactured goods have been robust despite several challenges while the export of chemical goods as well as that of machinery grew steadily. Machinery and transport equipment grew consistently, highlighting India's manufacturing advancements. Interestingly, fuel exports rebounded post-2020, driven by energy demands. In the rebound of fuel exports, particularly since the beginning of Russia-Ukraine conflict. The pragmatic policies of the Modi Government have played an important role. Ignoring sanctions on Russian exports by US and European Union, the government allowed the import of crude oil from Russia for refining and export. On the contrary, exports of food and live animals saw fluctuations although that of textiles and agricultural raw materials declined due to global competition.

As far as the policy suggestions are concerned, the present study would like to emphasizes on the continuance of the various policy measures, from make in India to FTA, adopted by Modi Government from time to time, since 2014. Besides, the present study proposes that the government should take the following measures to further improve the scenario of India's exports.

There should be more diversification of export basket and stabilization of exports from key sectors. In this regard the focus should be on the commodities with high potentials such as Textiles and Apparels, Gems and Jewellery, Chemical and Pharmaceuticals, Machinery and Electricals, Agricultural and Food exports. For textile and apparels exports, emphasis should be on technology and environmental sustainability of the products produced in India. And in order to improve the exports of Gems and Jewellery, the import duty on raw materials like gold and diamonds should further reduced to boost its completeness. Similarly, to enhance the exports of Chemical and Pharmaceuticals, research and development on specialty chemicals and generic drugs should be encouraged. And in order to make the Machinery and electrical exports competitive tax breaks should be provided for use of high tech and automation. for agricultural and food exports, export insurance scheme for perishable goods like fruits, vegetable and seafoods should be provided. Besides the cold-chain

logistics should be improved to minimize post-harvest losses. Importantly, MSMEs should be supported for technology upgradation pertaining to export competitiveness. The aforesaid policy measures will go a long way in strengthening the composition of India's exports and reducing volatility in the years to come.

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