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PROSPECTS AND POTENTIAL FOR ENHANCING EXPORTS AND REDUCING IMPORTS OF INDIA

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PHD Chamber's viewpoint

 <p>Shri Pradeep Multani President, PHDCCI</p>	<p>Over the centuries, countries have traded with one another and coexisted through enabling the free movement of goods and services. India's overseas trade has gradually increased over the years, and numerous foreign trade agreements have improved India's trade with partner nations. Every economy in the world, including India, United States, and China, was affected by the COVID-19 pandemic. As a result, it is critical to comprehend the ramifications for India's export and import prospects with its largest trading partners (USA and China). World economic recovery is on the way and demand is expected to re-emerge in India's top export destinations. The study has identified the export products that have been highly impacted during the Pandemic times with India's largest exporter and importer.</p>
 <p>Shri Saket Dalmia Senior Vice President PHDCCI</p>	<p>Trade is considered an essential driver of economic growth and prosperity. The global economy is experiencing the deepest recession since the Great Depression in the 1930s due to the continued spread of pandemic COVID-19. It has been observed that in 2020, products such as mineral fuels and oils, natural and cultural pearls, iron and steel and Pharmaceuticals are the comparative advantageous products for India. In contrast, electrical machinery and equipment, automobiles and plastic products were comparative disadvantages products for India. The major product market for India exists in pharmaceutical, nuclear boiler and reactors, organic chemicals and natural and cultural pearls. among others. India may focus upon comparative advantageous products in short run while comparative disadvantageous products may be focused upon in the medium term.</p>
 <p>Shri Sanjeev Agrawal Vice President, PHDCCI</p>	<p>Exports, imports, total trade and GDP for the world economy and other major economies, including India, USA and China, has decreased during the difficult time of pandemic COVID-19 when both production and consumption took a back seat due to associated supply chain disruptions. India has shown remarkable resilience in the pandemic by fighting the virus as well as ensuring economic stability. Going forward, estimates show improved growth prospects of India's top export destinations. At this stage, India should think big and be ready with the sector-specific strategy to improve further the export growth trajectory with the USA and China. To achieve higher export growth, rapid industrialization, enhancing the ease of doing business, and reducing transaction costs are essential to make India more resilient.</p>
 <p>Shri Saurabh Sanyal Secretary General PHDCCI</p>	<p>The study on prospects and potential for enhancing exports and reducing imports of India has been undertaken to analyze the looming impact of Covid 19 on the trade composition of India with the USA and China and provided insights of potential sectors for trade. Furthermore, India's foreign demand is expected to rise further as the global economy resumes its previous trajectory slowly. Additionally, the study highlighted that China imposing higher tariff rates and restricting India to access the Chinese market in agricultural, food processing and industrial goods. Whereas, USA is comparatively liberal and imposing higher tariffs on agricultural and dairy products of India. India has potential to reduce dependency on China and increase more exports with USA by strengthening manufacturing capacities of strategic and sunrise sectors of India.</p>

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Executive Summary

Countries that are more open to international trade tend to expand much faster, more innovative and productive, creating more opportunities for job and well-being. The impact of trade and contribution to the Global Value Chains support economic growth and socio-economic development at all levels—local, national and international. India's overseas trade has gradually increased over the years and numerous foreign trade agreements have improved India's trade with partner nations.

The United States and China have consistently been important trading partners of India in the past several years, but the pandemic has significantly influenced trade activities. At this outset, a study of India's largest export partner (i.e. USA) and Import partner (i.e. China) is conducted to evaluate the trade composition and direction to forecast India's new trade prospects and potential. In order to enhance its trade balance, India must ensure that not only exports to existing partners but also explores new markets with substantial potential.

Over the years, India-USA and China relations have intensified beyond the realms of trade and investments based on shared democratic values and increasing convergence of interests on bilateral, regional and global issues. The volume of total merchandise trade between India and USA has significantly increased from around USD 62 billion in FY2014 to around USD 87 billion in FY2021¹. Despite increasingly cold relations between India and China, bilateral trade between the two countries continues to rise. The bilateral trade between India and China has grown four-fold in the past decade. But the trade was tilted more in favour of China. India and China's total merchandise trade figures witnessed a tremendous jump from USD 66 billion in FY 2014 to around USD 85 billion in FY 2021-22.

According to the World Trade Organization Report 2020, China surpassed the USA to become the world's largest exporting nation, and India became the 18th largest exporting nation. As far as imports are concerned, India ranked 10th in total imports of the world, and China remains the second-largest importer in the world behind the USA.

In terms of changes in trade and GDP, India's GDP in 2020 was USD 2.6 trillion compared to USD 2.8 trillion in 2019. Whereas China's GDP declined to USD 14.7 trillion from USD 14.2 trillion in 2019 and the United States' GDP also decreased to USD 20.9 trillion in 2020 from USD 21.4 trillion in 2019. The severe impact of the COVID-19 pandemic has been felt in all three economies in terms of their trade and investment as compared to the pre-pandemic phase.

In 2020, India's merchandise exports decreased by USD 57 billion, whereas China's and the United States exports fell by USD 90 billion and USD 398 billion, respectively. During the same time, India's imports decreased by USD 136 billion, China's imports fell by USD 133 billion, and the United States imports fell by USD 292 billion.

During 2019-2020, India's top 3 exported products were mineral fuels & mineral oils, natural or cultured pearls, and machinery & mechanical appliances. In contrast, the basket of top

¹ Financial Year 2021 contain the data for the period FY 2021-22 (Apr-Dec).

exported products of the United States includes machinery & mechanical appliances, mineral fuels & mineral oils, and electrical machinery. At the same time, the top exported products of China were electrical machinery and equipment, machinery & mechanical appliances and furniture and related products in both the years 2019 and 2020.

The Major change in the rankings of products exported by India was noticed mainly in pharmaceutical products, where rankings of pharmaceutical products improved from 6th position in 2019 to 3rd position in 2020. In terms of exports of the USA, the ranking of electrical machinery and equipment improved from 3rd position to 2nd position during the same period. There was no shift in China's top 10 exported products in both years.

India's major export destinations were the United States, China, and the United Arab Emirates, with China becoming the second-largest importer of Indian products in 2020. For both years, the top export destinations for the United States were Canada, Mexico, and China, with no change in the rankings of the top 5 export destinations. China's major export destinations were the United States, Hong Kong and Japan during 2019 and 2020.

The import baskets of all three economies have witnessed a significant change during 2019 and 2020. For India, the top imported products were mineral fuels & mineral oils, natural or cultured pearls and electrical machinery and equipment. Whereas, machinery & mechanical appliances; electrical machinery & equipment and vehicles other than railway are the major products imported by the United States during the same period and for China, electrical machinery and equipment and parts thereof; sound recorders and reproducers, television are the major imported products during 2019 and 2020.

India has revealed a comparative advantage in mineral fuels & oils products (1.15), natural & cultured pearls (2.21), iron and steel products (2.06) and cereals (4.03). Similarly, China has revealed comparative advantage in 8 products such as electrical machinery & equipment (1.70), plastic articles & thereof (1.06), textile articles (4.13), toys & games (3.62) and articles of iron & steel (1.68) among others during 2020. The USA has a comparative advantage in machinery and mechanical appliances (1.06), electrical machinery & equipment (1.30), aircraft & spacecraft products (1.65) and vehicles and other than railway (5.92), among others.

One of the critical causes of concern as the global economy is recovering is the structure of global demand and Intra-Industry Trade (IIT) among India, the United States, and China. The Intra industry trade of India at an aggregate level with the USA and World is quite high compared to China, where IIT remains lower or moderate from 2010 to 2020. The intra-industry trade between India and the USA significantly declined in 2020 compared to 2019. However, the IIT has increased between India & China and India & world during the same period.

Out of total products at HS 2 digits, in nine products, the US imposes higher tariffs on India than China, but on 85 products, the US imposes lower tariffs than the rest of the world. On the other hand, the United States imposes a higher tariff on India than the rest of the world on 23 products and a lower tariff on India on 71 products. Live animals, dairy products, beverage and spirits, tobacco, wool, man-made staple fibre, and man-made filaments are

among the agricultural and food processing products that are subject to higher tariffs. At the same time, residue and waste from the food industry and minerals fuels also attract higher tariffs than China.

On 22 products, China imposes higher tariffs on India than the United States, whereas, on 65 products, China imposes lower duties than the rest of the world. On the other hand, China imposes a greater tariff on India than the rest of the world on 78 products and imposes a lower duty on India on 13 products. Agricultural and raw material goods, such as products of animal origin, coffee, tea, oil seeds, tobacco, man-made staple fibre, other vegetable textile fibre, and wool, are subject to higher tariffs. The industrial goods category also attracts higher tariffs compared to the world, such as minerals and fuels, chemicals, fertilizers, paper and paperboard, articles of copper, articles of nickel, articles of iron and steel, articles of zinc and articles of tin.

1. Introduction

Trade has been one of the major drivers of economic development and is essential for economic integration. Economies that are more open to international trade tend to expand quicker, innovate more, increase productivity and provide more money and opportunity for their inhabitants. Households gain from global trade because products and services are available at competitive prices. Furthermore, connecting with the global economy through trade and Global Value Chains aids economic growth and socio-economic development at local and worldwide scales. Over the centuries, countries have traded with one another and coexisted through enabling the free movement of goods and services. India's overseas trade has gradually increased over the years, and numerous foreign trade agreements have improved India's trade with partner nations.

There have been a lot of exogenous shocks that the world saw over the past and in the present and their impacts on these countries trade profiles. The most recent one has been the coronavirus pandemic-2019. According to the UNCTAD report on the trade and investment 2021, the COVID-19 pandemic was responsible for a decline of about 9² percent in international trade in 2020, with trade in goods declining by about 6 percent during the same period. Countries are trying to cope up with this pandemic, and they have been looking for their trade partners in different ways. Businesses are reshuffling their manufacturing base from one country to another in search of more ease of doing and the cost of doing business. Recovering from the crisis has had policy implications worldwide, prompting a reassessment of how trade is conducted.

According to the World Trade Organization Report 2020, China surpassed USA to become the world's largest exporting nation and India became the 18th largest exporting nation. As far as imports are concerned, India ranked 10th in total imports of the world and China remains the second-largest importer behind the USA. Emerging nations are becoming increasingly visible in world trade. Therefore, it becomes important to understand these economies' trade dynamics.

Over the last several years, the United States and China have consistently been important trading partners of India. Their contributions to the economic and social growth of rising economies like India have been critical. It is important for developing countries to examine the key trade challenges arising from Covid-19. Thus, the study attempted to analyze the changes in the trade preferences and target markets.

This study analyses the trade flows of India, China and USA with an objective to draw a potential products and market of the trilateral trade (i.e. India, China and USA) flows of the three nations using data for a period before COVID-19 i.e., 2019 and 2020. The study would help evaluate the trade composition and trade direction of these economies so that India's new trade prospects and potential could be anticipated during the pandemic and thereafter.

² United Nations conference on Trade and Development

2. Bilateral Merchandise Trade Profile of India's with USA and China

2.1 India-USA bilateral trade relations

India's trade and economic relations with USA have seen phenomenal growth in recent years. Rapidly expanding trade and commercial linkages between India and USA form an important component of the multi-faceted partnership between the two countries. The merchandise trade volume between India and USA has significantly increased from USD 62 billion in FY2014 to USD 87 billion in FY2021³. India's exports to USA have increased from USD 39 billion in FY2014 to USD 56 billion in FY21, which is the highest since the inception of bilateral trade. While, the imports from USA have increased from around USD 23 billion to around USD 31 billion during the same period. Moreover, India-USA bilateral trade in goods has registered double-digit positive growth in FY 2017 and FY 2018 and had negative growth in FY 2020, whereas the rebound in growth has witnessed in FY 2021. The US has remained India's top trading partner for FY2021, reflecting expanding economic ties between the two countries.

Table 1. India-USA Bilateral Merchandise Trade (USD billion)

Year	India's Exports to USA	% Share in India's Total Export	India's Imports from USA	% Share in India's Total Imports	Total Trade	Trade Balance	Total Trade Growth (%)
2013-14	39	12.44	23	4.99	62	16	-
2014-15	42	13.67	22	4.86	64	20	3%
2015-16	40	15.37	22	5.71	62	18	-3%
2016-17	42	15.30	22	5.89	64	20	3%
2017-18	48	15.77	27	5.72	75	21	17%
2018-19	52	15.88	36	6.92	88	16	17%
2019-20	53	16.94	36	7.55	89	17	1%
2020-21	51	17.69	29	7.32	80	22	-10%
2021-22 (Apr-Dec)	56	18.29	31	7.11	87	25	9%

Source PHD Research Bureau, PHDCCI compiled from Ministry of Commerce and Industry, Government of India

Since FY2016-17 USA's share in India's total merchandise exports to the world keeps on increasing and stands highest at around 18% in FY2021-22. India's top 10 export items to the USA include pearls & semiprecious stones, pharmaceutical products, vehicles, electrical machinery, machinery and mechanical appliances, textiles & articles, mineral fuels, and mineral oils.

³ Financial Year 2021 containing the data for the period FY 2021-22 (Apr-Dec).

2.2 India-China bilateral trade relations

Despite increasingly cold relations between India and China, bilateral trade between the two countries continues to rise. The bilateral trade between India and China has grown four-fold in the past decade. But the trade was tilted more in favour of China. India had an unfavourable balance of trade with China. While China continues to enjoy a huge favourable balance of trade vis-à-vis most other smaller countries of the South Asian region.

China overtook UAE to become India's major export destination in recent times. Presently, China is India's 2nd largest export destination whereas the biggest import source. The trade figures between India and China witnessed a tremendous jump from USD 66 billion in FY 2013-14 to around USD 85 billion in FY 2021-22. Importantly, the majority of the trade remained in favour of China as it exported around USD 68 billion and imported USD 17 billion during FY 2021-22.

Table 2. India-China Bilateral Merchandise Trade (USD billion)

Year	India's Exports to China	% Share in India's Total Export	India's Imports from China	% Share in India's Total Imports	Total Trade	Trade Balance	Total Trade Growth (%)
2013-14	15	4.7	51	11.33	66	-36	-
2014-15	12	3.84	60	13.48	72	-48	9%
2015-16	9	3.43	62	16.19	71	-53	-1%
2016-17	10	3.68	61	15.94	71	-51	0%
2017-18	13	4.39	76	16.4	89	-63	25%
2018-19	17	5	70	13.67	87	-53	-2%
2019-20	17	5.3	65	13.74	82	-48	-6%
2020-21	21	7.2	65	16.53	86	-44	5%
2021-22 (Apr-Dec)	17	5.6	68	15.33	85	-51	-1%

Source PHD Research Bureau, PHDCCI compiled from Ministry of Commerce and Industry, Government of India

During FY2021-22, China's share in India's total trade stood at around 11.3%, whereas its share in India's total exports stood at 5.6%, and imports stood at 15.3% during the same period. In a nutshell, the trade deficit gap for India exponentially widened over the years. India's top 10 export items to China include Ores, slag and ash, Organic chemicals, Iron and steel, Mineral fuels, mineral oils and products of their distillation, Cotton, Plastics and articles thereof, among others.

3. Economic Profile of the Countries

The United States of America, India, and China are regarded as world leaders in foreign trade. The trilateral trade connections play a critical role in these nations' social and economic growth, as evidenced by technological advancements, employment generation,

and an increase in GDP and per capita incomes. The pandemic similarly affected the trade among these nations, with the changes in composition and direction of trade.

In terms of foreign trade, all three economies' exports and imports decreased significantly during the pandemic compared to 2019. Low demand throughout the world due to countrywide lockdowns and control efforts pushed the trade downward. India's merchandise exports decreased by USD 57 billion from 2019 to 2020, whereas China's and the United States' exports fell by USD 90 billion and USD 398 billion, respectively. During the same time, India's imports decreased by USD 136 billion, China's imports fell by USD 133 billion, and the United States' imports fell by USD 292 billion⁴.

In terms of changes in GDP in 2020, India's GDP in 2020 was USD 2.6 trillion compared to USD 2.8 trillion in 2019. China's GDP declined to 14.7 trillion dollars from 14.2 trillion dollars in 2019, and the United States' GDP also decreased to 20.9 trillion dollars in 2020 from 21.4 trillion dollars in 2019.⁵

The pandemic had a detrimental impact on all three economies, India, China, and the United States in terms of employment. The employment to population ratio in India was 47% in 2019 and decreased to 43% during the pandemic in 2020. China's employment-to-population ratio, on the other hand, has decreased from 65% in 2019 to 63% in 2020. In addition, the employment-to-population ratio in the United States has decreased from 60% in 2019 to 56% in 2020.

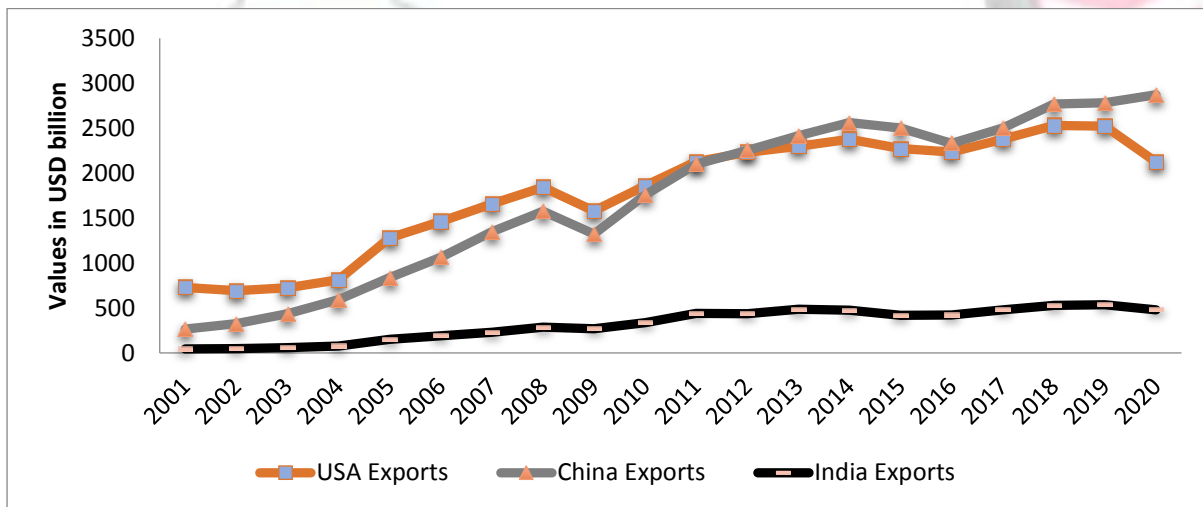
3.1 Exports Trend Analysis: 2001 to 2020

Over the years, the USA's export of goods and services has increased from USD 729 billion in 2001 to USD 2123 billion in 2020. It has been witnessed that the total exports of USA have increased by 191 % during 2001 to 2020. On the other hand, China's export of goods and services has increased from USD 266 billion in 2001 to USD 2872 billion in 2020, with a multifold increase of 979 % in exports from 2001 to 2020. As far as India is concerned, India's exports have increased from USD 44 billion in 2001 to USD 481 billion in 2020, and it was observed that the magnitude of growth in exports of India was 993% for the same period. Therefore, the exports of the three economies have increased significantly, whereas India and China experienced significant growth in exports as compared to USA during 2001 to 2020.

⁴ Trademap

⁵ WorldBank (World Development Indicators)

Fig: 1.1 Trend analysis of exports to world by USA, China and India during 2001 to 2020 (USD billion)



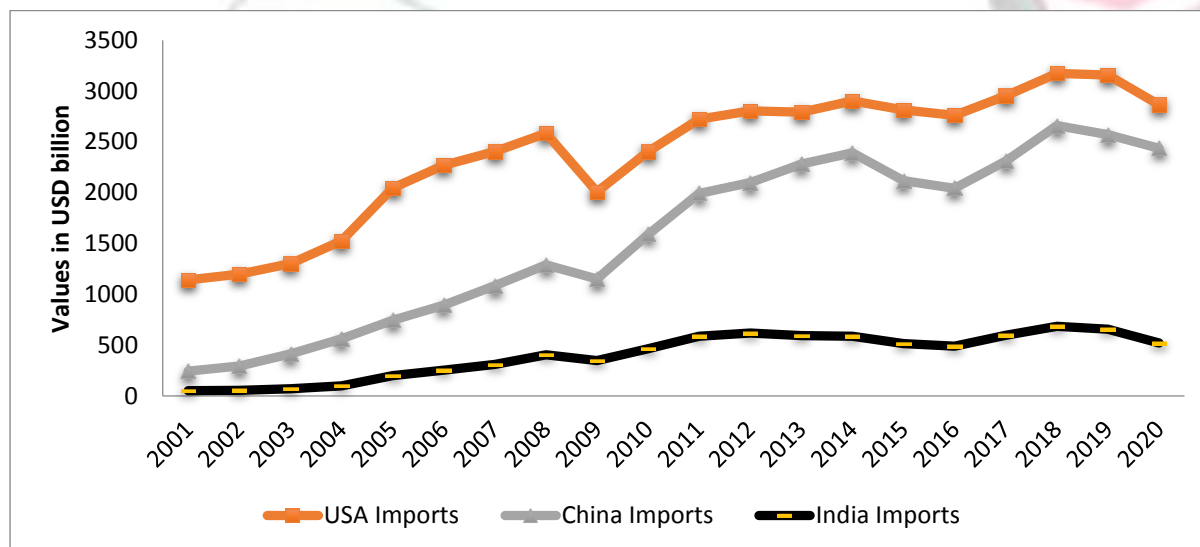
Source: PHD Research Bureau compiled from World Bank and Trade Map.

It has been noticed that the recession of 2008-2009 had a significant impact on the United States and China. The exports of all three countries' decreased dramatically during this period. Exports of the United States declined by USD 262 billion, whereas, Chinese exports fell by USD 252 billion. On the other hand, India avoided the heat and maintained stability despite a fall in exports of USD 18 billion.

3.2 Imports Trend Analysis: 2001 to 2020

Over the years, the USA's import of goods and services have increased from USD 1141 billion in 2001 to USD 2865 billion in 2020. It has been witnessed that the total imports of USA have increased by 151% during 2001 to 2020. On the other hand, China's imports of goods and services increased from USD 244 billion in 2001 to USD 2437 billion in 2020, with a multifold increase of 899 % in imports from 2001 to 2020. As far as India is concerned, imports have increased from USD 51 billion in 2001 to USD 522 billion in 2020, and it is observed that the magnitude of growth in imports of India was 923% for the same period. Therefore, the imports of the three economies have increased significantly, whereas India and China experienced significant growth in imports as compared to USA from 2001 to 2020.

Fig 1.2 : Trend analysis of imports from world by USA, China and India during 2001 to 2020



Source: PHD Research Bureau compiled from World Bank and Trade Map.

It has been witnessed that during recession 2008-2009 imports of all the three countries fell significantly. In value terms, USA's imports fell by USD 576 billion; China's imports fell by USD 137 billion, and India's imports declined by USD 18 billion.

4. Trade Composition and Direction

Composition of trade means studying the goods and services of imports and exports of a country. In other words, it tells about the commodities of imports and the commodities of exports of a country. Therefore it indicates the structure and level of economic development of a country. In general, developing countries export raw materials, agricultural products and intermediate goods; whereas developed countries export finished goods, machines, equipment and technique.

Table 3: Top ten exported and imported countries of China , USA and India with their share in their total exports and imports during 2019 and 2020

Source/ Country	2019		2020	
	Export	Import	Export	Import
USA	Canada (17.7 %)	China (18.4%)	Canada (17.83%)	China (19.0%)
	Mexico (15.58%)	Mexico (14.1%)	Mexico (14.86%)	Mexico (13.7%)
	China (6.48%)	Canada (12.7%)	China (8.71%)	Canada (11.5%)
	Japan (4.54%)	Japan (5.7%)	Japan (4.48%)	Japan (5.1%)
	United Kingdom (4.20%)	Germany (5.1%)	United Kingdom (4.12%)	Germany (4.9%)
	Germany (3.67%)	Korea (3.1%)	Germany (4.04%)	Vietnam (3.5%)
	Korea (3.46%)	Vietnam (2.7%)	Korea (3.58%)	Korea (3.3%)

Source/ Country	2019		2020	
	Netherlands (3.11%)	United Kingdom (2.5%)	Netherlands (3.18%)	Switzerland (3.1%)
	Brazil (2.62%)	Ireland (2.4%)	Brazil (2.45%)	Ireland (2.7%)
	France (2.36%)	India (2.3%)	Taipei, Chinese (2.13%)	Taipei, Chinese (2.6%)
China	USA (16.8%)	Korea (8.4%)	USA (17.5%)	Taipei, Chinese (9.8%)
	Hong Kong (11.2%)	Taipei, Chinese (8.4%)	Hong Kong (10.5%)	Japan (8.5%)
	Japan (5.7%)	Japan (8.3%)	Japan (5.5%)	Korea (8.4%)
	Korea (4.4%)	USA (6%)	Viet Nam (4.4%)	USA (6.6%)
	Viet Nam (3.9%)	Australia (5.8%)	Korea (4.3%)	Australia (5.6%)
	Germany (3.2%)	Germany (5.1%)	Germany (3.4%)	Germany (5.1%)
	India (3%)	Brazil (3.8%)	Netherlands (3%)	Brazil (4.1%)
	Netherlands (3%)	Malaysia (3.5%)	United Kingdom (2.8%)	Vietnam (3.8%)
	United Kingdom (2.5%)	Vietnam (3.1%)	India (2.6%)	Malaysia (3.6%)
	Taipei, Chinese (2.2%)	Russian Federation (2.9%)	Taipei, Chinese (2.3%)	Russian Federation (2.8%)
	USA (16.8%)	China (14.3%)	USA (17.9%)	China (16.0%)
India	UAE (9.1%)	USA (7.3%)	China (6.9%)	USA (7.2%)
	China (5.3%)	UAE (6.3%)	UAE (6.5%)	UAE (6.5%)
	Hong Kong (3.6%)	Saudi Arabia (5.6%)	Hong Kong (3.5%)	Saudi Arabia (4.8%)
	Singapore (3.3%)	Iraq (4.6%)	Singapore (3.0%)	Iraq (4.4%)
	Netherlands (2.8%)	Switzerland (3.7%)	Bangladesh (2.9%)	Hong Kong (4.0%)
	United Kingdom (2.7%)	Hong Kong (3.6%)	United Kingdom (2.8%)	Singapore (3.3%)
	Germany (2.7%)	Korea (3.4%)	Germany (2.8%)	Korea (3.3%)
	Bangladesh (2.6%)	Indonesia (3.3%)	Netherlands (2.3%)	Indonesia (3.3%)
	Nepal (2.2%)	Singapore (3.1%)	Malaysia (2.2%)	Switzerland (3.1%)

Source: PHD Research Bureau, compiled from Trade Map.

The United States is the world's largest economy, trader, and foreign direct investment source and destination. The United States' trade has grown, and its markets and manufacturing have become more intertwined, particularly with emerging markets. The United States' biggest trading partners in 2019 and 2020 were Canada, Mexico, China, Japan, and the United Kingdom (UK), collectively contributing around 46% in the total exports of the USA in the same period. Whereas, imports from these countries jointly contribute around 50% of the total imports of the USA. On the other hand, India contributes around 2% to 3% in USA total imports.

China has progressed in its integration with the global economy, achieving true global scale as a trade nation, but not in other areas such as finance. China's connection with the rest of the globe is evolving at the moment. China has surpassed the United States as the world's

largest exporter and second-largest importer. Despite its stringent policies, the country is reasonably open to international trade, which accounted for 35% of GDP in 2020. (World Bank, 2022). China's main exports include Electrical and electronic equipment, machinery, nuclear reactors, boilers, furniture, lighting signs, prefabricated buildings, and plastics. The United States, Japan, South Korea, Vietnam, Australia, and Germany are the country's key trading partners and contribute around 45% share in China's exports and 35% in imports.

Table 4: Export matrix of top 5 commodities and top 5 export destinations of USA, China and India during 2019 and 2020

Source Country	Top five commodities exported with percentage share in total exports		Top destinations of export with percentage share in total exports	
	2019	2020	2019	2020
India	1. Mineral fuels & mineral oils (13.78%) 2. Natural or cultured pearls (11.36%) 3. Machinery & mechanical appliances (6.58%) 4. Organic Chemicals (5.64%) 5. Vehicles other than Railway (5.39%).	1. Mineral fuels & mineral oils (10.03%) 2. Natural or cultured pearls (8.88%) 3. Pharmaceutical Products (6.69%) 4. Machinery & mechanical appliances (5.52%) 5. Vehicles other than Railway (6.52%).	1. USA (16.80%) 2. UAE (9.1%) 3. China (5.3%) 4. Hong Kong (3.6%), 5. Singapore (3.3%)	1. USA (17.9%) 2. China (6.9%) 3. UAE (6.5%) 4. Hong Kong (3.5%) 5. Singapore (3.0%)
USA	1. Machinery & mechanical appliances (12.51%), 2. Mineral fuels & mineral oils (12.14%) 3. Electrical machinery and equipment (10.53%) 4. Aircraft,	1. Machinery & mechanical appliances (12.8%) 2. Electrical machinery and equipment (11.4%) 3. Mineral fuels & oils (10.8%) 4. Vehicles other than railway (7.3%) 5. Optical and photographic products (5.8%)	1. Canada (17.77%) 2. Mexico (15.58%) 3. China (6.48%) 4. Japan (4.54%) 5. United Kingdom (4.20%), 12th position: India (2.09%)	1. Canada (17.83%) 2. Mexico (14.86%) 3. China (8.71%) 4. Japan (4.48%) 5. United Kingdom (4.12%), 13th position: India (1.91%)

Source Country	Top five commodities exported with percentage share in total exports		Top destinations of export with percentage share in total exports	
	2019	2020	2019	2020
	spacecraft, and parts (8.27%) 5.Vehicles other than railway (8.09%)			
China	1. Electrical machinery and equipment (26.85%) 2.Machinery & mechanical appliances (16.68%), 3.Furniture and related products (3.98%) 4.Plastic articles and thereof (3.37%) 5.Vehicles other than railway (2.97%)	1. Electrical machinery and equipment (27.41%) 2.Machinery & mechanical appliances (16.99%) 3.Furniture and related products (4.22%) 4.Plastic articles and thereof (3.72%) 5.Optical and photographic products (3.09%)	1. USA (16.75%) 2.Hongkong (11.19%) 3.Japan (5.73%) 4.Korea (4.4%) 5.Vietnam (3.92%) 7th position: India (2.99%)	1. USA (17.46%) 2.Hongkong (10.52%) 3.Japan (5.5%) 4.Vietnam (4.39%) 5.Korea(4.34%) 9th position :India(2.57%)

Source: PHD research Bureau, compiled from Trade Map

The above matrix shows the top 5 export destinations and exported products from India, USA and China. For India, the top exported products were mineral fuels & mineral oils, natural or cultured pearls and machinery & mechanical appliances in both years. Only the exports of pharmaceutical products improved to 3rd ranking in 2020 from 5th ranking in 2019 and featured in top 5 exported products. The top export destinations of India were USA, China and UAE. China improved its ranking in exports from 3rd in 2019 to 2nd ranking in 2020.

In the USA, the top exported products in 2019 and 2020 were machinery & mechanical appliances, mineral fuels & mineral oils and electrical machinery and equipment. Electrical machinery and equipment shifted from 3rd ranking in 2019 to 2nd ranking in 2020. The top export destinations were Canada, Mexico and China. The top 5 destinations remained the

same for both the years. India's position in USA's exporting destination changed from 12th rank in 2019 to 13th rank in 2020.

For China the top exported commodities were electrical machinery and equipment, machinery & mechanical appliances and furniture and related products in 2019 and 2020. The top export destinations were USA, Hong –Kong and Japan in 2019 and 2020. India's position in China's exporting destination changed from 7th rank in 2019 to 9th rank in 2020.

Table 5: Import matrix of top 5 commodities and top 5 import destinations of USA , China and India during 2019 and 2020

Source Country	Top five commodities imported with percentage share in total imports		Top sources of imports with percentage share in total imports	
	2019	2020	2019	2020
India	1. Mineral fuels & mineral oils (31.88%) 2.Natural or cultured pearls(12.30%) 3.Electrical machinery and equipment(10.62%) 4.Machinery and mechanical appliances(9.29%) 5.Organic Chemicals (4.29%).	1. Mineral fuels & mineral oils (28.36%) 2.Electrical machinery and equipment (11.67%) 3.Natural Or cultured pearls(11.16%) 4. Machinery and mechanical appliances (9.57%), 5.Organic Chemicals (4.93%).	1. China(14.3%) 2.USA(7.3%) 3.UAE(6.3%) 4.Saudi Arabia(5.6%) 5.Iraq (4.6%)	1. China(16.0%) 2.USA(7.2%) 3.UAE(6.5%) 4.Saudi Arabia(4.8%) 5.Iraq(4.4%)
USA	1.Machinery, mechanical appliances(14.8%) 2.Electrical machinery and equipment(13.7%), 3.Vehicles other than railway(12.1%), 4..Mineral fuels & Oils(8.2%), 5.Pharmaceutical products(5.0%).	1.Machinery & mechanical appliances(15.0%) 2.Electrical machinery and equipment(14.3%) 3.Vehicles other than railway (10.06%) 4.Pharmaceutical products(5.8%) 5.Mineral fuels & Oils(5.4%)	1.China(18.4%) 2.Mexico(14.1%) 3.Canada(12.7%) 4.Japan(5.7%) 5.Germany(5.1%) 10th position : India(2.33%)	1.China(19.0%) 2.Mexico(13.7%) 3.Canada(11.5%) 4.Japan(5.1%) 5.Germany(4.9%) 11th position : India(2.22%)
China	1.Electrical machinery and equipment(24.01%) 2.Mineral fuels & mineral oils(16.6%) 3.Machinery and mechanical appliances (9.19%)	1. Electrical machinery and equipment(26.69%) 2.Mineral fuels & mineral oils(13.01%)	1.Korea(8.38%) 2.Taipei,chinese(8.35%) 3.Japan(5.95%) 4.USA(5.95%) 5.Australia(5.78%) 28th position	1.Taipei,Chinese(9.76%) 2.Japan(8.50%) 3.Korea(8.40%),

Source Country	Top five commodities imported with percentage share in total imports		Top sources of imports with percentage share in total imports	
	2019	2020	2019	2020
	4.Ores, Slag and Ash(7.9%) 5.Optical and photographic products(4.76%).	3.Machinery and mechanical appliances (9.33%) 4.Ores, Slag and Ash(8.75%) 5.Optical and photographic products(4.82%).	:India(0.87%)	4.USA(6.60%) 5.Australia(5.60%) 21th position :India(1.01%)

Source: PHD Research Bureau, compiled from Trade Map

Table 5 shows the top 5 import sources and imported products from India, USA and China. For India, the top imported products were mineral fuels & mineral oils, natural or cultured pearls and electrical machinery and equipment. Natural Or cultured pearls shifted from 2nd position in 2019 to 3rd position in 2020, and electrical machinery and equipment shifted from 3rd position in 2019 to 2nd position in 2020. The top import sources for India are China, USA, and UAE, and it remained constant during 2019 and 2020.

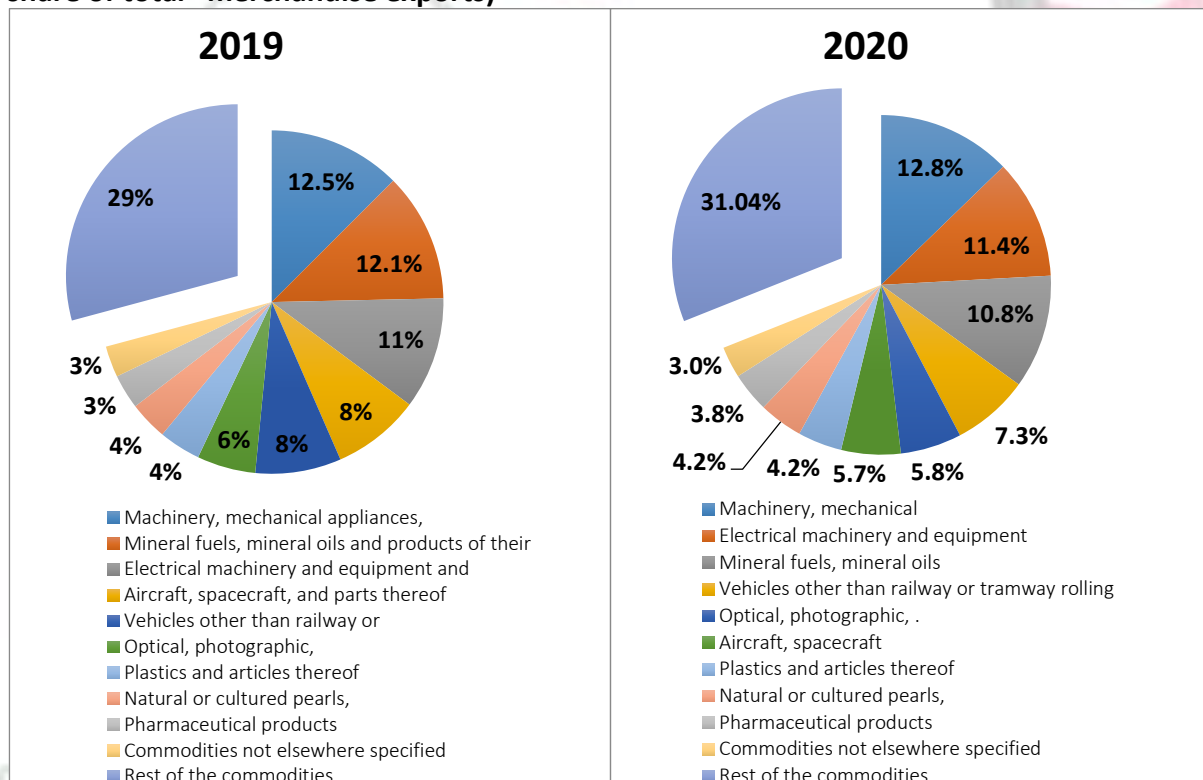
For USA the top imported products in 2019 and 2020 were machinery & mechanical appliances, electrical machinery and equipment and vehicles other than railway. Only pharmaceutical products shifted from 5th ranking in 2019 to 4th ranking in 2020.

The top import sources for USA were China, Mexico and Canada. The top 5 destinations remained the same for both the years. India's position as importing source of USA changed from 10th position in 2019 to 11th position in 2020.

For China, the top imported commodities were electrical machinery and equipment, mineral fuels & mineral oils and machinery & mechanical appliances in both the years 2019 and 2020. The top import sources were Taipei, Chinese, Japan and Korea in 2019 and 2020. Korea shifted from top import sources in 2019 to 3rd position in 2020. India's position as importing source of China changed from 28th position in 2019 to 21st position in 2020.

The opportunities lie for India in high technology engineering goods exports to USA considering the high demand for engineering goods, pharmaceuticals and gems and jewellery sector. On the other hand, electrical machinery and mineral fuels are the major thrust area for China's imports, but due to lower manufacturing costs, it isn't easy to export these products to China.

Fig 1.3 Composition of USA's top ten merchandise exports during 2019 and 2020 (as % share of total merchandise exports)



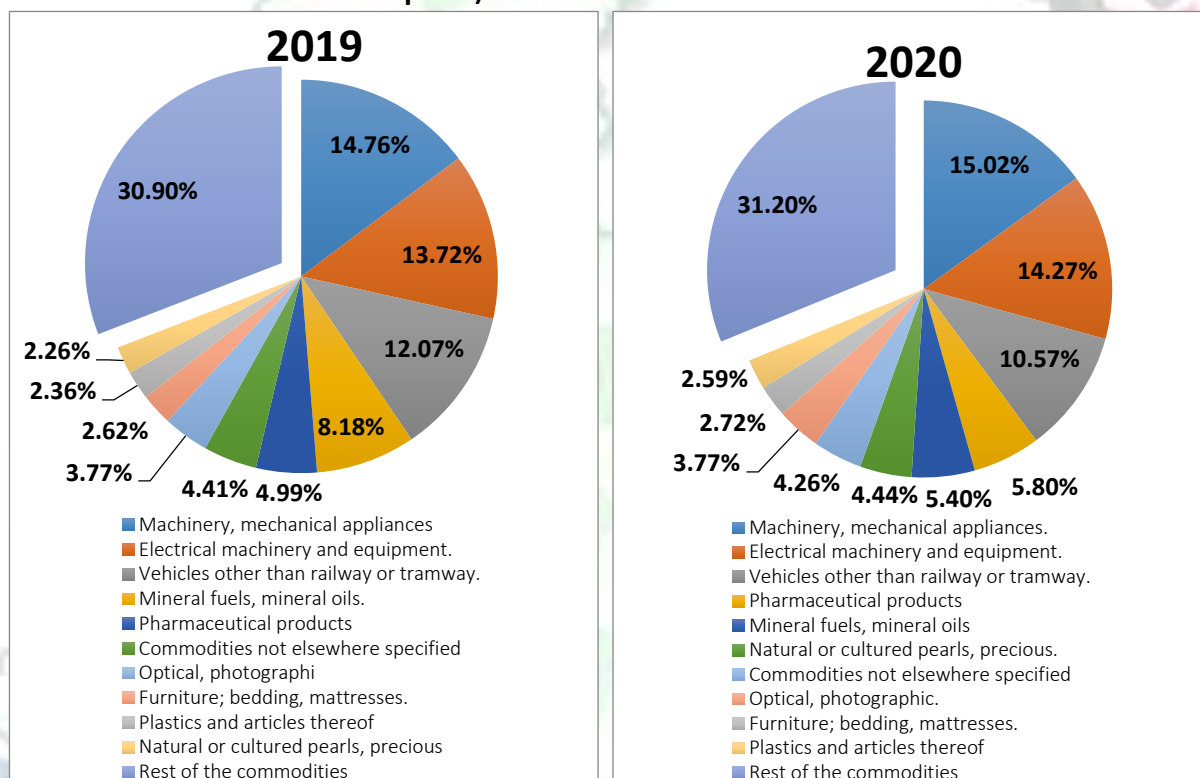
Source: PHD Research Bureau, compiled from Trade Map

Figure.1.3 depicts the changing composition of the United States' top ten merchandise export items in 2019 and 2020. According to the chart above, machinery & mechanical appliances, mineral oils & mineral fuels are the dominating products of merchandise exports. Machinery & mechanical appliances and mineral oils and fuels are contributing around 12.5 percent and 12.1 percent respectively of total merchandise exports in 2019. Electrical machinery and aircraft, on the other hand, are key products in the US export basket, accounting for 10.5 percent and 8.3 percent, respectively. Whereas, machinery and mechanical products continued to be the popular export products in 2020 followed by electrical equipment and mineral fuel products. Vehicles other than railway goods and optical photographic products are other significant exports, accounting for 7.3 percent and 5.8 percent of total exports, respectively. The larger share of merchandise exports constituted by other products such as products related to agriculture (live animals, meat, cereals, tea, coffee, tobacco and residue wastes), plastic and rubber articles, foot wares and leather articles, arts and antiques etc. contributing more than 29 percent share in total merchandise exports.

The share of USA's top ten exported products decreased from 70.82% in 2019 to 68.96% in 2020. Further, it can be noticed that during 2020 the percentage share of almost all the

commodities has fallen, but the demand for machinery and mechanical equipment of the USA around the world increased by almost 1 percentage point in 2020 as compared to 2019.

Fig 1.4: Composition of USA's top ten merchandise imports during 2019 and 2020(as % share of total merchandise imports)

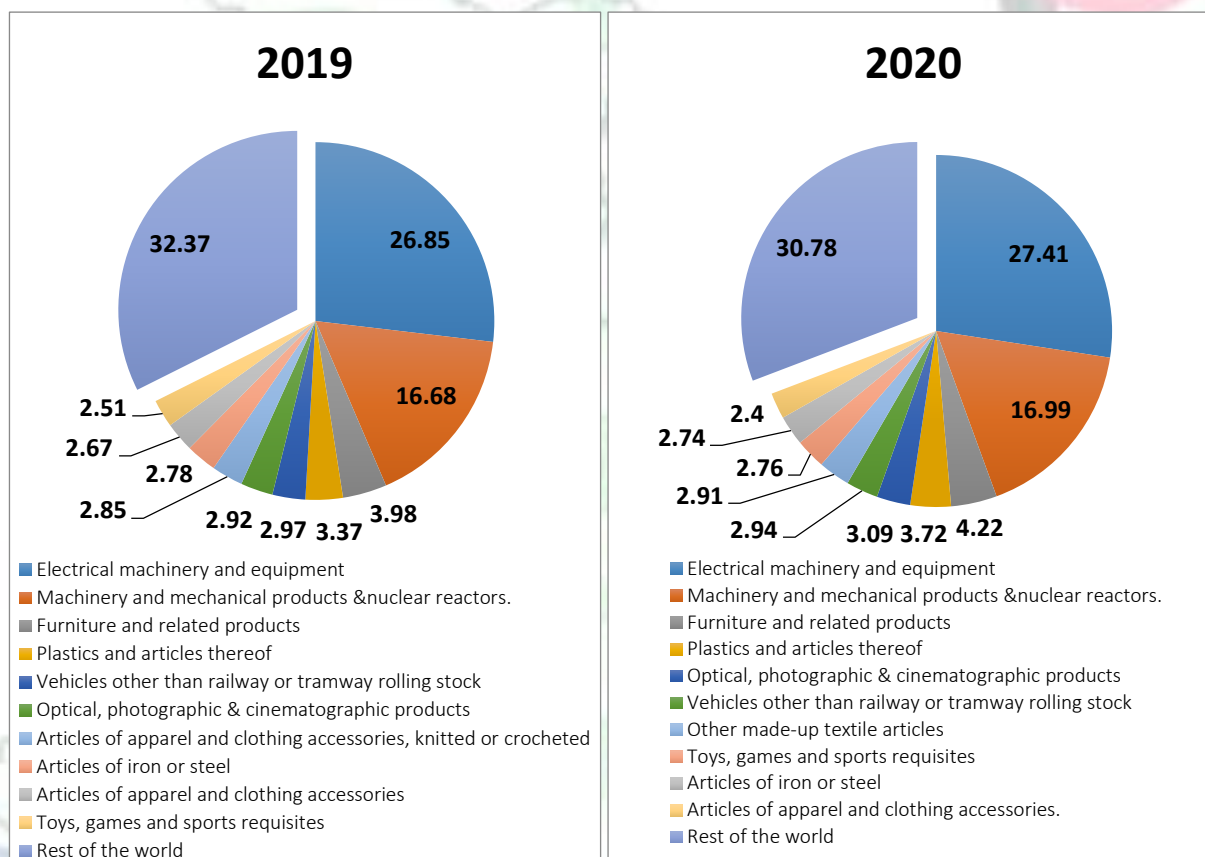


Source: PHD Research Bureau, compiled from Trade Map

Figure 1.4 depicts the composition of merchandise imports of the USA during 2019 and 2020. According to the chart, machinery & mechanical equipment, Electrical machinery are the dominating products of merchandise imports. Machinery & mechanical equipment and electrical machinery are contributing around 14.8% and 13.8 percent of total merchandise imports in 2019. On the other hand, vehicles other than railway and mineral fuels & oils are key products in the US export basket, accounting for 12.1 percent and 8.1 percent, respectively. However, machinery and mechanical equipment continued to be the most popular merchandise exports in 2020. Pharmaceutical products and mineral fuels & oils products are other significant imports, accounting for 4.9 percent and 3.8 percent of total imports.

The share of top ten imported products of USA decreased from 69.1% in 2019 to 68.8% in 2020. Further, it has been witnessed that during 2020 the imports of pharmaceutical products have increased by 1 percentage point in comparison 2019. Hence, it can be concluded that during the coronavirus pandemic, the demand for pharmaceutical products in USA has increased.

Fig 1.5: Composition of China's top ten merchandise exports during 2019 and 2020 (as % share of total merchandise exports)

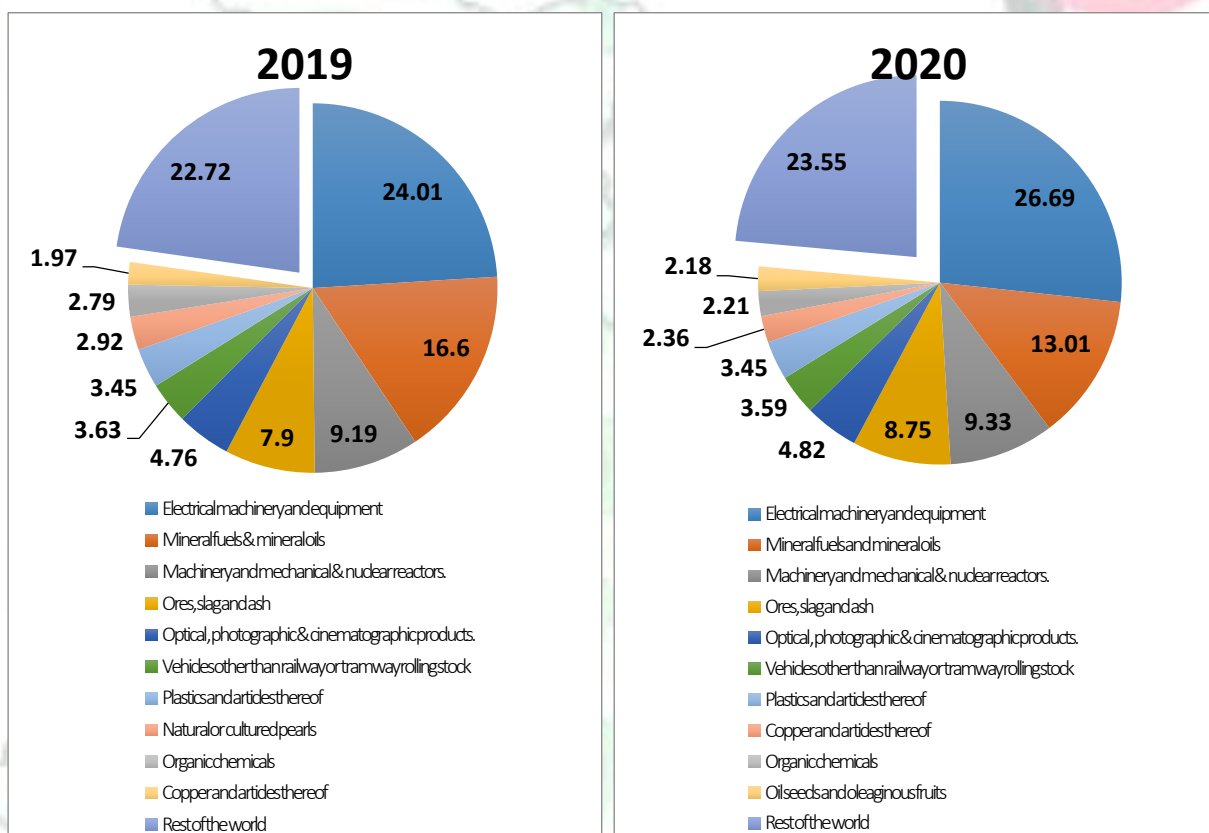


Source: PHD Research Bureau, Compiled from Trade Map

The charts above show the changing composition of China's top ten merchandise export products in the year 2019 and 2020. The above chart represents electrical machinery and equipment and parts thereof; sound recorders and reproducers, television are the dominating merchandise exports by China during the same period. Electrical machinery & equipment and machinery & mechanical appliances are contributing around 26.85 percent and 16.68 percent in the total exports of China during 2019. Plastic articles and vehicles other than railway, on the other hand, are key products in the China export basket, accounting for 2.97 percent and 3.37 percent, respectively. However, electrical machinery and equipment continued to be the most popular merchandise exports in 2020, followed by machinery & mechanical appliances and furniture products. Optical & photographic and vehicles other than railway products are other significant exports, accounting for 3.09 percent and 2.94 percent of total exports, respectively.

The share of China's top ten exported products increased from 67.63% in 2019 to 69.22% in 2020. Further, it has been noticed all the major products exported from China witnessed growth which implies that the overall demand of Chinese products has increased globally during the pandemic.

Fig 1.6: Composition of China's top ten merchandise imports during 2019 and 2020 (as % share of total merchandise imports)

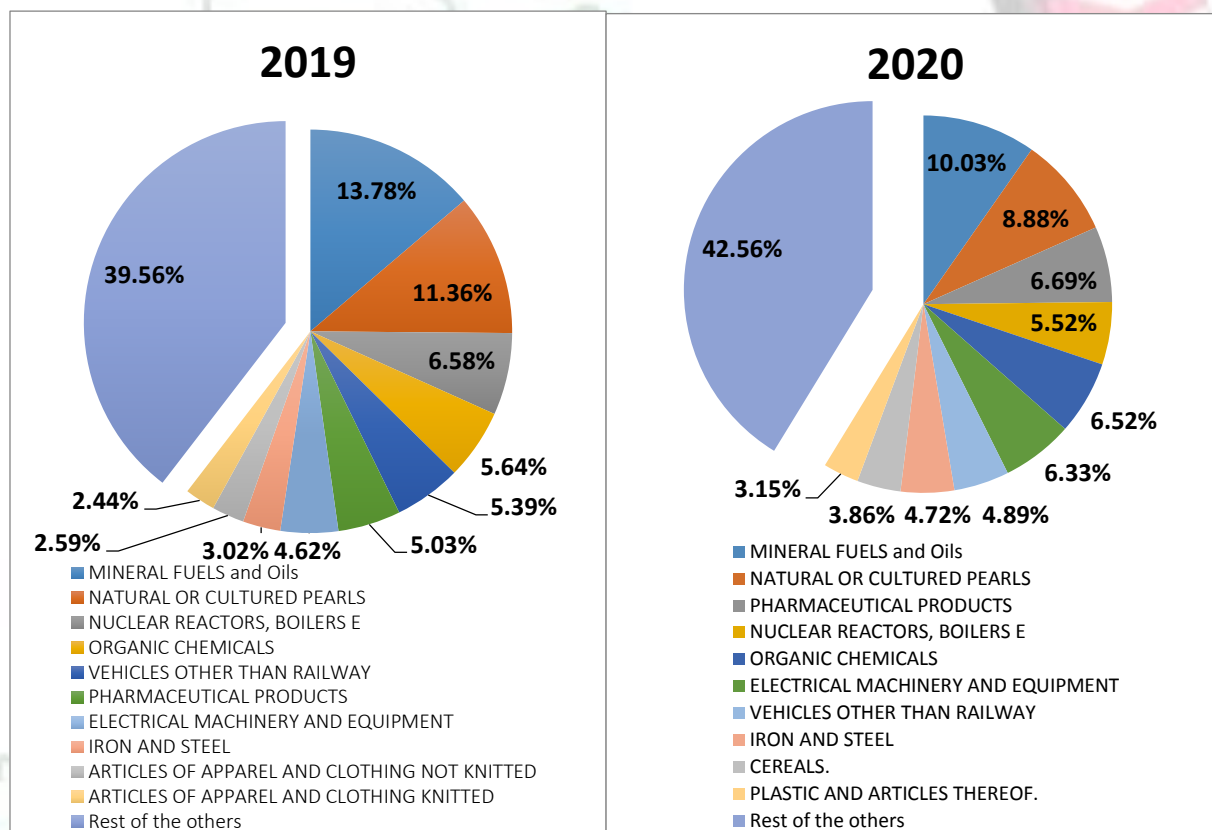


Source: PHD Research Bureau, Compiled from Trade Map

Figure 1.6 depicts the changing composition of China's top ten merchandise Import products in the year 2019 and 2020. The chart above shows that electrical machinery and equipment and parts thereof; sound recorders and reproducers, television are the top products of merchandise imports of China with the increase in percentage share from 24.01 percent to 26.6 percent respectively of total merchandise imports. Whereas, mineral fuels, mineral oils and products of their distillation; bituminous substances also an important product in import basket of China and their share in total imports have declined from 16.6 percent in 2019 to 13.01 percent in 2020. Further, the import share of machinery, mechanical appliances, nuclear reactors, boilers; parts thereof increased slightly from 9.19 percent to 9.33 percent during the pandemic. The copper and articles' share increased from 7.9 percent to 13.01 percent from 2019 to 2020. Ores, slag and ash, optical, photographic, cinematographic, measuring, checking, precision, medical or surgical, vehicles other than railway or tramway rolling stock, and parts and accessories thereof are also important products of imports and contributing 8.75 percent, 4.82 percent and 3.59 percent respectively during the pandemic times.

The share of top ten imported products of China declined from 77.28% in 2019 to 76.45% in 2020. Further, it has been observed that during pandemic the domestic demand of all the major commodities have increased except the Mineral fuels & oils products in China.

Fig 1.7: Composition of India's top ten merchandise exports during 2019 and 2020 (as % share of total merchandise exports)

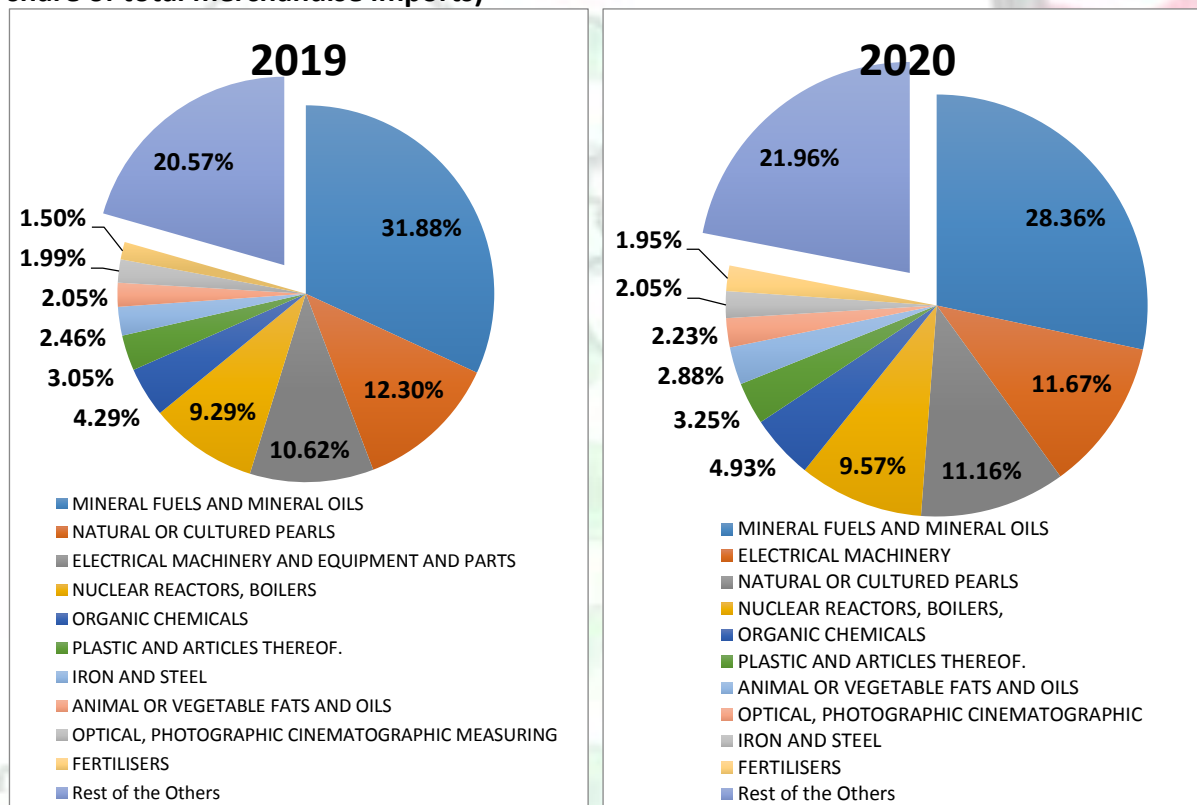


Source: PHD Research Bureau, Compiled from Trade Map

Figure 1.7 illustrates the composition of merchandise exports of India during 2019 and 2020. According to the above charts, mineral fuels and oils and natural and cultured pearls dominate merchandise exports. Mineral fuels & oils and natural & cultured pearls are contributing around 13.78 percent and 11.36 percent of total merchandise exports in 2019. Nuclear reactors and organic chemicals, on the other hand, are key products in the India export basket, accounting for 6.58 percent and 5.64 percent, respectively. However, mineral fuels & oils continued to be the most popular merchandise exports in 2020, followed by natural & cultured pearls and pharmaceutical products. Nuclear Reactors & boilers, and organic chemical products are other significant exports, accounting for 5.52 percent and 6.52 percent of total exports, respectively.

It has been further noticed that there is a significant change in the ranking of pharmaceutical products in 2020 compared to 2019 and the Percentage share of pharmaceutical products in total exports increased by 1.66 percentage points in 2020. Therefore, it can be concluded that the demand for pharmaceutical products across the globe has increased more significantly during the pandemic compared to other products.

Fig 1.8: Composition of India's top ten merchandise imports during 2019 and 2020(as % share of total merchandise imports)



Source: PHD Research Bureau, Compiled from Trade Map

According to the above figure 1.8, mineral fuels and oils, electrical machinery equipment, and natural and cultured pearls are the most common items imported by India during 2019 and 2020. Mineral fuels & oils and natural and cultured pearls account for about 31.88 percent and 12.30 percent of total products imported during 2019. On the other hand, electrical machinery and nuclear reactors account for 10.62 percent and 9.29 percent of India's import basket. Mineral fuels and oils continued to be the most popular item imported in 2020, followed by electrical machinery, natural and cultivated pearls and nuclear reactors. Other major imports were organic chemical products and plastic articles & thereof accounted for 4.93 percent and 3.29 percent of overall imports.

Further, It has been noticed that the imports of Electrical and machinery equipment products have increased by 1.05 percentage point during 2020 compared to 2019. Therefore, it can be concluded that during the coronavirus pandemic, the domestic demand for electrical machinery and equipment products in India has increased significantly.

5. Trade Prospects and Potential

The idea of revealed comparative advantage (RCA)⁶ is based on Ricardian trade theory, which states that relative productivity differences between nations drive trade patterns. Although such variations in productivity are difficult to see, an RCA index can easily derive them using trade data. It is noteworthy that RCA index can be used to get a general idea and first approximation of a country's competitive export strengths.

5.1. Competitive matrix of India US and China: An RCA Analysis

Table 6: Revealed Comparative Advantage of India, China and USA during 2020

S.no	India		China		USA	
	Commodities (HS 2 Digit)	RCA (2020)	Commodities (HS 2 Digit)	RCA (2020)	Commodities (HS 2 Digit)	RCA (2020)
1	Mineral Fuels and Oils	1.15	Electrical machinery and equipment	1.70	Machinery and mechanical appliances	1.06
2	Natural and cultured pearls	2.21	Machinery and mechanical appliances	1.41	Electrical machinery and equipment	1.30
3	Pharmaceutical products	1.71	Furniture and products	2.74	Mineral Fuels and Oils	0.67
4	Nuclear Reactors and Boilers	0.54	Plastics and articles thereof	1.06	Vehicles other than railway	5.92
5	Organic Chemical	2.84	Optical and Photographic products	0.90	Optical and photographic products	0.80
6	Electrical Machinery and Equipment	0.30	Vehicles other than railway	0.40	Aircraft and spacecraft products	1.65
7	Vehicles other than railway	0.65	Other made-up textile articles	4.13	Plastics and articles thereof	1.20
8	Iron and Steel	2.06	Toys, games and sports	3.62	Natural or cultured pearls,	1.04
9	Cereals	4.62	Articles of iron or steel	1.68	Pharmaceutical products	0.97

⁶ $RCA_{ij} = [(X_i^k / X_i) / (X_w^k / X_w)]$ Where, X_i^k is countries export of commodity k and X_i is total export of the country, X_w^k is the total world exports of commodity k and X_w is total world export

10	Plastic Articles and thereof	0.68	Articles of apparel and clothing	1.99	Commodities not elsewhere specified	1.67
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Source: PHD Research Bureau, Compiled from Trade Map.

The above tables show the revealed comparative advantage of India, China and USA in their top ten exported commodities with the world during 2020. India has a comparative advantage in mineral fuels & oils products, natural & cultured pearls, iron and steel products, cereals and pharmaceutical products. At the same time, India has a comparative disadvantage in products such as nuclear boilers & reactors, electrical machinery & equipment, plastic articles & thereof and vehicles other than railway.

In the context of China, it has revealed comparative advantage in 8 products such as electrical machinery & equipment, plastic articles & thereof, textile articles, toys & games and articles of iron & steel among others during 2020. On the other hand, China has a comparative disadvantage in optical & photographic products and vehicles other than railway products during the same period.

Further, it has been observed that USA has revealed comparative advantage in machinery and mechanical appliances, electrical machinery & equipment, aircraft & spacecraft products and vehicles and other than railway etc during 2020. Whereas, USA has comparative disadvantage in mineral fuels & oils, optical photographic products and pharmaceutical products. Therefore, it may be concluded that India has a comparative advantage in producing goods such as mineral fuels & oils and pharmaceutical products over the other two nations, China and the USA, during the pandemic.

5.2. Trade prospects and Potential of India in USA and China

Table 7: Export potential of India in USA and China Imports

India Top ten Exports in 2020	USA's Imports		China's Imports	
	Share	Major exporter	Share	Major Exporter
Mineral Fuels & Oils	5.40%	Canada (48.54%) Mexico (7.87%), Russian Federation (7.27%), Saudi Arabia (6.18%) Colombo (3.66%) India (1.45%)	13.02%	Russian Federation (12.48%) Saudi Arabia (10.77%) Australia (7.22%) Iraq (7.19%) Angola (5.4%) India (0.70%)
Natural or cultured pearls	4.44%	Switzerland (29.15%), India (8.19%) , Canada (7.54%) South Africa	1.54%	South Africa (25.29%) Switzerland (16.22%) Singapore (7.04%) Japan (6.24%) Hong-Kong (5.54%)

		(7.24%), Mexico (5.34%)		India (3.94%)
Pharmaceutical Products	5.80%	Ireland (19.81%), Germany (14.49%), Switzerland (12.70%), Belgium (7.30%), India (6.02%)	1.70%	Germany (25.86%), USA (16.21%), Ireland (7.41%), France (6.84%), Italy (6.37%), India(0.0%)
Nuclear Reactors and Boilers	15.02%	China (27.28%), Mexico (17.29%), Japan (7.58%), Germany (6.78%), Canada (5.48%) India (0.90%) .	9.33%	Japan (19.11%), Germany (11.47%), Korea (11.17%), Taipei, Chinese (10.09%), USA (8.76%) India (0.45%)
Organic Chemicals	2.32%	Ireland (32.88%), China (13.84%), Switzerland (7.48%) India (5.09%) , Germany (4.97%)	2.21%	Korea (16.95%), Japan (9.96%), Saudi Arabia (9.68%), Taipei, Chinese (8.02%), USA (7.09%) India (5.20%)
Electrical Machinery and Equipment	14.27%	China (33.33%), Mexico (17.35%), Vietnam (8.02%), Malaysia (7.67%), Taipei Chinese (5.51%) India (0.87%)	26.69%	Taipei, Chinese (25.43%), Korea (15.42%), Vietnam (8.88%), Japan (8.48%), Malaysia (7.07%) India (0.14%)
Vehicles Other than Railway	10.57%	Mexico (32.74%), Japan (16.10%), Canada (16.00%), Korea (8.31%), Germany(7.29%), India (0.86%) .	3.60%	Germany (30.61%), Japan (22.36%), USA (14.72%), Slovakia (7.43%), UK (5.11%) India (0%)
Iron and Steel	0.78%	Canada (23.74%), Brazil (11.74%), Mexico (10.29%), Korea (6.17%), Russian Federation (5.00%), India (0.71%)	1.79%	Indonesia (20.14%), Japan (12.58%), Korea (10.26%) India (6.87%) Brazil (6.09%)

Cereals	0.11%	Canada (37.75%), Thailand (27.97%), India (11.36%) , Argentina (4.09%), Chile (2.68%).	0.45%	USA (26.25%) Ukraine (20.05%) Canada (12.33%) France (11.08%) Australia (8.67%), India (0%)
Plastic and articles Thereof	2.59%	China (35.12%) Canada (17.34%) Mexico (8.85%) Germany (5.08%) Korea (4.81%), India (1.09%)	3.45%	Korea (15.09%) Japan (14.23%) Taipei, Chinese (11.27%) USA (9.16%) Saudi Arab (6.75%) India (1.66%)

Source: PHD Research Bureau, compiled from Trade Map

The above table shows the export potential of India in Imports of USA and China. The study has taken India's top 10 exported products in the year 2020. And corresponding to each product of India having export potential we have taken the Import share of USA and China in that particular commodity.

The top exported product of India in 2020 is minerals, fuels and oils worth USD 27.63 billion, USA's Import share of the same product is 5.40 percent and China's 13.02 percent of the total imported products. The major countries from which USA Imports minerals, fuels and oils are Canada (48.54%), Mexico (7.87%) and Russian Federation (7.27%) whereas, India export only 1.45 percent of the same. The top exporter of minerals, fuels and oils for China are the Russian federation (12.48%), Saudi Arabia (10.77%) and Australia (7.22%), and from India it imports 0.70 percent.

Natural or cultured pearls are India's second largest exported commodity in 2020, valued at USD 24.46 Billion. For the same product the percentage share of USA is 4.44 percent whereas for China it is 1.54 percent. The top exporting countries of natural or cultured Pearls for USA are Switzerland (29.15%), India (8.19%) and Canada (7.54%), with India being the second largest exporter of the same product for the USA. For China, the top exporting countries are South Africa (25.29%), Switzerland (16.22%), Singapore (7.04%) and India exports 3.94 percent of natural or cultured pearls to China.

India's third major exported commodity is pharmaceutical products in India USD 18.43 billion. The percentage share of imports by USA and China in pharmaceutical products is 5.80 percent and 1.70 percent respectively. The major countries from which USA imports are Ireland (19.81%), Germany (14.49%), and Switzerland (12.70%) and from India it imports 6.02 percent. Whereas, the major importing partners of China in pharmaceutical products are Germany (25.86%), USA (16.21%) and Ireland (7.41%). The imports of pharma products from India are negligible, though India has a significant scope of exports in the pharmaceutical sector.

Further, India has a lot of potential to export pharmaceuticals, electrical machinery and equipment, nuclear reactors and boilers, and plastic items to the United States and China. It can be noticed that the share of India's top ten exporting products in USA and China's importing basket is not very significant so India should take necessary steps such as product-specific trade agreements to improve the export potential of India in these countries.

India can increase its exports to USA in the sectors such as nuclear reactors and boilers, electrical machinery, vehicles other than railways and components of iron and steel. India is exporting less than a percent of USA's total imports of these products while China, Mexico and Canada are the major exporters to the USA. On the other hand, India can tap into exports of cereals, electrical machinery and pharmaceutical products to China.

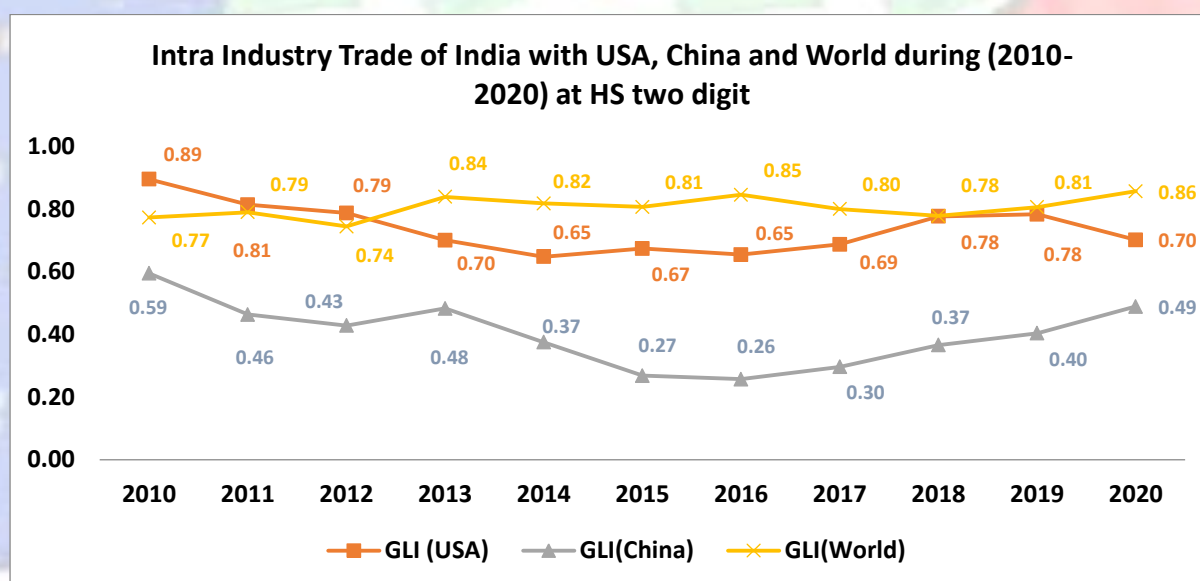
6. Market Competitiveness of India USA and China- A GL Index Analysis

Intra-industry trade is very important to critically analyze the competitiveness and the degree of readiness to integrate into the world economy and the global value chain. The intra industry trade commodities have high competitiveness compared with the others. The classical measure of IIT was proposed by Grubel and Lloyd (1975). It provides the definitive empirical study on the importance of intra-industry trade and the measurement formulae. In this study we have used Grubel and Lloyd Index to evaluate the intra industry trade among India, China and USA.

$$GLI_{ij} = 1 - \frac{|X_{ij} - M_{ij}|}{X_{ij} + M_{ij}}$$

Where X stands for export of i country to j country in the similar industry and M stands for import of i country from j country in the similar industry.

Fig 1.9 : Intra industry trade of India with USA, China and world at an aggregate level



Source: PHD Chamber of Commerce: compiled from Trade map

Figure 1.9 depicts the intra industry trade of India with the USA, China and the World. Over the years, it has been noticed that the intra industry trade of India at an aggregate level with USA and the world is quite high as compared to China where IIT remains lower or moderate from 2010 to 2020. During 2014 and 2015, IIT between India and China was lower or below 0.5, implying that the countries preferred inter-industry trade over intra industry trade. On the other hand, IIT of India with USA and world was at higher level or above 0.5 which implies that the India preferred intra industry trade with USA and world over inter industry trade during the same period.

Further, IIT between India, USA, and the world had witnessed an increasing trend over 2010 to 2020. Whereas, in 2020, the intra industry trade between India and USA have significantly declined as compare to 2019. However, the intra industry trade have increased between India & China and India & world during the same period.

Therefore, It can be concluded that the IIT between India and China during the pandemic had increased significantly. In contrast, it remains at lower level as compare to India's IIT with USA and World.

Table 6: India's IIT with USA and China in HS two digit data level

India IIT with USA and China in HS two digit			
	India Top Ten commodities exported in 2020	GLI with USA	GLI with China
1	Mineral fuels & Oils	0.34	0.39
2	Natural or cultured pearls	0.71	0.72
3	Pharmaceutical Products	0.11	0.43
4	Machinery and Nuclear Reactors and boilers	0.66	0.11
5	Organic Chemicals	0.91	0.46
6	Electrical Machinery and equipment	0.71	0.07
7	Vehicles other than railway	0.26	0.15
8	Iron and Steel	0.57	0.51
9	Cereals	0.02	0.00
10	Plastic and Articles thereof	0.95	0.63

Source: PHD Research Bureau, compiled from Trade Map

The above table shows the GLI results of India with USA and China during 2020. It has been noticed that India's IIT with USA at two-digit level are high in commodities like Plastic and Articles thereof (0.95), Organic Chemicals (0.91), Electrical Machinery and equipment (0.71), Natural or cultured pearls (0.71), among others during 2020. Whereas, India's IIT with China is high in fewer commodities like Natural or cultured pearls (0.72), Plastic and Articles thereof (0.63) and Iron and Steel (0.51) commodities during the same period.

Further, Commodities like Cereals (0.02), Pharmaceutical Products (0.11) and Vehicles other than railways (0.26) have very low IIT with USA. On the other hand, India's IIT with China in commodities like Cereals (0), Electrical Machinery and equipment (0.07), Machinery and Nuclear Reactors and boilers (0.11) and Vehicles other than railway (0.15) is very low. Therefore, it can be concluded that during pandemic Intra industry trade of India is high or moderate in commodities like Natural or cultured pearls, Plastic and articles thereof and Organic Chemicals with countries like USA and China.

Table 7 : USA's IIT with India and China in HS two-digit data level

USA IIT with India and China in HS two digit in 2020			
S.no	USA Top Ten commodities exported in 2020	India	China
1	Machinery and Nuclear Reactors and boilers	0.66	0.24
2	Electrical machinery and equipment	0.71	0.26
3	Mineral fuels & oils	0.34	0.02
4	Vehicles other than railway or tramway rolling	0.26	0.75
5	Optical & photographic products	0.65	0.86
6	Aircraft & spacecraft	0.39	0.11
7	Plastics and articles thereof	0.95	0.40
8	Natural or cultured pearls	0.71	0.63
9	Pharmaceutical products	0.11	0.64
10	Commodities not elsewhere specified	0.00	0.22

Source: PHD Research Bureau, compiled from Trade Map

The above table shows the GLI results of USA with India and China during 2020. It has been observed that USA's IIT with India at two-digit level are high in fewer commodities like Plastic and Articles thereof (0.95), Electrical Machinery and equipment (0.71), Natural or cultured pearls (0.71), among others during 2020. Whereas, USA's IIT with China is high in commodities like Natural or cultured pearls (0.63), Pharmaceutical products (0.64) and optical & photographic products (0.86) and vehicles other than railway or tramway rolling products (0.75) during the same period.

Further, it has been witnessed that USA's IIT in commodities like, Pharmaceutical products (0.11), vehicles other than railway (0.26) and mineral fuels & oils is very low with India during 2020. On the other hand, USA's IIT with China in commodities like aircraft & spacecraft (0.11), mineral fuels & oils (0.02), electrical machinery and equipment (0.26) and machinery and nuclear reactors & boilers (0.15) is very low during the same period. Therefore, it can be concluded that during pandemic Intra industry trade of USA is high in commodities like natural or cultured pearls and optical & photographic products with countries like India and China.

Table 8 : China's IIT with India and USA in HS two digit data level

China IIT with India and China in HS two digit			
S.no	China's top ten commodities exported during 2020	India	USA
1	Electrical machinery and equipment	0.07	0.32
2	Machinery and nuclear reactors & boilers	0.11	0.30
3	Furniture and related products	0.02	0.01
4	Plastics and articles thereof	0.63	0.46
5	Optical and Photographic products	0.14	0.95
6	Vehicles other than railway or tramway rolling	0.15	0.87
7	Other made-up textile articles	0.29	0.01
8	Toys, games and sports	0.44	0.02
9	Articles of iron or steel	0.88	0.16
10	Articles of apparel and clothing	0.68	0.01

Source: PHD Research Bureau, Compiled from Trade Map

The table above shows the GLI results of China with India and USA during 2020. It has been noticed that China's IIT with India at two-digit level is high in fewer commodities like Articles of Apparel and clothing (0.68), Articles of iron and Steel (0.88), plastics and articles thereof (0.63), among others during 2020. China's IIT with USA is high in commodities like Optical & photographic products (0.95) and vehicles other than railway or tramway rolling products (0.87) during the same period.

Further, it has been observed that China's IIT in commodities like Electrical machinery and equipment (0.07), machinery and nuclear reactors & boilers (0.11) and furniture and related products have been very low with India during 2020. On the other hand, China's IIT with the USA in commodities like Articles of apparel and clothing (0.01), other made up textile articles (0.01), furniture and related products is very low during the same period. Therefore, it can be concluded that India and China were majorly traded in commodities like Articles of iron or steel and articles of clothing during the pandemic. In contrast, China and USA were traded in commodities like optical & photographic products and vehicles other than railways with USA during the same period.

7. Tariff Analysis

A tariff is a tax imposed by a country on an imported item. It adds to the cost of imported goods and is one of several trade policies that a country can enact. The tariff analysis streamlines India's situation in terms of simple average tariff rates offered by USA and China

vis a vis world in various sectors. The data on tariffs imposed by USA and China on different products imported from India (at HS-02) level revealed some astonishing results.

Table 9: Tariff Scenario of USA to World, China and India (Simple Average in percentage terms)

Tariff Scenario of USA (Simple Average in percentage terms)									
HS Code	Description	World		China		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t China
1	LIVE ANIMALS	0.38	349	0.4	7	1.2	3	High	High
2	MEAT AND EDIBLE MEAT OFFAL	0.94	538	4.13	5	-	-	-	-
3	FISH AND CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC I	0.28	3008	0.51	150	0.11	35	Low	Low
4	DAIRY PRODUCE; BIRDS' EGGS; NATURAL HONEY; EDIBLE	12.26	6246	3.28	10	20.14	160	High	High
5	PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECIFIED	0.23	513	0.46	19	0.07	14	Low	Low
6	LIVE TREES AND OTHER PLANTS; BULBS, ROOTS AND THE	1.24	827	3.41	23	0.08	19	Low	Low
7	EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS	2.54	4177	6.05	136	2.11	124	Low	Low
8	EDIBLE FRUIT AND NUTS; PEEL OF CITRUS FRUIT OR MEL	1.6	2666	2.9	82	2.64	71	High	Low
9	COFFEE, TEA, MATÉ AND SPICES	0.25	2159	0.36	50	0.04	57	Low	Low
10	CEREALS	0.82	383	0.9	19	0.56	13	Low	Low
11	PRODUCTS OF THE MILLING INDUSTRY; MALT; STARCHES;	1.01	1002	2.04	37	0.48	33	Low	Low
12	OIL SEEDS AND OLEAGINOUS FRUITS; MISCELLANEOUS GRA	0.68	1700	0.54	36	0.13	37	Low	Low
13	LAC; GUMS, RESINS AND OTHER VEGETABLE SAPS AND EXT	0.55	400	1.26	13	0.36	12	Low	Low
14	VEGETABLE PLAITING MATERIALS; VEGETABLE PRODUCTS N	0.56	286	1.37	10	0.48	11	Low	Low
15	ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVA	2.07	1447	3.48	48	2.09	40	High	Low
16	PREPARATIONS OF MEAT, OF FISH OR OF CRUSTACEANS, M	2.07	2221	2.86	85	1.9	45	Low	Low
17	SUGARS AND SUGAR CONFECTIONERY	6.03	2595	8.13	58	5.75	61	Low	Low
18	COCOA AND COCOA PREPARATIONS	3.52	3686	4.75	62	4.25	60	High	Low
19	PREPARATIONS OF CEREALS, FLOUR, STARCH OR MILK; PA	2.88	3562	4.73	56	1.95	57	Low	Low
20	PREPARATIONS OF VEGETABLES, FRUIT, NUTS OR OTHER P	4.35	9250	8.04	170	4.88	136	High	Low
21	MISCELLANEOUS EDIBLE PREPARATIONS	5.39	6353	5.94	80	3.9	90	Low	Low
22	BEVERAGES, SPIRITS AND VINEGAR	1.76	3668	1.63	52	2.27	31	High	High
23	RESIDUES AND WASTE FROM THE FOOD INDUSTRIES; PREPA	1.91	765	1.19	28	1.57	20	Low	High

Tariff Scenario of USA (Simple Average in percentage terms)									
HS Code	Description	World		China		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t China
24	TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES	40.22	1407	27.7	27	40.84	46	High	High
25	SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERI	0.14	1246	0.24	67	0	44	Low	Low
26	ORES, SLAG AND ASH	0.15	409	0.33	30	0	11	Low	Low
27	MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR	0.39	2517	0.26	48	0.29	47	Low	High
28	INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUND	1.39	4183	2.18	243	0.14	212	Low	Low
29	ORGANIC CHEMICALS	1.92	28106	2.84	1365	0.95	1275	Low	Low
30	PHARMACEUTICAL PRODUCTS	0.07	1353	0.22	42	0	41	Low	Low
31	FERTILISERS	0	348	0	21	0	11	Low	Low
32	TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERI	2.57	3007	4.02	110	1.6	100	Low	Low
33	ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC	0.77	2247	1.56	43	0.35	42	Low	Low
34	SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPA	0.98	1814	1.67	46	0.35	39	Low	Low
35	ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES;	1.65	654	2.18	18	0.66	18	Low	Low
36	EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHO	1.89	257	2.87	13	0.66	5	Low	Low
37	PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	1.79	397	2.72	24	0	7	Low	Low
38	MISCELLANEOUS CHEMICAL PRODUCTS	2.49	4793	3.58	161	1.87	125	Low	Low
39	PLASTICS AND ARTICLES THEREOF	2.55	14441	4.27	271	0.38	243	Low	Low
40	RUBBER AND ARTICLES THEREOF	1.18	6292	1.56	150	0.25	139	Low	Low
41	RAW HIDES AND SKINS (OTHER THAN FURSKINS) AND LEAT	1.45	2758	2.39	89	0.28	77	Low	Low
42	ARTICLES OF LEATHER; SADDLERY AND HARNESS; TRAVEL	5.3	7338	7.69	89	5.95	89	High	Low
43	FURSKINS AND ARTIFICIAL FUR; MANUFACTURES THEREOF	1.71	592	2.33	20	1.3	11	Low	Low
44	WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL	1.08	8248	1.49	199	0.15	140	Low	Low
45	CORK AND ARTICLES OF CORK	0.5	326	0.78	17	0	17	Low	Low
46	MANUFACTURES OF STRAW, OF ESPARTO OR OF OTHER PLAI	2.13	1582	4.05	48	0.92	40	Low	Low
47	PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERI	0	98	0	11	-	-	-	-
48	PAPER AND PAPERBOARD; ARTICLES OF PAPER PULP, OF P	0	6144	0	221	0	183	Low	Low
49	PRINTED BOOKS, NEWSPAPERS,	0	1627	0	29	0	28	Low	Low

Tariff Scenario of USA (Simple Average in percentage terms)									
HS Code	Description	World		China		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t China
	PICTURES AND OTHER PROD								
50	SILK	0.59	194	0.66	13	0.49	12	Low	Low
51	WOOL, FINE OR COARSE ANIMAL HAIR; HORSEHAIR YARN A	6.55	1616	6.82	74	8.52	51	High	High
52	COTTON	6.54	3959	8.25	215	8.11	207	High	Low
53	OTHER VEGETABLE TEXTILE FIBRES; PAPER YARN AND WOV	1.27	603	0.88	28	0.78	28	Low	Low
54	MAN-MADE FILAMENTS; STRIP AND THE LIKE OF MAN-MADE	8.34	2792	10.1	130	10.54	111	High	High
55	MAN-MADE STAPLE FIBRES	8.46	1803	10.51	126	10.82	88	High	High
56	WADDING, FELT AND NONWOVENS; SPECIAL YARNS; TWINE,	3.27	2097	4.38	55	4.31	52	High	Low
57	CARPETS AND OTHER TEXTILE FLOOR COVERINGS	2.01	2038	2.81	48	2.48	48	High	Low
58	SPECIAL WOVEN FABRICS; TUFTED TEXTILE FABRICS; LAC	5.87	2018	8.44	72	7.72	67	High	Low
59	IMPREGNATED, COATED, COVERED OR LAMINATED TEXTILE	2.59	2019	3.19	59	2.86	56	High	Low
60	KNITTED OR CROCHETED FABRICS	7.8	1258	10.32	60	10.23	41	High	Low
61	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, KNIT	10.04	14294	13.13	249	12.75	245	High	Low
62	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, NOT	8.12	27055	10.95	394	10.6	388	High	Low
63	OTHER MADE-UP TEXTILE ARTICLES; SETS; WORN CLOTHIN	5.21	5334	6.88	98	6.74	95	High	Low
64	FOOTWEAR, GAITERS AND THE LIKE; PARTS OF SUCH ARTI	8.98	9832	11.63	147	10.55	142	High	Low
65	HEADGEAR AND PARTS THEREOF	2.58	2121	3.41	29	1.5	26	Low	Low
66	UMBRELLAS, SUN UMBRELLAS, WALKING STICKS, SEAT-STI	2.7	274	4.55	8	0	6	Low	Low
67	PREPARED FEATHERS AND DOWN AND ARTICLES MADE OF FE	1.32	483	2.6	13	0	13	Low	Low
68	ARTICLES OF STONE, PLASTER, CEMENT, ASBESTOS, MICA	0.92	2090	1.52	61	0.1	50	Low	Low
69	CERAMIC PRODUCTS	3.14	3773	4.15	82	1.69	79	Low	Low
70	GLASS AND GLASSWARE	4.21	5794	5.07	170	2.5	156	Low	Low
71	NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMI-PRECI	1.26	5430	2.49	93	0.22	91	Low	Low
72	IRON AND STEEL	0.12	4720	0.23	211	0.11	133	Low	Low
73	ARTICLES OF IRON OR STEEL	0.94	9326	1.21	252	0.17	231	Low	Low
74	COPPER AND ARTICLES THEREOF	1.32	2479	1.99	87	0.01	73	Low	Low

Tariff Scenario of USA (Simple Average in percentage terms)									
HS Code	Description	World		China		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t China
75	NICKEL AND ARTICLES THEREOF	1.31	556	1.86	27	0	20	Low	Low
76	ALUMINIUM AND ARTICLES THEREOF	2.05	2737	3.49	67	0.16	62	Low	Low
78	LEAD AND ARTICLES THEREOF	0.82	215	1.95	7	0	8	Low	Low
79	ZINC AND ARTICLES THEREOF	1.46	245	2.62	11	0.5	8	Low	Low
80	TIN AND ARTICLES THEREOF	1.01	312	1.4	9	0	7	Low	Low
81	OTHER BASE METALS; CERMETS; ARTICLES THEREOF	2.61	1190	3.53	56	1.27	32	Low	Low
82	TOOLS, IMPLEMENTS, CUTLERY, SPOONS AND FORKS, OF B	2.55	5252	3.72	135	0.81	132	Low	Low
83	MISCELLANEOUS ARTICLES OF BASE METAL	1.51	3137	2.44	69	0.1	66	Low	Low
84	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICA	0.72	36559	1.23	824	0.07	681	Low	Low
85	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THERE	0.8	33545	1.45	654	0.11	577	Low	Low
86	RAILWAY OR TRAMWAY LOCOMOTIVES, ROLLING STOCK AND	1.52	671	3.92	24	0.01	21	Low	Low
87	VEHICLES OTHER THAN RAILWAY OR TRAMWAY ROLLING STO	1.62	8759	2.38	188	1.12	150	Low	Low
88	AIRCRAFT, SPACECRAFT, AND PARTS THEREOF	0.19	437	0.3	11	0	7	Low	Low
89	SHIPS, BOATS AND FLOATING STRUCTURES	0.47	511	0.66	14	0	5	Low	Low
90	OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC, MEASURING,	0.63	17522	1.11	328	0.03	291	Low	Low
91	CLOCKS AND WATCHES AND PARTS THEREOF	3.83	3996	4.96	184	4.15	102	High	Low
92	MUSICAL INSTRUMENTS; PARTS AND ACCESSORIES OF SUCH	2.22	1600	3.45	41	0.15	38	Low	Low
93	ARMS AND AMMUNITION; PARTS AND ACCESSORIES THEREOF	1.31	950	1.67	25	0.1	23	Low	Low
94	FURNITURE; BEDDING, MATTRESSES, MATTRESS SUPPORTS,	0.87	7682	1.61	100	0.33	100	Low	Low
95	TOYS, GAMES AND SPORTS REQUISITES; PARTS AND ACCES	1	3836	2.03	77	0.25	62	Low	Low
96	MISCELLANEOUS MANUFACTURED ARTICLES	2.85	4116	4.66	128	0.83	116	Low	Low
97	WORKS OF ART, COLLECTORS' PIECES AND ANTIQUES	0	763	0	7	0	7	Low	Low

Source: PHD Research Bureau, Compiled from WorldBank WITS database

According to Table 9, out of total products at the HS 2 digit level, the United States imposes greater tariffs on India than China on 9 products, while the United States imposes lower tariffs compared to world tariff rates on 85 products. On the other side, there are 23

products on which the United States imposes a higher tariff on India than the rest of the world, and 71 products on which the United States imposes a lower tariff on India. The agricultural and food processing products are attracting higher tariffs, including live animals, dairy products, beverage and spirits, tobacco, wool, man made staple fiber and man made filaments. Going ahead, residue and waste from the food industry and minerals fuels are attracting higher tariffs than China.

In a nutshell, India and the USA are highly interconnected in terms of trade. USA is highly dependent on India on services imports, including information technology and software services. India's skilled & semi-skilled human capital resources highly align with the technological capabilities of USA, whereas USA's companies offer infrastructural facilities to India, especially in the logistics and construction sectors. The unique amalgamation of India-USA core competencies will surely lead to a sustainable and strengthened bilateral partnership.

Despite the fact that the two countries have a strong trading connection, there are numerous obstacles and bottlenecks in the form of tariffs, and non-tariff barriers must be addressed as quickly as feasible. A free trade agreement between the two countries would deepen their ties and improve their trading pathways. It is necessary to work for a win-win situation for both countries to turn difficulty into an opportunity for mutual prosperity.

India and USA have an intense trade relationship, which is expected to strengthen in the coming times. Further, the rise in trade complementarity between both nations will propel trade growth prospects. On the tariff front, consumer goods and intermediate goods from India attracted higher tariffs than raw materials and capital goods in the USA. Thus, the India-USA FTA if concluded can act as an effective mechanism for unlocking additional trade liberalization in goods & services both bilaterally and multilaterally and do away with trade related distortions such as high tariffs and complex non-tariff measures

In view of the above, India and USA hold immense potential for refueling global growth to a higher trajectory in the coming times. Based on strong complementarities and growth prospects, both countries have significant potential to enhance bilateral trade (goods and services) to USD 300 billion by 2025-26 from the current level of around USD 150 billion.

Table 10: Tariff Scenario of China to World, USA and India (Simple Average in percentage terms)

HS Code	Description	World		USA		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t USA
1	LIVE ANIMALS	4.38	406	4.76	15	-	-	-	-
2	MEAT AND EDIBLE MEAT OFFAL	11.94	206	16.89	19	-	-	-	-
3	FISH AND CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC I	6.8	2356	10.21	119	9.2	53	High	Low
4	DAIRY PRODUCE; BIRDS' EGGS;	10.65	539	13.25	26	-	-	-	-

HS Code	Description	World		USA		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t USA
	NATURAL HONEY; EDIBLE								
5	PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECIFIED	7.22	598	9.79	22	11.88	16	High	High
6	LIVE TREES AND OTHER PLANTS; BULBS, ROOTS AND THE	8.02	614	10.31	25	8.89	12	High	Low
7	EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS	8.16	647	10.91	68	8.67	19	High	Low
8	EDIBLE FRUIT AND NUTS; PEEL OF CITRUS FRUIT OR MEL	12.9	729	17.21	53	8.71	7	Low	Low
9	COFFEE, TEA, MATÉ AND SPICES	11.34	626	14.35	32	10.61	30	Low	Low
10	CEREALS	33.07	163	38.21	17	50	7	High	High
11	PRODUCTS OF THE MILLING INDUSTRY; MALT; STARCHES;	22.84	322	26.13	25	13.75	4	Low	Low
12	OIL SEEDS AND OLEAGINOUS FRUITS; MISCELLANEOUS GRA	5.77	2882	8.07	94	9.29	59	High	High
13	LAC; GUMS, RESINS AND OTHER VEGETABLE SAPS AND EXT	10.25	493	12.71	20	11.06	18	High	Low
14	VEGETABLE PLAITING MATERIALS; VEGETABLE PRODUCTS N	5.04	170	8	4	7.88	8	High	Low
15	ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVA	11.31	830	13.22	37	12.74	18	High	Low
16	PREPARATIONS OF MEAT, OF FISH OR OF CRUSTACEANS, M	7.23	453	10.2	31	6.63	6	Low	Low
17	SUGARS AND SUGAR CONFECTIONERY	23.2	379	30.14	16	26.37	8	High	Low
18	COCOA AND COCOA PREPARATIONS	8.11	301	11.1	10	10.63	4	High	Low
19	PREPARATIONS OF CEREALS, FLOUR, STARCH OR MILK; PA	15.4	732	19.71	21	16.99	11	High	Low
20	PREPARATIONS OF VEGETABLES, FRUIT, NUTS OR OTHER P	16.33	2796	19.85	97	17.67	29	High	Low
21	MISCELLANEOUS EDIBLE PREPARATIONS	17.37	972	21.8	22	20.81	15	High	Low
22	BEVERAGES, SPIRITS AND VINEGAR	16.05	1164	22.52	29	13.25	6	Low	Low
23	RESIDUES AND WASTE FROM THE FOOD INDUSTRIES; PREPA	4.59	271	5.78	17	3.75	5	Low	Low
24	TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES	30.39	118	34.8	6	35.5	5	High	High
25	SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERI	2.77	2236	3.76	79	3.45	63	High	Low
26	ORES, SLAG AND ASH	0.16	770	0.32	21	0.33	15	High	High
27	MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR	4.29	1654	5.35	59	5.94	30	High	High
28	INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUND	4.88	5034	5.56	292	5.4	205	High	Low
29	ORGANIC CHEMICALS	4.96	9191	5.67	471	5.74	369	High	High
30	PHARMACEUTICAL PRODUCTS	3.74	1930	4.4	72	3.81	51	High	Low

HS Code	Description	World		USA		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t USA
31	FERTILISERS	13.68	298	12.47	22	20.5	8	High	High
32	TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERI	6.16	2042	7.54	66	6.88	58	High	Low
33	ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC	10.02	1804	12.96	42	12.56	34	High	Low
34	SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPA	7.73	1071	9.57	27	8.89	25	High	Low
35	ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES;	7.79	802	10.31	21	8.49	15	High	Low
36	EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHO	7.03	78	7.86	9	9	1	High	High
37	PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	9.13	833	12.12	70	4.9	14	Low	Low
38	MISCELLANEOUS CHEMICAL PRODUCTS	5.89	2709	7.47	94	7.05	62	High	Low
39	PLASTICS AND ARTICLES THEREOF	6.33	7864	8.02	175	7.35	156	High	Low
40	RUBBER AND ARTICLES THEREOF	9.12	3544	11.1	104	10.93	84	High	Low
41	RAW HIDES AND SKINS (OTHER THAN FURSKINS) AND LEAT	6.41	1523	8.79	46	7.88	25	High	Low
42	ARTICLES OF LEATHER; SADDLERY AND HARNESS; TRAVEL	10.87	1304	15.43	25	13.01	25	High	Low
43	FURSKINS AND ARTIFICIAL FUR; MANUFACTURES THEREOF	14.77	434	17.6	18	17.8	11	High	High
44	WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL	2.73	6052	3.23	163	4.66	89	High	High
45	CORK AND ARTICLES OF CORK	5.04	82	5.38	6	8.4	1	High	High
46	MANUFACTURES OF STRAW, OF ESPARTO OR OF OTHER PLAI	6.02	323	9.1	12	8.92	17	High	Low
47	PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERI	0	326	0	16	-	-	-	-
48	PAPER AND PAPERBOARD; ARTICLES OF PAPER PULP, OF P	6.44	3255	6.47	107	6.76	75	High	High
49	PRINTED BOOKS, NEWSPAPERS, PICTURES AND OTHER PROD	3.58	1451	2.73	31	3.17	26	Low	High
50	SILK	7.51	340	10	11	8.83	14	High	Low
51	WOOL, FINE OR COARSE ANIMAL HAIR; HORSEHAIR YARN A	11.62	851	11.55	34	11.76	22	High	High
52	COTTON	7.21	1982	10.01	89	8.54	97	High	Low
53	OTHER VEGETABLE TEXTILE FIBRES; PAPER YARN AND WOV	6.9	592	8.73	22	8.76	24	High	High
54	MAN-MADE FILAMENTS; STRIP AND THE LIKE OF MAN-MADE	6.23	2266	7.49	107	7.82	74	High	High
55	MAN-MADE STAPLE FIBRES	6.79	1807	8.26	103	8.06	62	High	Low
56	WADDING, FELT AND NONWOVENS; SPECIAL YARNS; TWINE,	6.7	1346	8.54	38	8.41	31	High	Low

HS Code	Description	World		USA		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t USA
57	CARPETS AND OTHER TEXTILE FLOOR COVERINGS	10.69	645	12.74	25	12.7	28	High	Low
58	SPECIAL WOVEN FABRICS; TUFTED TEXTILE FABRICS; LAC	8.07	1489	10.26	65	9.82	48	High	Low
59	IMPREGNATED, COATED, COVERED OR LAMINATED TEXTILE	7.4	1352	9.42	43	9.17	37	High	Low
60	KNITTED OR CROCHETED FABRICS	7.63	1194	10.21	55	8.61	32	High	Low
61	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, KNIT	12.12	4998	16.31	117	12.16	99	High	Low
62	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, NOT	12.34	7090	15.85	150	13.05	139	High	Low
63	OTHER MADE-UP TEXTILE ARTICLES; SETS; WORN CLOTHIN	11.98	2871	14.83	95	14.57	91	High	Low
64	FOOTWEAR, GAITERS AND THE LIKE; PARTS OF SUCH ARTI	14.05	1741	19.13	42	12.89	36	Low	Low
65	HEADGEAR AND PARTS THEREOF	13.09	720	16.95	12	16.54	9	High	Low
66	UMBRELLAS, SUN UMBRELLAS, WALKING STICKS, SEAT-STI	9.12	138	12	6	11	4	High	Low
67	PREPARED FEATHERS AND DOWN AND ARTICLES MADE OF FE	16.42	282	21.5	11	18.75	7	High	Low
68	ARTICLES OF STONE, PLASTER, CEMENT, ASBESTOS, MICA	10.49	2082	12.77	72	12.05	57	High	Low
69	CERAMIC PRODUCTS	10.73	1137	13.41	36	12.61	31	High	Low
70	GLASS AND GLASSWARE	11.09	2826	13.64	87	13.26	69	High	Low
71	NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMI-PRECI	10.98	1667	10.13	75	11.46	42	High	High
72	IRON AND STEEL	4.82	3811	5.29	191	5.34	114	High	High
73	ARTICLES OF IRON OR STEEL	8.28	5857	9.81	158	9.5	127	High	Low
74	COPPER AND ARTICLES THEREOF	5.25	2565	6.51	78	6.6	62	High	High
75	NICKEL AND ARTICLES THEREOF	4.59	493	5.22	22	5.87	7	High	High
76	ALUMINIUM AND ARTICLES THEREOF	7.16	1887	8.79	53	8.68	44	High	Low
78	LEAD AND ARTICLES THEREOF	3.63	147	4.71	8	6	2	High	High
79	ZINC AND ARTICLES THEREOF	3.98	294	4.5	12	4.5	7	High	Low
80	TIN AND ARTICLES THEREOF	4.86	271	5.5	10	6.33	9	High	High
81	OTHER BASE METALS; CERMETS; ARTICLES THEREOF	5.53	1140	5.79	65	7.38	17	High	High
82	TOOLS, IMPLEMENTS, CUTLERY, SPOONS AND FORKS, OF B	8.87	2806	10.77	82	11.01	69	High	High
83	MISCELLANEOUS ARTICLES OF BASE METAL	9.24	1578	11.12	38	10.86	34	High	Low
84	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICA	6.08	33695	7.76	1040	7.08	680	High	Low
85	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THERE	5.43	28725	8.27	622	6.92	490	High	Low

HS Code	Description	World		USA		India			
		Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Simple Average Tariff	No of Tariff Lines	Tariff Difference w.r.t World	Tariff Difference w.r.t USA
86	RAILWAY OR TRAMWAY LOCOMOTIVES, ROLLING STOCK AND	3.39	490	3.87	25	3.1	6	Low	Low
87	VEHICLES OTHER THAN RAILWAY OR TRAMWAY ROLLING STO	11.63	8331	15	257	15.45	164	High	High
88	AIRCRAFT, SPACECRAFT, AND PARTS THEREOF	1.34	280	2.03	17	0.67	3	Low	Low
89	SHIPS, BOATS AND FLOATING STRUCTURES	7.13	289	7.6	13	-	-	-	-
90	OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC, MEASURING,	4.83	15172	6.33	370	5.82	270	High	Low
91	CLOCKS AND WATCHES AND PARTS THEREOF	12.19	753	16.18	33	15.76	27	High	Low
92	MUSICAL INSTRUMENTS; PARTS AND ACCESSORIES OF SUCH	15.64	538	19.64	22	18.19	15	High	Low
93	ARMS AND AMMUNITION; PARTS AND ACCESSORIES THEREOF	11.62	78	13	6	13	2	High	Low
94	FURNITURE; BEDDING, MATTRESSES, MATTRESS SUPPORTS,	6.01	3000	7.36	61	7.2	55	High	Low
95	TOYS, GAMES AND SPORTS REQUISITES; PARTS AND ACCES	8.1	2081	10.73	58	7.79	40	Low	Low
96	MISCELLANEOUS MANUFACTURED ARTICLES	15.03	2132	19.11	67	18.23	60	High	Low
97	WORKS OF ART, COLLECTORS' PIECES AND ANTIQUES	6.63	456	8.81	10	6.17	6	Low	Low

Source: PHD Research Bureau, Compiled from WorldBank WITS database

According to table 10, out of total products at the HS 2 digit level, on 22 products, China imposes higher tariffs on India than the United States. In contrast, on 65 products, China imposes lower duties than the rest of the world. On the other hand, China imposes a greater tariff on India than the rest of the world on 78 products and imposes a lower duty on India on 13 products. Agricultural and raw materials, such as goods of animal origin, coffee, tea, oil seeds, tobacco, man-made staple fibre, other vegetable textile fibre, and wool, are subject to higher tariffs. The industrial goods category also attracts higher tariff as compared to the world, such as minerals and fuels, chemicals, fertilizers, paper and paperboard, articles of copper, articles of nickle, articles of iron and steel, articles of zinc and articles of tin.

It is worth mentioning that more disaggregated level data analysis suggested that approximately 36 sub-sectors can reduce their reliance on Chinese imports. These sectors together account for around USD35 billion in imports. Since the domestic market has production capabilities, these sectors can readily minimize their reliance on China in a phased manner without any substantial extra investments. If the domestic manufacturing sector can replace 22% of total imports from the mentioned sectors in the first phase, India

can reduce its trade deficit by around USD 8 billion. It would have a positive cascading effect on the economy, as the equivalent amount of revenue would not only be added to the turnover of domestic enterprises (primarily MSMEs), but it would also be likely to translate to benefits through forward and backward linkages, as well as increasing the scope of employment generation.

India is the world's sixth largest chemical manufacturer, with around USD 16 billion annual exports. Despite this, India's yearly chemical and related item imports (mainly methanol and phenol) total around USD 10 billion. Imports of plastics and related categories (mainly artificial resins and intermediate plastics), a chemical industry byproduct, total USD 2 billion. Even if we exclude some specialized chemicals that India's manufacturing capabilities have yet to develop, India could save about USD 3 billion on such imports.

The Indian pharmaceutical industry is the world's 3rd largest by volume and 14th largest in terms of value. The pharmaceuticals and drugs category is another potential sector that may reduce the burden of imports from China. Furthermore, some other industries such as handicrafts and spices and bicycle parts are the sectors that can also be considered in phase one to reduce the trade deficit with China. The bicycle and bicycle parts industry, which has witnessed USD 100 million worth of items from China, needs to be revived. A larger scale of operations brought about by import replacement is expected to help the companies, including MSMEs in these sectors, enhance their cost competitiveness, cater to export markets, and build a geographically diversified business franchise.

8. Conclusion

Over the last several years, the United States and China have consistently been important trading partners in India's international trade. They have significant contributions to India's economic and social growth. As the pandemic significantly influences trade activities.

During 2019 and 2020, the top exported products for India were Mineral fuels & mineral oils, Natural or cultured pearls, and machinery & mechanical appliances, whereas the basket of top exported products for the United States includes machinery & mechanical appliances, mineral fuels & mineral oils, and electrical machinery. On the other hand, the top exported products of China were electrical machinery and equipment, machinery & mechanical appliances and furniture and related products in both the years 2019 and 2020.

India's major export destinations were the United States, China, and the United Arab Emirates, with China becoming the second-largest importer of Indian products in 2020. At the same time, the top export destinations for the United States were Canada, Mexico, and China, with no change in the rankings of the top 5 export destinations. On the other hand, China's major export destinations were the United States, Hong Kong, and Japan during 2019 and 2020.

The import basket of all the three economies has witnessed a significant change during 2019 and 2020. For India, the top imported products were Mineral fuels & mineral oils, Natural or cultured pearls and Electrical machinery and equipment. However, machinery & mechanical appliances; electrical machinery & equipment and vehicles other than railway are the major

products imported by the United States during the same period. On the other hand, electrical machinery and equipment and parts thereof; sound recorders and reproducers, television are the major imported products by China during 2019 and 2020.

As far as import sources are concerned, India's major import sources during 2019 and 2020 were India are China, USA, and UAE and it remained constant in 2019 and 2020. For the USA, major import sources were China, Mexico and Canada. On the other hand, Korea, Japan and Taipei were major importing partners for China during 2019 and 2020.

Trade, consumption, and demand have all been impacted as the world grapples with humanitarian crises in the coronavirus pandemic in 2020. India has revealed comparative advantage in Mineral fuels & oils products (1.15), natural & cultured pearls (2.21), iron and steel products (2.06) and cereals (4.03). In contrast, China has revealed comparative advantage in 8 products such as electrical machinery & equipment (1.70), plastic articles & thereof(1.06), Textile articles(4.13), toys & games(3.62) and articles of iron & steel(1.68) among others during 2020. On the other hand, USA has a comparative advantage in machinery and mechanical appliances (1.06), electrical machinery & equipment (1.30), aircraft & spacecraft products (1.65) and vehicles and other than railway (5.92) among others.

In context of comparative disadvantage, India has comparative disadvantage in producing products such as nuclear boilers & reactors(0.54), electrical machinery & equipment(0.30), plastic articles & thereof(0.68) and vehicles other than railway (0.65) in 2020. Whereas, China has comparative disadvantage in optical & photographic products (0.90) and vehicles other than railway products (0.40) during the same period. . On the other hand, USA has comparative disadvantage in mineral fuels & oils (0.67), optical photographic products (0.80) and pharmaceutical products (0.97). Therefore, it may be concluded that India has a comparative advantage in producing goods such as mineral fuels & oils and pharmaceutical products over the other two nations, China and the USA, during the pandemic.

One of the key causes of concern as the global economy recovers is the structure of global demand and intra trade between the industries of these countries such as India, United States and China during these unpredictable times. The Intra industry trade of India at an aggregate level with the USA and the World is quite high as compared to China, where IIT remains lower or moderate from 2010 to 2020. However, In 2020 the intra industry trade between India and USA have significantly declined as compared to 2019. Although, the intra industry trade has increased between India & China and India & world during the same period. Therefore, It can be concluded that during the pandemic the IIT between India and China had increased significantly whereas it remained at lower level as compared to India's IIT with USA and World. The study tries to exemplify the exports prospects and Potential of Indian commodities in its top two trading partners i.e. the United States and China. India's comparative advantage in mineral fuels & fuels, and pharmaceutical products pave the way for exploring new opportunities in China and the USA so that the potential of the Indian industries could be enhanced.

9. Suggestions

In recent years, imports from China have changed from low-value, low-cost products like toys and crackers to high-value items like electronics. Unfair competition from imports from China has had a severe impact on the growth prospects of domestic manufacturers, especially small businesses. The focus on labour-intensive industries such as toys and crackers making will reduce imports burden and create employment opportunities.

With proactive and fast action by the government, the Indian economy has significant scope for import substitution in the sectors including chemicals, automotive components, bicycle parts, agro-based items, handicrafts, drug formulations, cosmetics, consumer electronics, and leather-based goods. Higher scale of operations brought about by import replacement is expected to assist companies in this sector, including MSMEs, in improving their cost competitiveness and catering to export markets and, as a result, building a geographically diverse business franchise.

Efforts should be made further to deepen trade and investment relations between India and the USA and ensure market access, focusing on promising sectors of mutual interest. Both the economies have agreed to push further and maintain the extraordinary momentum achieved over the years in Indo-US bilateral relations in the form of a limited trade package.

Going ahead, India should concentrate on mass production of commodities in which it has a comparative advantage over the United States and China. As a result, the United States and China should import most of those commodities from India rather than from other countries. It would necessitate more support and guidance from the government, focusing on lowering the cost of doing business in the country, including capital costs, compliance costs, logistics costs, land costs and availability, and labour costs.

The India-USA FTA could play a cornerstone role in the long-standing bilateral trade and investments relations. The economic impact resulting from an FTA needs to be evaluated regarding trade creation and trade diversion aspects and gains resulting from access to partners' markets. However, considering the vibrant trade and economic complementarities, such an agreement could boost trade and economic welfare in both economies by removing trade barriers, increasing market access and providing a stable framework for comprehensive growth of the various sectors of mutual interest.

There are approximately 36 sub-sectors can reduce India's reliance on Chinese imports. These sectors together account for around USD35 billion in imports. Since the domestic market has production capabilities, these sectors can readily minimize their reliance on China in a phased manner without any substantial extra investments. It would have a positive cascading effect on the economy, as the equivalent amount of revenue would not only be added to the turnover of domestic enterprises (primarily MSMEs), but it would also be likely to translate to benefits through forward and backward linkages, as well as increasing the scope of employment generation.



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PHDCCI, acting as the "Voice of Industry & Trade" with a large membership base of 1,50,000 direct and indirect members consisting of large, medium and small industries, has forged ahead leveraging its legacy with the industry knowledge across multiple sectors to take Indian Economy to the next level.

At the global level, we have been working with the Embassies and High Commissions in India and overseas to bring in the International Best Practices and Business Opportunities.

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- ICT
- International Trade

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