

## **An Analysis of India and China's Exports in European Markets**

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**Abstract:** India and China have emerged as the largest economies in the world. Economic reforms enabled both countries to increase their external linkage with the rest of the world. After becoming a WTO member in 2001, China started capturing the world markets through the supply of cheaper products. In 2019, China's share in world exports reached 13.31 per cent and in imports, 10.80 per cent. However, India's share in world exports and imports are minimal at 1.71 per cent and 2.53 per cent respectively (WTO 2021). China has already replaced many countries' exports from international markets. In 2020 China had replaced the United States and became the largest trading partner in Europe. This paper attempts to analyze India and China's exports in European markets from 2001 to 2019. The study uses the Constant Market Share approach to analyze India and China's exports to European markets.

**Keywords:** India's Exports, China Competition, Exports, Imports, European markets

### **Introduction**

With the highest population, India and China have emerged as the largest economies in the world. Both countries have grown in terms of growth rates through economic liberalization. They opened their door to the rest of the world in different periods. India introduced economic reforms in 1991 on the other side; China initiated economic reforms in 1978, much before India. Economic reforms enabled both countries to increase their external linkage with the rest of the world. However, China is growing faster than India after economic reforms. The share of industrial output in China's GDP has grown remarkably, whereas India's service sector has the largest GDP contribution. Based on the manufacturing sector, China has become the top exporter in the world. China is exporting their low-cost products to all developed and developing countries. After becoming a WTO member in 2001, China started capturing the world markets as China's Share in world Exports reached 13.31 per cent and in imports 10.80 per cent. However, India's share in world exports and imports are 1.71 per cent and 2.53 per cent respectively (WTO 2021). The Chinese economy grew at a very high rate of growth compared to the Indian economy; however, the Indian economy was also able to grow faster after the economic reforms of 1991.

China is the biggest competitor of India in International markets as Chinese products are capturing Indian markets and replacing Indian products in International markets. China will be a big threat to the Indian manufacturing industry in the next decade. In 2019, many automobile Companies shut down, the unemployment rate increased, and the Indian economy is a facing slowdown. India's trade deficit with China is badly affecting Indian pharmaceutical, toys, steel, and textiles industries. India investigated 223 anti-dumping cases against various countries and there were 62 cases against China. In the 145<sup>th</sup> report of Rajya Sabha, a total of Rs. 1268 crores have been collected as anti-dumping duties during 2017-2018, Rs 798 crores anti-dumping has been collected from the commodities imported from China, which was 63% of total anti-dumping duties. Most of the cases of anti-dumping measures against China are used by India, Brazil and the USA. However, only a fraction of total anti-dumping measures in the world against China is used by the EU. These anti-dumping measures are used in the case of base metals, pharmaceutical and chemical sectors (Felbermayr and Sandkamp, 2020)

India has a huge trade deficit with China. India's export to China increased from US\$ 0.083 billion in 2000-01 to US\$ 16.75 billion in 2018-19, and India's imports from China increased tremendously from US\$ 1.50 billion in

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2000-01 to US\$ 70.32 billion. India's trade deficit with China has increased from US\$ 1.42 billion in 2000-01 to US\$ 53.57 billion. Segal (2018) stated that if a country has a trade deficit for a prolonged period, it essentially goes into debt. Over time, investors will notice the decline in spending on domestically produced goods, which will hurt domestic companies and decline their stock prices. Like the USA, India's growing trade deficit with China has a serious threat to Indian MSMEs, employment, output and exports. So India should focus more on making its export more competitive. Further, India should focus on attracting companies exiting China and looking for relocation to other Asian nations. India can promise to give a better environment through its trade policies. Because imposing tariffs is not a permanent solution for reducing the trade deficit, it will bring a secular trade war as well as welfare loss to imposing economies. Trade war will also affect the other economies and will reduce the total volume of World Trade.

UNCTAD's director of International Trade and Commodities Pamela Coke Hamilton said, "A lose-lose trade war is not only harming the main contenders, but It also comprises the stability of the global economy and future growth". Europe has been a significant trading partner of India and has a greater significance in international trade. Hence, this study's main objective is to analyze India and China's export competitiveness in European markets. Tables: 1 and 2 indicate that China's place in Indian exports and imports has improved during 1996-97 to 2019-20. China was in 17<sup>th</sup> place among India's top importers in 1996-97, and in 2019-20, China crowded out all the countries and became the leading source of imports for India. Same in the case of India's top export destination, China's rank changed from 16<sup>th</sup> in 1995-97 to 3<sup>rd</sup> in 2019-20.

**Table: 1 India's Imports from top Partners in 1996-97 and 2019-20**

Rank in 1996-97	Top Countries	Rank in 2019-20	Top Countries	%Share 2019-20
1	U S A	1	CHINA P RP	13.732
2	GERMANY	2	U S A	7.5384
3	BELGIUM	3	U ARAB EMTS	6.3805
4	JAPAN	4	SAUDI ARAB	5.6605
5	U K	5	IRAQ	5.0091
6	SAUDI ARAB	6	HONG KONG	3.5704
7	NIGERIA	7	SWITZERLAND	3.5478
8	U ARAB EMTS	8	KOREA RP	3.2992
9	AUSTRALIA	9	INDONESIA	3.1755
17	<b>CHINA P RP</b>	10	SINGAPORE	3.1061

Source: Ministry of Commerce and Industry

**Table:-2 India's exports to top Partners in 1996-97 and 2019-20**

Rank in 1996-97	Top Countries	Rank in 2019-20	Top Countries	%Share2019-20
1	U S A	1	U S A	16.9455
2	U K	2	U ARAB EMTS	9.2005
3	JAPAN	<b>3</b>	<b>CHINA P RP</b>	<b>5.3009</b>
4	GERMANY	4	HONG KONG	3.5026
5	HONG KONG	5	SINGAPORE	2.8392
6	U ARAB EMTS	6	U K	2.7877
7	BELGIUM	7	NETHERLAND	2.6664
8	SINGAPORE	8	GERMANY	2.6453
9	ITALY	9	BANGLADESH PR	2.6207
<b>16</b>	<b>CHINA P RP</b>	10	NEPAL	2.1206

Source: Ministry of Commerce and Industry

#### Literature Review

Yang and Vines (2000) analyze the impact of China's growth on other Asian Countries' exports by using a multi-sector, multi-country model with differentiated products. In their findings, exports from Japan and NIEs rise however, the exports from Asian countries decline slightly. Shafaeddin (2002) uses RCA's rank correlation (Revealed competitive advantage indices) and qualitative assessment to analyze the impact of China's exports on developing countries after becoming a WTO member. The study finds that China has affected the clothing and

textiles industries of Egypt and Malawi, machinery & equipment items of Tunisia and, to a lesser extent, plastic articles have reduced their market shares in Kenya because of China's competition.

Eichengreen, Rhee & Tong (2004) uses the gravity model to analyze the impact of China's growth on the other Asian countries' exports during the 1990-2002 period. For analyses purpose, bilateral flows between 13 Asian exporting countries and 180 importing countries have been selected. Results confirmed that exports from China crowd out the exports of other Asian countries. The most affected are consumer goods markets and less developed countries. Freund & Ozden (2006) found that Mexican exports to the U.S market have negatively impacted industrial goods. In particular, the growth of China exports slower the growth of Mexican exports by 2 percentage points. There are also negative impacts on a few countries from Central America and the Caribbean. On aggregate, LAC prices have decreased due to China's competition, reflecting the terms of trade effect significantly negative. Giovannetti & Sanfilippo (2016) measured the indirect impact of Chinese exports on African exports. Disaggregated data was used for the period 1995-2005. The augmented Gravity Model was used for estimating the effect of Chinese exports on African manufacturing exports to other countries. They presented significant evidence of the existence of a displacement effect at different levels: market, sector, product and region.

Sekakela (2016) uses Chenery Decomposition Approach and Constant Market Share (CMS) to analyze the estimated loss of markets by Botswana in third markets from 2000 to 2012. The study found that Chinese goods mainly from textile, clothing and footwear industries captured Botswana's domestic market and replaced Botswana exports in other markets. Botswana industries, mainly textile, clothing and footwear, loosed Botswana's market share over the study period. Jain (2017) uses the Constant Market Share analysis approach to investigate India's export competitiveness in comparison to China in the World Trade of cotton after abolishing the multi-fibre Arrangement. The study finds that India and China's export competitiveness has increased after abolishing the MEA but China's export competitiveness has increased more than India's export competitiveness. Bartilol et al. use the CMS to analyze the market share of Kenya's cut flower exports to the EU-28. The study finds that the cut flower products' export growth to the EU-28 is mainly because of the market share effect. The value of market share effect shows that cut flower export products did not gain market due to the growing competition with world markets. Stanojevic et al. (2020) use an augmented gravity model to investigate the impact of China's exports on the EU-15 exports to the 16 CEEC. The study covered the period 2006-2017 and used disaggregated trade data. The study finds that China's exports crowd out the EU-15 exports of textiles and furniture from CEEC markets.

Hence the objective of the present paper is to analyze India and China's exports to European markets. The study selected those four commodities in which India and China have the highest share in EU-28 trade.

**Methodology**

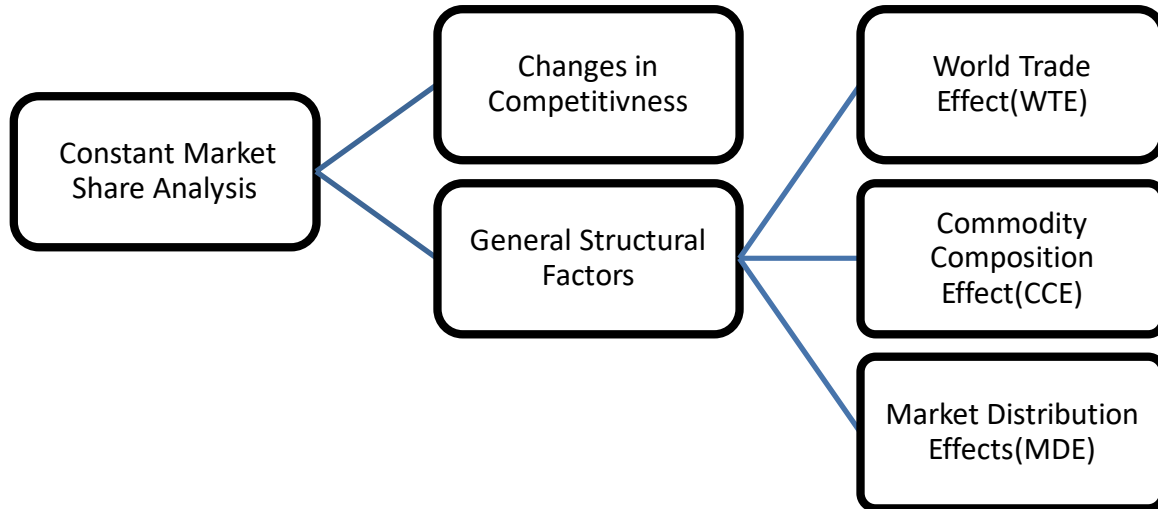
The study used the internationally accepted nomenclature, i.e. SITC Revision-3 Standard International Trade Classification of products published by the United Nations Conference on Trade and Development and covered the annual time series data from 2001 to 2019. China joined the World Trade Organization as a member in 2001, so the study has taken the trade data from 2001. Data of exports and imports on four commodities Chemical and related products, manufactured goods, machinery and transport equipment and other manufactured articles have been collected from the UN COMTRADE database. Data has also been collected from different databases Ministry of Commerce and Industry, Eurostat etc. The study selected these commodities for analysis purposes because India and China contribute the highest in these commodities in EU-28 trade.

**Table: - 3 Standard International Trade Classification Revision-3**

Code	Label
SITC-5	Chemicals and related products, n.e.s.
SITC-6	Manufactured goods
SITC-7	Machinery and transport equipment
SITC-8	Miscellaneous manufactured articles

Constant Market Share Analysis has been used for analyzing the impact of China on Indian Exports. Tyszynsk developed the Constant market share analysis (CMS) in 1951. This approach was further developed by Fleming and Tsiang (1956), Leamer and Stern (1970) and Richarson(1971) suggested changes. Many researchers have used this approach in their studies to analyse export performance and competitiveness.

Figure:- 1 Decomposition of Constant Market Share



$$\Delta x = \left[ \sum_{i=1}^n w x_i^0 \right] + \left[ \sum_{i=1}^n w i x_i^0 - w x_i^o \right] + \left[ \sum_{i=1}^n \sum_{z=1}^m w_{iz} x_{iz}^o - \sum_{i=1}^n w_i x_i^0 \right] + \left[ \sum_{i=1}^n x_i^1 - x_i^0 - \sum_{i=1}^n \sum_{z=1}^m w_{iz} x_{iz}^0 \right]$$

$\Delta x$  = change in exports of focus country.

$W$  = % age change in total world export.

$x_i^0$  = total export of  $i$ th commodity in the base year.

$w_i$  = % age change in world exports of the  $i$ th country.

$w_{iz}$  = % age change in world exports of the  $i$ th commodity to  $z$ th market.

$x_{iz}^0$  = the value of country's exports of commodity  $i$  to  $z$  market in base year ( $i= 1\dots n, z= 1\dots m$ ).

$x_{iz}^1$  = the value of the country's exports of commodity  $i$  to  $z$  market in the terminal year ( $i= 1\dots n, z= 1\dots m$ ).

$x_i^1$  = total export of  $i$ th commodity in the terminal year.

The world trade effect, which depicts the overall growth in exports worldwide, is the first term in the equation. The second part of the equation refers to the commodity composition effect, which determines whether India focused on commodities that developed quickly or slowly between period 1 and period 2. If India has focused its exports on goods with faster growth rates than the global average, the value is positive. Similarly, if India has concentrated on modestly expanding commodity markets, the value is negative. The market distribution impact is discussed in the third portion of the equation. A positive MDE score indicates that exports from the focus nations were directed to markets with quicker growth rates than the global average, while a negative value indicates the opposite. The competitiveness of the focus country is shown to have improved by the positive CE value due to a variety of factors, while the competitiveness has declined by the negative CE value.

#### India, China and the European Union

India, China and Europe were among the world's largest traders in goods. Table 4 indicates that the world's largest exporters were China (USD 2549.08 billion, 16%), EU-27(USD 2492.22 billion, 15%), the United States (USD 1708.26 billion, 10 %) and Japan (USD 757.34 billion, 5 %) and India came on 13<sup>th</sup> (USD 332.70 billion, 2 %) place in world top exporter. The world's largest importers were the US (USD 2678 billion, 16 %), EU-27 (USD 2308 billion, 14 %), China (USD 1810 billion, 13 %) and Japan (USD 767 billion, 5 %) and India came on 8<sup>th</sup> (USD 527 billion, 3 %) place in world largest importers.

**Table: - 4 World Top Traders of Goods in 2018**

Country	Share in Exports	Country	Share in Imports
China	16 %	US	16 %
EU-27	15 %	EU-27	14 %
US	10 %	China	13 %
Japan	5 %	Japan	5 %
India (13 <sup>th</sup> )	2 %	India (8 <sup>th</sup> place)	3 %
Others	52 %	Others	49 %

Source: EUROSTAT

India and China's trade with the EU has increased since 2001. India and China is the largest trade partner of the EU. Table 5 shows that in 2019 the US, UK, China and Switzerland were the four largest partners of the EU. India and China's contributions to EU exports were 1.8 % and 9 %, and in imports of the EU, India and China's share was 2.0 % and 19 % respectively. China is a top importer of the EU and 3<sup>rd</sup> largest exporter, while India occupied 10<sup>th</sup> place in EU's imports and 11<sup>th</sup> place in EU's exports. In 2020, China overtook the United States and became the EU's biggest trading partner. Historically, the US was the EU's largest trading partner.

**Table:- 5 EU-27 Top Trading Partners in Goods in 2019**

Sr. no.	Export Partner	Share	Sr. no.	Import Partner	Share
1	US	18 %	1	China	19 %
2	UK	15 %	2	US	12 %
3	China	9 %	3	UK	10 %
4	Switzerland	7 %	4	Russia	7 %
5	India	2 %	5	India	2 %
6	Other	49 %	6	Others	50 %

Source: EUROSTAT

Table. 6 show that the EU top imported and exported products from India and China in 2019. India and China's share in EU imports in Machinery & Vehicles were 17 % and 54 %, in Chemicals 19 % and 5 % and other manufactured goods 45 % and 37 %. India's share in EU imports was highest in other manufactured goods, while China's highest contribution was in machinery and vehicles 54 %. India's share was highest in machinery and vehicles at 44% of EU total exports and China's share in EU total exports was highest in machinery & vehicles at 55 %.

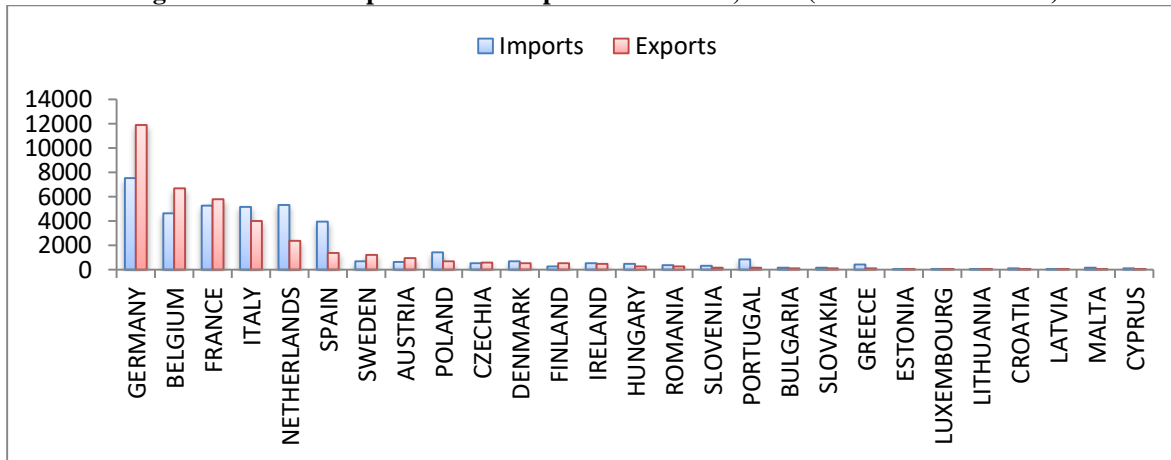
**Table:- 6 India-China Trade with EU by Main Products, 2019**

Categories in Goods	India's share in total imports of the EU	India's share in total exports of the EU	China's share in total imports of the EU	China's share in total exports of the EU
Machinery & Vehicles	17 %	44 %	54 %	55 %
Chemicals	19 %	16 %	5 %	18 %
Other Manufactured Goods	45 %	30 %	37 %	14 %

Source: EUROSTAT

Figure: - 2 indicates the trade relations of India with European Union member countries. As indicated in the figure, Germany, France and Netherland are important trading partners of India. India's trade with Estonia, Lithuania, Latvia and Cyprus is trifling. Germany is also the largest investor in India and imports organic chemicals, machinery, boilers and nuclear reactors from India.

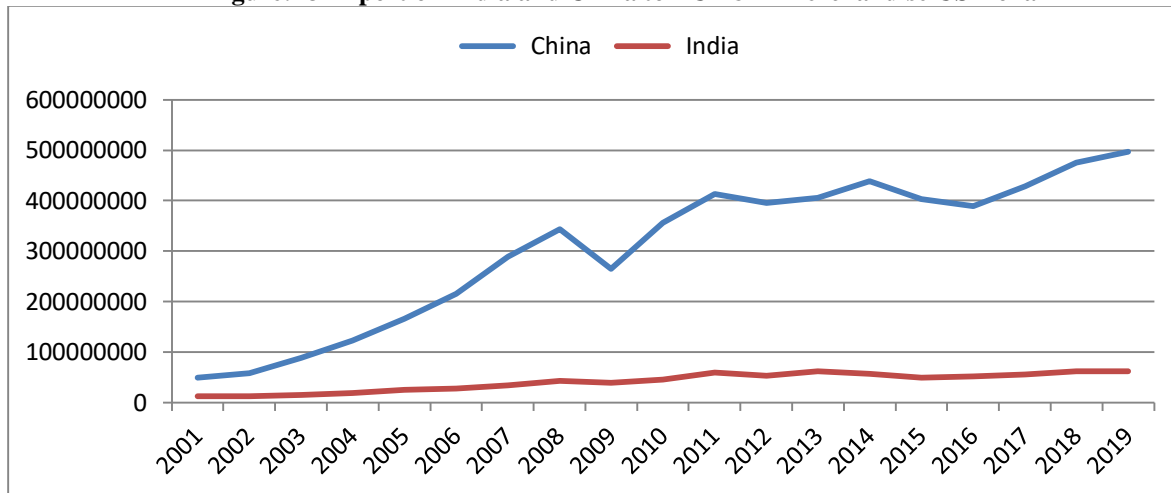
**Figure: - 2 EU-27 Exports to and Imports from India, 2019 (Value in Eur Million)**



Source: Eurostat

Figure: - 3 shows India- China’s exports to EU-28 in merchandise. China’s exports to the European Union have increased very fast in comparison to India since 2001. In 2001 China became a member of the World Trade Organization, and member countries dropped the tariffs on imports from China. Member countries of WTO opened the free trade agreement with China. After becoming a member country of WTO, China's exports increased tremendously in World exports. Most countries prefer China's products due to the lower price and attractive designs the products. But China starts dumping their products for capturing the world markets. There is the rule in WTO that importing countries can impose anti-dumping measures against those countries that dump their products on world markets.

**Figure:- 3 Export of India and China to EU-28 in Merchandise US Dollar**



Source: Eurostat

**Results and Discussions**

As we have seen in the above section that China's exports to European Union have increased tremendously since 2001 on the other hand, India’s exports to the European Union have not increased that much. So here we see the decomposition of export growth in India and China. Both countries’ exports have increased in selected commodities due to the world trade effect, competitiveness effect, commodity composition effect or market share effect. Decomposition of Constant Market Share approach used to see the changes in exports growth of both the countries. Table:-7 indicates that exports of India and China to the European markets increased for all four commodities. The world trade effect means that some part of the growth and decline in the focus country’s export due to the general

growth/decline in world exports. The positive value of WTE shows that the world's trade expanded during the study periods. Here in the table, the value of WTE for all four commodities for India and China is positive. It means during 2001 to 2019 world's export expanded in all commodities. The Commodity Composition Effect has a positive value only for chemical and related products for both the countries and for the remaining commodities value of CCE was negative. The positive value of CCE shows that the demand for exports from India and China is concentrated on chemical and related products; exports of this commodity are growing faster rate than the world's aggregate growth rate in exports. The Competitiveness Effect and Market distribution effect have negative values for all four commodities (Manufactured goods, Machinery and Transport equipment, miscellaneous manufactured articles) for both countries.

**Table:-7 Results of Decomposition of Constant Market Share Analysis**

<b>Result of CMS analysis for Chemicals and related products, n.e.s. periods from 2001 to 2019</b>				
	<b>India</b>		<b>China</b>	
Decomposition	Value	Share	Value	Share
Change in Exports	48398385957	100	148577920938	100
World Trade Effect	924745675460	1910.7	2601262385268	1750.77
Competitiveness Effect	-222159806320	-459.02	-569567292215	-383.35
Market Distribution Effect	-983748576159	-2032.61	-2810155707220	-1891.37
Commodity Composition Effect	329561092975	680.93	927038535105	623.95
<b>Result of CMS analysis for Manufactured goods periods from 2001 to 2019</b>				
	<b>India</b>		<b>China</b>	
Decomposition	Value	Share	Value	Share
Change in Exports	60343188296	100	366132200561	100
World Trade Effect	3097269538298	5132.76	8535727608272	2331.77
Competitiveness Effect	-2398143837852	-3974.17	-4611662357609	-1260
Market Distribution Effect	-121458054824	-201.29	-2132244843690	-582.37
Commodity Composition Effect	-517324457326	-857.3	-1425688206412	-389.4
<b>Result of CMS analysis for Machinery and transport equipment periods from 2001 to 2019</b>				
	<b>India</b>		<b>China</b>	
Decomposition	Value	Share	Value	Share
Change in Exports	57907956908	100	1105137101660	100
World Trade Effect	734398150797	1268.22	18488567481100	1672.97
Competitiveness Effect	-106495666048	-183.91	-3012621477731	-273
Market Distribution Effect	-489890017501	-845.98	-12354167597051	-1117.69
Commodity Composition Effect	-80104510340	-138.33	-2016641304658	-182.28
<b>Result of CMS analysis for Miscellaneous manufactured articles periods from 2001 to 2019</b>				
	<b>India</b>		<b>China</b>	
Decomposition	Value	Share	Value	Share
Change in Exports	35653130232	100	492635985598	100
World Trade Effect	1710500463416	4797.62	16970740599244	3445
Competitiveness Effect	-595329408266	-1669.78	-4177947942983	-848.1
Market Distribution Effect	-1041676548276	-2921.7	-11924713225520	-2420.59

Commodity Effect	Composition	-37841376642	-106.14	-375443445143	-76.31
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Source: Based on Authors Calculation

A negative value of MDE indicates that the European markets were growing slower than the world average for these commodities. The value of the Competitiveness Effect is negative for both countries for all commodities and a negative value indicates that there is a deterioration in the competitiveness of the export of India and China due to price and non-price reasons.

### Conclusion

The above results established that exports of India and China are growing since 2001, and a major part of this growth was contributed by the world's export growth. Both countries are exporting their products to European Union where markets are growing at a lesser rate than the world average. Their exports are concentrated in chemicals and related products. The future growth of India's exports is based on its ability to compete with China in World markets and increase market share for its products in European markets through changes in internal policies towards export-oriented units. India should follow the framework advocated by the thematic group on export competitiveness developed by World Bank. This framework is based on the three complementary elements. The first one is the incentive framework which is related to the allocation of resources among the most productive firms that can compete internationally in long run. The second element is related to reducing trade-related costs. These costs include trade-related physical infrastructure and complementary services and policies related to the supply of efficient workers. The third element includes overcoming market and government failures.

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