EXPORT PERFORMANCE OF ENGINEERING PRODUCTS IN INDIA

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Abstract

Engineering is by far the largest segment in the Indian industry. It is a diverse industry with a number of segments, and can be broadly categorized into two segments, namely, heavy engineering and light engineering. The sector has a comparative advantage in terms of manufacturing costs, market knowledge, technology and creativity. Powered by significant investments in power projects and infrastructure development, the sector has witnessed tremendous growth in recent years. It employs approximately four million skilled and semi-skilled workers and accounts for 27 per cent of the total factories in the industrial sector. Capacity creation in sectors such as infrastructure, power, mining, oil and gas, refinery, steel, automotive, and consumer durables are driving demand in the engineering sector. Exports have played an increasingly important role in India's economic growth in the last two decades. This study analyze the export performance of engineering products of India especially the export performance of top three and bottom three Indian engineering products. The analysis of export performance of six engineering products namely: Iron and steel, hand tools, auto components, zinc and zinc products, pumps, ship boats and floating bodies is done in present study. Analysis shows a decline trend in four engineering products, only two products shows slight increase in exports.

Keywords*: Exports, Engineering Products, commodities, Iron & Steel, auto components, hand tools, zinc products, pumps, ship and boat products.*

Introduction

Way back in 1955-56, the Indian engineering sector was in the process of diversifying and restructuring the narrow export base of the industry and it needed a strong push. EEPC (Engineering Export Promotion Council) was set up in 1955 under the sponsorship of Ministry of Commerce & Industry, Govt. of India for export promotion of engineering goods, projects and services from India. Initially started with a few hundreds of engineering units as a small outfit, with a passage of time it has grown to be the largest Export Promotion Council, having membership of nearly 12,960 from amongst large Corporate Houses, Star Trading Houses, Small & Medium Scale Units (SME), Trading Houses, etc. Out of the total membership of the Council, 60% constitutes the SMEs.

The reasons behind the steady growth in the export of engineering goods from India has been the continuous innovation and setting up quality standards in manufacturing and delivering services. This is evident as a large number of exporters are ISO 9000 or equivalent accredited. EEPC India right from its inception has been insisting the exporting community on the quality

parameter and the Council itself has the distinction of achieving the ISO 9002 accreditation from world renowned KPMG. This has further been upgraded to ISO 9001:2008 for designing and execution of exhibition management services and provision of specialized management, educational, consulting and public relation services to engineering industry.

Engineering exports from India has been steadily growing and the performance has probably exceeded all expectations ever since the birth of the Council. Apart from being one of the largest stakeholders in the total exports out of India, the engineering exporters are the foremost net foreign exchange earner in the country. As the engineering sector is extremely diversified, the Council has set up different Product Panels with a view to ensure that all possible & potential Indian products reach out to the global markets.

Objective of the Study

The objective of the study is to analyze the export performance of engineering products of India especially the export performance of top three and bottom three Indian engineering products. This study analyses the performance of India's exports and the various economic factors which have contributed to its growth. Since manufactured exports comprise a significant share of India's aggregate (merchandise) exports, the study also provides an overview of the export performance of six important commodities; namely, iron and steel, auto components, hand tools, zinc products, pumps ship and boat products.

Functions of EEPC

EEPC fixes annual export target in line with Government of India's Foreign Trade Policy and decides upon various measures to be undertaken. It acts as a bridge between exporters and various bodies of Government of India like DGFT, Customs, Central Excise, RBI, EXIM Bank etc. on policy matters related to exports. It arranges various promotional activities in India and abroad under MDA/MAI scheme of Government of India. EEPC also provides information to overseas buyers about the India's business information. By network of its foreign offices, council assists the member exporters to penetrate overseas market. Finally it undertakes publicity campaign and brings out publications, film, CDs, market survey reports etc. on consistent basis.

Literature Review

The literature available in the area of Engineering Exports includes papers published by individuals and annual reports of EEPC, government, quasi government and private institutions.

The long term trends in India's exports were examined by Patel (1959) who projects a gloomy picture of the traditional exports. This, according to him, was largely due to the world demand for the traditional products. There was no systematic attempt to evolve an export policy. This was disputed by Krueger, Cohen and Manmohan Singh.

Manmohan Singh (1964) isolates the external and internal factors that affect India's exports. He argues that multiplicity of factors influence the exports. This is because of the fact that different commodities face different conditions of demand and supply in the domestic and world markets. Singh (1987) examines the overall export promotion in India: problems and solutions. He described that export promotion is one of the main facets of self-reliance. In fact, the success of our economic development and the bright future of our economy depends upon our export promotion

capacity. Economists, academicians and planners are of the opinion that prospects of export promotion are not too bright and import substitution is the more appropriate policy to follow.

Ifzal (1987) has analyzed the supply factors of Indian manufacturing exports for the period 1967-68 to 1980-81 and observed that export supply was positively affected by relative price and negatively affected by the domestic demand, as an indication of the growth bias against exports. Further, this study separated the relative price effect into effect of the subsidy and the effect of exchange rate. It is found that both are positively affecting exports, while the effect of exchange rate is more than that of subsidy.

Majeed and Eatzaz (2006) examined the determinants of the exports of developing countries. For this, they have selected a sample of 75 developing countries, including India. The period of study was 1970 to 2004 and panel data estimation technique was utilized. The exports as percentage of GDP were regressed on FDI, National saving, Development assistance, Indirect taxes, industry value added (all the above mentioned variables were taken as a percentage of GDP), GDP, GDP growth, real exchange rate, number of telephone per thousand population, and number of television for 1000 populations and total labor force. The study explains that GDP growth, communication facilities, real exchange rate are important determinants of developing country exports.

Prusty (2008) examines the relationship between the exchange rate and exports of India for the period 1992 to 2007 using monthly data. The Granger causality analysis indicated a bidirectional causal relationship between the variables. Further the Johanson-Juselius co-integration analysis also indicated a long run relationship between the exchange rate and exports of India.

Declining from respectable share of 2.00 per cent to 0.50 per cent during 1950 -60, and hovering around 0.50 per cent during 1960-90, India’s share in world merchandise export has increased from 0.56 per cent in 1991-92 to 1.0 per cent in 2005-06 and 1.6 percent in 2010-11. Trade policy reforms in recent past with their focus on liberalization, openness, transparency and globalization as well as creation of WTO have provided an export friendly environment with simplified procedure for trade facilitation (Economic Survey, 2007-08).

Methodology

The study is based on secondary data. Data required for the study has been collected from the Centre for Monitoring Indian Economy (CMIE), Economic survey, major statistics on India's engineering exports have been compiled from information made available by various issues of Annual publications of the Engineering Export Promotion Council (EEPC).

Both descriptive and analytical techniques have been used in the study. These techniques have been employed to delineate major trends in India's engineering exports to various regions in the world in a temporal as well as cross-sectional basis.

The Export Performance of all Engineering Products

The engineering sector is among the top contributors to the total Indian export basket. Engineering exports from the country include transport equipment, capital goods, other machinery/equipment and light engineering products such as castings, forgings and fasteners. The sector accounts for about 20 per cent of India’s total exports and is the largest foreign exchange

earner for the country in terms of merchandised goods. USA being the top most importing country of Indian engineering products. Engineering exports increased by 11.33% year on year and reached US$ 65.23 billion in year 2016-2017 (EEPC Annual report, 2017). With 100 per cent foreign direct investment (FDI) allowed through the automatic route, major international players such as Cummins, ABB and Alfa Laval have entered the Indian engineering sector and have raised the industry's competitiveness. The Indian economy has gained considerable momentum over the last decade. This high growth rate can be in part attributed to the growing contribution of the export sector to the economy.

Indian Engineering Sector

In India, the engineering industry has witnessed tremendous technological progress and consequently expertise has been gained in several areas. Technology whether imported or indigenously developed, has put India on the industrial map of the world. Today, India ranks as one of the top ten industrial nations of the world with the largest pool of technical personnel and scientists in the world.

The Indian engineering sector is divided into two major segments – heavy engineering and light engineering. The sector has a comparative advantage in terms of manufacturing costs, market knowledge, technology and creativity. Capacity creation in sectors such as infrastructure, power, mining, oil and gas, refinery, steel, automotive, and consumer durables are driving demand in the engineering sector.

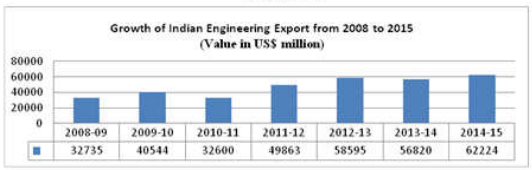
World Engineering Exports vs. India's Engineering Exports

India's engineering exports decreased sharply by 12% in 2015 vis-à-vis 2014. On the other hand, world engineering exports also recorded negative growth during 2015 to the extent of 7% compared to 2014.

Graph 1

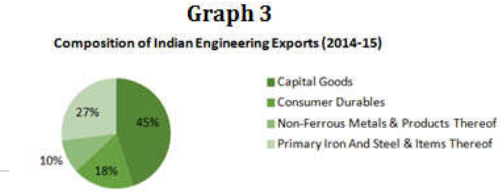
Source: Compiled from annual reports of EEPC

Graph 2



Source: Compiled from annual reports of EEPC

Graph 3



Source: Compiled from annual reports of EEPC

Export Performance

During last five decades, EEPC India has been playing a pivotal role in increasing country's engineering exports and as of date, engineering exports stands at US$ 62 billion in the year 2013-14 in comparison to US$ 10 million that was achieved in the year 1975-76.

As engineering goods consists of capital goods, consumer durables, Non-ferrous metals and products, primary iron and steel items. Today, out of total engineering exports, capital goods and machinery account for around 45%

During the emerging stage, Indian engineering exports were mainly confined to Asia and to a small extent to Africa. Over the years, the scenario has completely changed and as of date, about 30 % of total engineering exports are made for developed

countries. Indian engineering exports rose from US$ 33.7 billion in 2008-09 to US$ 56.7 billion in 2014-15, posting a growth of around 11 per cent. Also, engineering exports showed an annual increase of 14.72 per cent in November 2015 over the corresponding month of 2014. The US and Europe together account for about 60 percent of India's total engineering exports. The US import of engineering goods from India stood at US$ 475 million in November 2015. Indian engineering exports to Saudi Arabia, Thailand, the Netherlands, Malaysia, Czech Republic, Bangladesh and Egypt have also seen significant rise during the period 2012-13 to 2014-15 A key driver for increased engineering exports has been the shifting of global manufacturing bases to countries such as India that offer lower costs and good engineering aptitude.

Government Initiatives

With an aim to give a boost to the manufacturing sector, the government in its interim budget 2014-15 has announced a cut in excise duty, or factory gate tax, on capital goods, consumer durables and vehicles. It would also provide 15 per cent exemption on tax to manufacturing companies that invest more than US$ 18.4 million in plant and machinery over the year 2015. Further, the National Manufacturing Policy has set the goal of increasing the share of manufacturing in gross domestic product (GDP) to 25 per cent and to create 100 million jobs over the next decade.

Analysis

The total exports of the Indian engineering sector stood at US$ 56.7 billion during FY 15. Over the period FY 08–15, exports from the sector posted a compound annual growth rate (CAGR) of 11 percent. Transport equipment is the leading contributor to engineering exports. The segment accounted for 32.5 per cent of the total engineering exports during FY 15. Engineering Services Outsourcing (ESO) is a huge opportunity for India over the next few years. By 2020, the ESO market in India is expected to reach US$ 40–50 billion, driven by the increasing onshore to offshore movement of services.

India- Move in Advance

India is fast moving from exporting low-value goods to developing countries to exporting high-value goods to developed countries. With development in associated sectors such as automotive, industrial goods and infrastructure, coupled with a well-developed technical human resources pool, engineering exports are expected to rise year by year. India's share of global engineering process outsourcing is expected to reach US$ 40 billion by 2020, which will be 30 per cent of the total global market. The Indian electrical machinery industry is likely to double its sales to US$ 100 billion between 2012 and 2022. The industry can also look forward to deriving revenues from newer services and from newer geographies with Big Data, Cloud, M2M and Internet of Things, becoming a reality. Wipro, HCL Technologies, Tata Consultancy Services (TCS), Tech Mahindra and Infosys are account for most of the R&D activities outsourced to India.

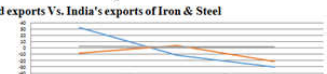
Analysis of Export Performance of Six Engineering products

This part of the study shows the analysis of export performance of six engineering products namely: Iron and steel, hand tools, auto components, zinc and zinc products, pumps, ship boats and floating bodies.

Iron and Steel: India's iron and steel industries are one of the important backbones of the wealth of the country. In 2014-2015, India was the third largest producer of raw steel and the largest producer of sponge iron in the world. The industry produced 91.46 metric tonnes of total finished steel and 9.7 metric tons of pig iron. Most iron and steel in India is produced from iron ore.

Graph 4

World exports Vs. India's exports of Iron & Steel



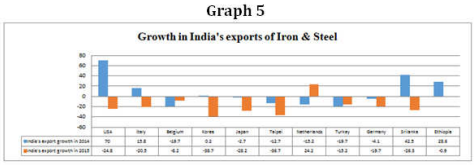
	2013	2014	2015
Growth in India's exports %	32.56	-11.03	-30.53
Growth in World exports %	-7.92	4.5	-21.28
India's Share	2.6	2.21	1.95

Source: Compiled from annual reports of EEPC

India's exports of motor vehicles/cars were significantly positive compared to the negative world exports for 2013. Thereafter India's exports declined and World exports also fell heavily for the same. Share of India's export have dropped over the period.

Graph 5

Growth in India's exports of Iron & Steel



Source: Compiled from annual reports of EEPC

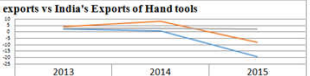
India's exports decreased for all countries in 2015 excluding for Netherlands. India's exports increased significantly for Netherlands from -15.2% in 2014 to 24.2% in 2015.

Hand Tools

In the recent years, as the economic globalization accelerates, the hand tool industry became the main source in hardware tool manufacturer throughout the world. The wide application and larger demands in hand tools are beyond imagination and as a result of this there is an increase of more than 10% every year.

Graph 6

World exports vs India's Exports of Hand tools



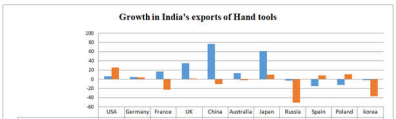
	2013	2014	2015
Growth in India's export %	2.37	0.66	-19.13
Growth in World export %	3.9	8.24	-8.11
India's Share	2.93	2.72	2.4

Source: Compiled from annual reports of EEPC

India's exports growth of Hand Tools has been declining. Share of India's export share has also been declining for the years

Graph 7

Growth in India's exports of Hand tools



	USA	Germany	France	UK	China	Australia	Japan	Russia	Spain	Poland	Korea
India's export growth (2014)	6.7	4.72	16.43	34.78	76.34	13.25	60.8	-2.94	-15.18	-12.06	-2.43
India's export growth (2015)	24.92	3.88	-22.37	1.17	-10.88	-2.17	9.84	-50.56	8.53	10.85	-37.26

Source: Compiled from annual reports of EEPC

The growth in exports of the Hand Tools product by India shows a mixed trend. For some countries the growth has been positive and increasing, for some it has been negative and decreasing except the export growth to USA and Australia which has significantly changed. Exports to Russia, Korea and France experienced a considerable decline.

Auto Components

The Auto Component industry in India has a strong positive multiplier effect as a key driver of economic growth. The auto component industry registered a turnover of USD

Graph 8

World exports vs. India's exports of Auto Components

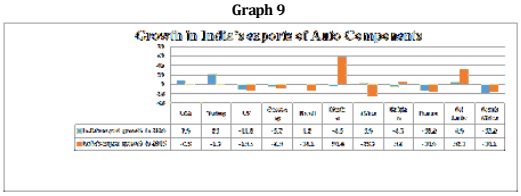
	2013	2014	2015
Growth in India's exports %	6.7	4.1	-5.3
Growth in World exports %	4.5	2.6	-6.4
India's Share	1.1	1.1	1.1

Source: Compiled from annual reports of EEPC

38.5 billion in 2014 - 2015, with a growth of 11% as also CAGR of 11% over the last six years. Indian auto components are exporting to more than 160 countries and it is indeed very heartening that component exports have been growing at a CAGR of 29% over the past six years.

India's exports of auto components declined almost at par with World exports. Share of India's export remained same in last three years.

Graph 9



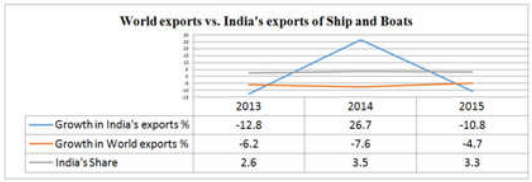
Source: Compiled from annual reports of EEPC

India's auto components exports declined in most of the countries in 2015 the major decline in exports were declined in China. India's exports increased notably in case of Sri Lanka and Mexico.

Ships Boats and Floating Bodies

Exports of Ships, Boats & Floating Bodies in India decreased to 1931.85 USD Million in 2015 from 3086.76 USD Million in 2014. Exports of Ships, Boats & Floating Bodies in India averaged 1818.22 USD Million from 1996 until 2015, reaching an all-time high of 8095.76 USD Million in 2011 and a record low of 36.77 USD Million in 2001.

Graph 10



	2013	2014	2015
Growth in India's exports %	-12.8	26.7	-10.8
Growth in World exports %	-6.2	-7.6	-4.7
India's Share	2.6	3.5	3.3

Source: Compiled from annual reports of EEPC

India's exports of ships and boats share decreased from 3.5% in 2014 to 3.3% in 2015. Growth in India's exports recorded sharper downward trend from 26.7% in 2014 to (-) 10.8% in 2015, while growth in World Exports maintainzed negative trend throughout the three year span.

Graph 11

	Singapore	France	Taipei, Chinese
India's export growth in 2014	-88.2	2853.8	-92.3
India's export growth in 2015	790.3	-99.5	7.6

Source: Compiled from annual reports of EEPC

India's exports of ships and boats in 2015 recorded well for Singapore and Taipei Chinese. For France it was negatively in 2015, facing a substantial dip in imports from India.

Pumps

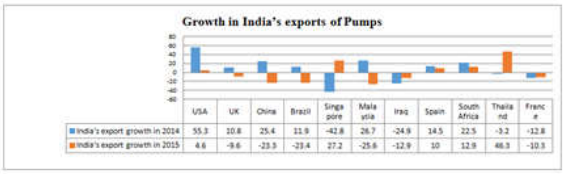
Pumps contribute significantly to the growth of Indian economy. They have proved highly critical in productivity of the core sectors of the economy. The Pumps sector has a net value addition ratio in manufacturing of over 20 per cent. India already exports Pumps & Valves worth over US$ 1.55 billion, serving various engineering segments, to over 100 countries. The exports in this segment are growing at a healthy rate of around 10-12 per cent annually. Additionally the Indian market is already worth over US$ 780 million in pumps.

Graph 12

	2013	2014	2015
Growth in India's exports %	-24.2	0.7	-2.9
Growth in World exports %	-4.6	4.5	-11.3
India's Share	1.1	1	1.1

Source: Compiled from annual reports of EEPC

Graph 13



Source: Compiled from annual reports of EEPC

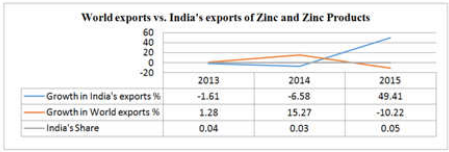
The trend in India's export growth of Pumps more or less resembles that of the global exports for the last three years. Share of India in global exports was largely flat during the last three years.

Indian exports of pumps declined notably in case of China, Brazil, Malaysia, Iraq and France. India's exports increased notably in case of Singapore, Thailand and South Africa.

Zinc and Zinc Products

India is one the first countries that started the process of extracting and smelting zinc. India is not a leading player in the production of zinc but it is moving in the direction to get self-reliant in this context. India has approximately 4.3% share in the total zinc smelter capacity in the Asia pacific region.

Graph 14

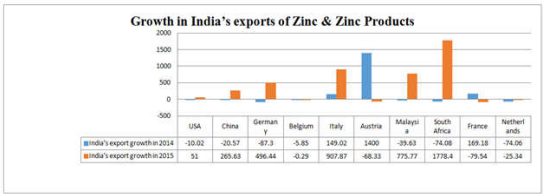


Source: Compiled from annual reports of EEPC

India's exports of zinc and zinc products increased notably in case South Africa, Italy, Malaysia, Germany and China while India's exports have declined in France, Netherlands and Austria.

India's share of Zinc and Zinc products showed a slight increase from 0.03% in 2014 to 0.05% in 2015. Growth in India's exports recorded sharper upward trend than the trend in World exports.

Graph 15



Source: Compiled from annual reports of EEPC

Results

Global exports declined sharply from US$ 18.9 trillion in 2014 to 16.3 trillion in 2015. India's overall exports to the World also declined consistently in three years. Total exports decreased from US$ 317.5 billion in 2014 to US$ 264.4 billion in 2015. Share of India's overall exports which was 1.8% in 2013, decreased to 1.6% in 2015. India's engineering exports also fell but the rate of decline was much lower than the overall trend. Share of India's engineering declined from 0.9% in 2014 to 0.85% in 2015. Major panels recording slight declines in share are: Auto Components and Parts, Hand Tools, Iron & Steel and Ship and Boats.

Recommendations

The following measures are recommended to increase India's engineering exports:

- There is a need to set up a National Data Collection and Information Centre on overseas trade. Right type of overseas communication is also important for exporters.
- Despite liberalization at the policy level, procedures in many areas still remain archaic and cumbersome. These have to be rectified. Many of the procedures need a thorough review to bring them in line with the emerging economic environment.

- Participation in the international trade fairs in a big way, personal contacts and visits to the prospective European clients, America, China, Latin America, Africa etc. and hard-selling approaches to sales are required until a satisfactory image of the Indian engineering items is established.
- Promotional bodies abroad should be upgraded in terms of quantity and quality of staff and the number of offices in developed world should be increased.

Conclusion

After witnessing a slower growth in January 2015, India's engineering exports fell by 0.9% in February 2015 over the same month in the year 2014. Some of the key engineering segments, which normally drive exports, have taken a hit in the month of February 2015: iron and steel exports; motor cars, aircraft parts and shipping components, to name a few. It needs to be emphasized that the exchange rate scenario is relatively favorable vis-a-vis in the year 2014 but the falling global commodity prices in general have resulted in dampening external demand for a range of engineering products.

It needs to be noted that engineering exports are increasingly becoming more responsive to income changes as compared to price changes. UNCTAD has estimated that a 1% decline in global GDP growth leads to 1.88% decline in India's growth of exports, while a 10% reduction in prices will lead to only a 5.4% increase in exports. In fact, manufactured exports in general have remained weak in the past two years, owing to weak growth in our export markets. This means that increasing exports will require much higher price competitiveness than ever before, if global growth remains muted. With the global trade landscape set to become more competitive with the emergence of mega trade pacts like the Trans-Pacific Partnership and the Regional Comprehensive Economic Partnership, increasing competitiveness will be key to export growth.

Manufacturing growth, though decent in January 2015, was lower than that of the revised figure of December. What is therefore required are clear policy signals, further lowering of repo rates and an early announcement of the new Foreign Trade policy to revive the dip.

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