CHAPTER-I

Introduction and Research Design of the Study
1.1 INTRODUCTION

The engineering sector is the largest segment in the overall industrial sectors in India. Indian engineering sector is in the process of diversifying and restructuring the narrow export base of the industry. Engineering goods were the second-largest top commodity product group in India’s export basket in the financial year 2012-2013 (DGCI&S). The engineering sector is broadly classified into heavy and light engineering goods. The heavy engineering segment includes machinery used in power, oil refining, mining, metallurgy, oil and gas extraction, cement production and textile production etc. The light engineering segment constitutes machines related to roller bearings, instruments for the medical and surgical sector, process control instruments, castings, steel forgings and pipes. Since the heavy engineering goods segment mainly consists of the capital goods, it contributes almost 12 per cent of the manufacturing activities. It employs approximately 4 million skilled and semi-skilled workers. The engineering sector has witnessed tremendous growth, powered by significant investments in power projects and infrastructure development.¹

India is one of the leading offshore destinations in delivering Engineering Research and Development (ER&D) services with a market share of 22 per cent in 2012-2013. On a value-added basis, India's engineering sector exported $67 billion worth of engineering goods in the 2013-14 and served part of the domestic demand for engineering goods.² Major markets for Indian engineering exports are China, US, UAE, Singapore, Saudi Arabia, South Africa, Germany, Sri Lanka and UK. The engineering goods industry has been receiving special attention from the Government of India due to the country’s ongoing industrial expansion and infrastructural developments.

Engineering Export Promotion Council was set up in 1955 under the sponsorship of Ministry of Commerce & Industry, Government 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, it has grown to be the largest Export Promotion Council having membership of nearly 13,000 from amongst large Corporate Houses, Small & Medium Scale Units (SMEs), Trading Houses, Star Trading Houses, etc. Out of the total membership of the Council, 60% constitutes the SMEs. The Department of Commerce has set the 12th Five Year Plan, based on a CAGR of 20% for the major sectors of engineering exports Industrial Machinery, Electrical Machinery, and Ship Building. The overall export target for engineering exports at the end of the 12th Five Year Plan has been set at US$ 222 billion in

¹ Engineering Sector in India, 2012  
² Making a case for higher engineering exports, The Financial Express, July 24, 2014
2016-17. Thus, there are many opportunities for the Indian engineering sector. This target is anticipated to contribute to the development of the engineering industry.

The engineering sector is a growing market. Current spending on engineering services is projected to increase to US$ 1.1 trillion by 2020. 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 touch US$ 120 billion by 2015.

It includes transport equipment, machine tools, capital goods, transformers, switchgears, furnaces, cast and forged simple to precision parts for turbines, automobiles and railways. The industry employs about four million workers.

The engineering industry of India includes its growing car, motorcycle and scooters industry, as well as productivity machinery such as tractors. India manufactured and assembled about 18 million passenger and utility vehicles in 2011, of which 2.3 million were exported. India is the world's largest producer of and the largest market for tractors, accounting for 29% of world's tractor production in 2013. India is the 12th largest producer and 7th largest consumer of machine tools in the world.

Petroleum products and engineering goods like machinery and parts, transport equipment and electronic goods account for over 40% of exports (2014-15), as compared to 14% in 1992. India’s engineering exports have fast moved from low-value items to better quality high-value products which have helped them grow alongside Chinese engineering exports.

Experts attribute the rise to the significant competitive edge the Indian companies have acquired in the engineering space and their ability to rise up the value chain. "The engineering goods have moved from the low to the medium end in terms of skill, knowledge and Research & Development applied."
1.2 FOREIGN TRADE POLICY

The foreign trade of India is guided by the Export Import (EXIM) Policy of the government of India and is regulated by the Foreign Trade (Development and Regulation) Act, 1992. EXIM policy contains various policy decisions taken by the government in the sphere of foreign trade, i.e., with respect to imports and exports from the country and more especially export promotion measures, policies and procedures related thereto. It is prepared and announced by the Central Government (Ministry of Commerce and Industry). India’s EXIM policy, in general, aims at developing export potential, improving export performance, encouraging foreign trade and creating favourable balance of payments position.

The Union Commerce Ministry, Government of India announces the integrated Foreign Trade Policy (FTP) in every five year. This is also called EXIM Policy. This policy is updated every year with some modifications and new schemes. New schemes come into effect on the first day of financial year i.e. April 1st, every year. The Foreign trade Policy which was announced on August 28, 2009 is an integrated policy for the period 2009-14.

1.3 OBJECTIVES OF FOREIGN TRADE POLICY 2009-14

- To arrest and reverse declining trend of exports is the main aim of the policy. This aim will be reviewed after two years.
- To Double India's exports of goods and services by 2014.
- To double India's share in global merchandise trade by 2020 as a long term aim of this policy. India’s share in Global merchandise exports was 1.45% in 2008.

1.4 HIGHLIGHTS OF FOREIGN TRADE POLICY 2009-2014

The following Foreign Trade Policy should be followed by the Engineering goods exporters during the study period:

1. Widens scope for products to be included for benefits under Focus Product Scheme (FPS). Additional engineering products, plastic and some electronics get a hike in incentives under Focus Product Scheme from 1.25% to 2%.
2. Twenty-six new markets have been added under Focus Market Scheme (FMS). The incentive available under Focus Market Scheme rose from 2.5 per cent to 3 per cent.
3. To aid technological up-gradation of export sector, EPCG Scheme at Zero Duty has been introduced.
4. Taking into account the decline in exports, the facility of Re-fixation of Annual Average Export Obligation for a particular financial year in which there is decline in exports from the country, has been extended for the 5-year Policy period 2009-14 support for Green products and products from North East.


6. To neutralize duty incidence on gold jewellery exports, it has been decided to allow Duty Drawback on such exports.

7. To reduce transaction and handling costs, a single window system to facilitate export of perishable agricultural produce has been introduced.

8. To simplify claims under FPS, requirement of “Handloom Mark’ for availing benefits under FPS has been removed.

9. Income tax exemption to 100% EOUs and to STPI units under Section 10B and 10A of Income Tax Act has been extended for the financial year 2010-11 in the Budget 2009-10.

10. In order to make India World’s diamond hub, it is planned to establish Diamond Bourses.

11. EOUs have been allowed to sell products manufactured by the in DTA (Domestic Tariff Area) up to a limit of 90 per cent instead of existing 75 per cent, without changing the criteria of ‘similar goods’, within the overall entitlement of 50 per cent for DTA sale.

**1.5 NEW FOREIGN TRADE POLICY 2015-2020**

The New Foreign Trade Policy (FTP) takes an integrated view of the overall development of India’s foreign trade and goes beyond the traditional focus on pure exports. Government of India, Ministry of Commerce and Industry has announced New Foreign Trade Policy 2015-2020 on 01.04.2015.

**1.6 OBJECTIVES OF NEW FOREIGN TRADE POLICY 2015-2020**

- To provide stable and sustainable policy environment for Foreign Trade in merchandise and services.

- To link incentives for export and import with other initiatives such as “Make in India”, Digital India andSkills India, to create an export promotion mission for India.
- To promote the diversification of India’s export by helping various sectors of the Indian economy.
- To gain global competitiveness with the view to expanding its market and better integration with major regions thereby increasing the demand for Indian’s products and contributing to the Make in India initiatives and
- To provide a mechanism for regular appraisal in order to rationalize import and reduce trade imbalance.

The New Foreign Trade Policy 2015-2020 is kept ready to make necessary shape after forming new Government, on 1st of April, 2015. However, the validity of Foreign Trade Policy 2015-2020 will be with effect from the first notification at the time of declaration of FTP 2015-20. The FTP 2015-2020 comes in to force with effect from 1st April 2015. Changes in schemes and incentives are expected in new Foreign Trade Policy 2015-2020. However, the status quo might be maintained under some of the schemes. The Scheme of Foreign Trade Policy 2009-14 with MEIS (Merchandise Exports from India Scheme), one of the two schemes of exports from India.

Earlier there were 5 different schemes under Foreign Trade Policy 2009-14 such as Focus Product Scheme, Market Linked Focus Product Scheme, Focus Market Scheme, Agri Infrastructure Incentive Scrip, VKGUY(Vishesh Krishi and Gram Udyog Yojana) for rewarding merchandise exports with different kinds of duty scrip with varying conditions (sector specific or actual user only) attached to their use.

Now all these schemes have been merged into a single scheme, namely Merchandise Export from India Scheme (MEIS) under Foreign Trade Policy 2015-2020, including details of various groups of products supported under MEIS. The new Foreign Trade Policy 2015-2020 is made product-wise and location-wise and tried to maximize the foreign trade from the country. Although some exporters could not make benefit out of Foreign Trade Policy of 2009 -14, those exporters can contact local office of Director General of Foreign Trade (DGFT) to get assistance. The country groupings benefited with MEIS scheme under Foreign Trade Policy 2015-20 are

- Category A: Traditional Markets (30) - European Union (28), USA, and Canada.
- Category B: Emerging & Focus Markets (139), Africa (55), Latin America and Mexico (45), CIS countries (12), Turkey and West Asian countries (13), ASEAN countries (10), Japan, South Korea, China, Taiwan.
- Category C: Other Markets (70).
Another difference between the schemes under Foreign Trade Policy 2014-19 and MEIS scheme, Merchandise Exports from India Scheme of Foreign Trade Policy 2015-20 is that at present, only the additional duty of customs / excise duty / service tax is allowed adjustment as CENVAT credit or drawback, as per Department of Revenue rules. However under MEIS scheme, Merchandise Exports from India Scheme of FTP 2015-20, rewards for export of notified goods to notified markets under Merchandise Exports from India Scheme (MEIS) shall be payable as percentage of realized FOB value (in free foreign exchange). The debits towards basic customs duty in the transferable reward duty credit scrip would also be allowed adjustment as duty drawback.

Pre policy suggestions to Foreign Trade Policy 2015-2020 have been sent from different Government Departments concerned, Export Promotion Councils, Commodity Boards, Manufacturer’s associations, Traders forum, and other export promotion agencies of government and non government to the concerned authorities to shape new Foreign Trade Policy 2015-2020. Customs and Banking related matters also have been updated after discussing all concerned to meld Foreign Trade Policy 2015-2020 (FTP 2015-20) in such a way to safeguard exporters of the country by resolving their previous issues under Foreign Trade Policy. Federation of Indian Exporters Association has submitted their reports region-wise to strengthen the contents of New Foreign Trade Policy 2015-2020.

The New Foreign Trade Policy 2015-2020 has been designed by including long term and medium term strategy to boost overall growth of India’s foreign trade by enhancing trade competitiveness. By implementing Foreign Trade Policy FTP 2015-2020, the India’s share in world trade is expected to double from the present level of 3% by the year 2020. By taking measures for import substitution at one side, the forthcoming New Foreign Trade Policy 2015-2020 focuses on increasing exports at the present scenario of increasing current account deficit (CAD). The New Foreign Trade Policy 2015-2020 includes necessary measures to boost productivity and earn exportable surplus at competitive rates in exports.

Trade is not an end in itself, but a means to economic growth and rational development. The primary purpose is not the mere earning of foreign exchange, but the stimulation of greater economic activity.

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1.7 HIGHLIGHTS OF NEW FOREIGN TRADE POLICY 2015-2020

- India to be made a significant participant in world trade by 2020.
- Merchandize exports from India (MEIS) to promote specific services for specific Markets Foreign Trade Policy.
- FTP would reduce export obligations by 25% and give boost to domestic manufacturing.
- FTP benefits from both MEIS and SEIS will be extended to units located in SEZs.
- FTP 2015-20 introduces two new schemes, namely "Merchandise Exports from India Scheme (MEIS)" and "Services Exports from India Scheme (SEIS)". The 'Services Exports from India Scheme' (SEIS) is for increasing exports of notified services. These schemes (MEIS and SEIS) replace multiple schemes earlier in place, each with different conditions for eligibility and usage. Incentives (MEIS & SEIS) to be available for SEZs, also handicrafts, handlooms, books etc., eligible for benefits of MEIS.
- Agricultural and village industry products to be supported across the globe at rates of 3% and 5% under MEIS. Higher level of support to be provided to process and packaged agricultural and food items under MEIS.
- Industrial products to be supported in major markets at rates ranging from 2% to 3%.
- Served from India Scheme (SFIS) will be replaced with Service Export from India Scheme (SEIS).
- Branding campaigns planned to promote exports in sectors where India has traditional Strength.
- SEIS shall apply to 'Service Providers located in India' instead of 'Indian Service Providers'.
- Business services, hotel and restaurants to get rewards scrip under SEIS at 3% and other specified services at 5%.
- Duty credit scrip to be freely transferable and usable for payment of customs duty, excise duty and service tax.
- Debits against scrip would be eligible for CENVAT credit or drawback also.
- Nomenclature of Export House, Star Export House, Trading House, Premier Trading House certificate changed to 1,2,3,4,5 Star Export House.
- The criteria for export performance for recognition of status holder have been changed from Rupees to US dollar earnings.
Manufacturers who are also status holders will be enabled to self-certify their manufactured goods as originating from India.

- Reduced Export Obligation (EO) (75%) for domestic procurement under EPCG scheme.
- Online procedure to upload digitally signed document by Chartered Accountant/Company Secretary/Cost Accountant to be developed.
- Inter-ministerial consultations to be held online for issue of various licences.
- No need to repeatedly submit physical copies of documents available on Exporter Importer Profile.
- Validity period of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) export authorisation extended from present 12 months to 24 months.

1.8 STATEMENT OF THE PROBLEM

Export is the key field of the economy of any country. Export is a vital source of earning foreign exchange, which has almost the wealth of the nation. The engineering industry of India is the largest sub-sector of its industry GDP and is one of three largest foreign exchange earning sectors of the country\(^8\). It includes transport equipment, machine tools, capital goods, transformers, switchgears, furnaces, casting and forged simple to precision parts for turbines, automobiles and railways.

Government of India is providing various facilities to engineering sector such as financial assistance, marketing assistance, various subsidies, promotional activities, special awards for exporters and other facilities. Though such facilities are available to engineering sector, there is no significant export growth. India’s share in world export of engineering goods were 25.52% in 2008-09, 21.41% in 2009-10, 23.15% in 2010-11, 22.17% in 2011-12, 21.72% in 2012-13, 22.88% in 2013-14, and 25.65% in 2014-15.

Indian industrial sector has suffered from the depressed demand condition in its export markets, as well as from suppressed domestic demand due to the slow generation of employment. Demand in the engineering goods sector is propelled by the manufacturing, power and mining industries. The problem of global demand has to be factored in designing, packaging, product display due to limited capacities of finance, non availability of raw materials.

\(^8\) Engineering Industry of India IBEF, Ministry of Commerce and Industry, Government of India, April, 2014.
materials at a competitive cost, high transaction costs, low technology levels and lack of access to modern technology.

The major problems faced by the engineering industries are threat of entry of foreign competitors who will be selling products at cheaper rates, the excise duty, sales tax and high interest charges that have placed the domestic sector in a disadvantage position. Hence, governments faced constraints in extending incentives to exports. In this study the researcher has examined the financial and non-financial problems faced by the engineering goods exporters of southern states of India such as Tamilnadu, Karnataka, Andhra Pradesh and Kerala. This study is a fact-finding exercise to assess the potential of export market for Indian engineering goods and analyses the problems faced by this sector in domestic as well as export market.

1.9 REVIEW OF RELATED LITERATURE

In this study, attempt is made by the researcher to analyse engineering goods exports of India. The researcher took serious efforts to collect earlier research studies related to engineering goods exports of India. But the researcher found that there was no research study related to engineering goods exports of India. The present research study undertaken by the researcher is a pioneering one. So the researcher has collected earlier research studies related to export performance, export finance and financial institutions assisting export trade. The findings of such earlier research studies are given below.

Dr. K. Jeychandran in his Ph.D. thesis titled “Utilisation of Export Incentives by Exporters in Tamilnadu” submitted to the Alagappa University, Karaikudi, January 2002, has analysed the motivation value of the export incentives schemes to the exporters, utilisation of export incentives schemes by the exporters, and the opinions of the exporters regarding the procedural aspects of utilisation of export incentive schemes. He has studied utilisation of export incentive schemes such as Duty Drawback, Export promotion Capital Goods, Market Development Assistance and Export Finance by four (Garments, Engineering, Leather and Plastics) categories of exporters in Tamilnadu. This study assessed the extent to which those exporters were motivated by the export incentive schemes. This study attempted to find out the percentage and level of motivation and utilisation of export incentive schemes by the exporters. This study reviewed the procedural aspects involved in the utilisation of the
selected export incentive schemes. In this research study, the researcher found the level of agreement of the exporters on the various procedural aspects of export incentive schemes.

Dr. Saikat Sinha Rov in his Ph.D. thesis titled “Factors in the determination of India’s exports” submitted to the Jawaharlal Nehru University, New Delhi, February 2014 has analyzed the factors under study to obtain an understanding of the pattern of export growth, the associated changes in export structure, and the international competitiveness of exports during this period. This has helped to identify supply and demand factors explaining long-term export performance, both at aggregate and disaggregate levels. Specifically, demand and supply scale factors have been considered as important as relative price effects. An explanation for the post-reforms export growth in terms of these effects has provided the proof of robustness of the demand-supply model estimates. A liberal policy regime relaxes the constraints operating on exports. The relationship between development strategy and export performance, however, holds good only under certain restrictive conditions. The contrary view holds that outward orientation does not necessarily lead to better export performance since the economy often faces deteriorating terms of trade. This alternative view maintains that developing country exports are driven by external market conditions. These divergent views have been incorporated in this study for a better understanding of India's export behaviour.

Dr. Kathikeyan.S in his Ph.D. thesis titled “Production and Export Analysis of Tea in India: A Region-Wise study” submitted to the Madurai Kamaraj University, February 2002 discussed the growth of Tea Exports in India, the export Performance of Tea in India and the problems faced by exporters in detail in this study. The following are the major objectives of the study.

- To study the region-wise trends of growth of tea in India in terms of area of Cultivation, Physical Production and Productivity.
- To examine region-wise export performance of tea in India and its stability of export earnings over a period of time.

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9 Jeychandran in his Ph.D., thesis titled “Utilisation of Export Incentives by Exporters in Tamilnadu” submitted to the Alagappa University, January 2002
10Saikat Sinha Rov in his Ph.D., thesis titled “Factors in the determination of India’s exports” submitted to the Jawaharlal Nehru University, February 2014
To analyse the region-wise temporal variations and spatial integration of prices and sales of tea in India\textsuperscript{11}.

Dr. Sethurajan.S in his Ph.D. thesis titled “A Study on Export Marketing of Cotton Yarn in Coimbatore District” submitted to the Alagappa University, Karaikudi, May 2000 has studied the problems and challenges faced by Cotton Yarn Exporters in Coimbatore District. The sample size of the study is 30 textile mills in Coimbatore District. The major findings of the study are, 60% of the mills are public limited companies and 50% of the mills availed finance from banks and financial institutions. The study further highlights that 22 mills which availed pre-shipment credit and 21 mills which availed post-shipment credit. 57% of the mills export to quota countries and 83% of the mills tested the raw materials at their own laboratory. The study highlights stable government policies alone can solve the export marketing problems\textsuperscript{12}.

Dr. Arunachalam.A in his Ph.D. thesis titled “A Study on Export Performance of Textile units in Karur District” submitted to the Bharathidasan University, Trichy, June 2011 has analyzed the problems of exporters that would be very much useful to make preventive measures and also identify the own production problems, and also help the textile authority to provide valuable suggestions to the exporters and manufacturers. The study analyses problems related to the company for raising its standard. It helps the company to earn more profit and less waste. The specific objectives of the study are to analyse the structure of Textile Industry in India, to analyse the organizational pattern of exporters, to analyse the motivational factor of exporters. The recommendations are to maintain a good raw material supply; Government should ban raw material export. The handloom weavers continue to get work despite the proliferation of power looms and auto looms. This is perhaps because of the growing volume of home furnishing exports from the town and the growing interest in handloom fabrics for home fashion in the international market. Apart from the introduction of auto looms, the home furnishing companies have also implemented technological upgradation in dyeing and stitching operations. While the majority of exporters have shifted

\textsuperscript{11} Kathikeyan.S in his Ph.D. thesis titled “Production and Export Analysis of Tea in India: A Region-Wise study” submitted to the Madurai Kamaraj University, February 2002

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from manual to cabinet dyeing, the stitching facilities are functioning with power driven machines\textsuperscript{13}.

Dr. Venugopal.P in his Ph.D. thesis titled “A Study of the Problems in and Potentials of Leather and Leather goods Exports of India” submitted to the Alagappa University, Karaikudi, August 2004 has analysed the Problems and Potentials of leather and leather goods exports of India. He has analysed the problems faced by tanners and leather goods manufacturers relating to export finance schemes utilization, export documentation process, infrastructure facilities and international trade fairs and buyers-sellers meets. This study reviewed the problems of tanners, leather goods manufacturers and exporters in India.

The researcher hopes that this research study will be useful to the policy makers

- To frame tannery and leather goods development schemes.
- To design incentive schemes for leather and leather goods exporters.
- To take necessary steps to increase leather export of leather goods export and
- To create necessary infrastructure for leather goods production and export\textsuperscript{14}.

Dr. Sridharan in his Ph.D. thesis titled “Performance Evaluation of Export-Import Bank of India” submitted to the Madurai Kamaraj University, December 2002 has studied the origin, growth, various schemes, and performance regarding lending category-wise, scheme-wise, industry-wise, region-wise and also analysed the operational performance of Export Import Bank of India. The ratio analysis has been used to analyse the operational and financial performance of EXIM Bank of India\textsuperscript{15}.

Dr. Muthusamy.A in his Ph.D. thesis titled “ECGC Services to Exporters: a Study with reference to Coimbatore Region” submitted to the Alagappa University, Karaikudi, January 2005 has studied ECGC services to exporters in Coimbatore region. The researcher analysed the various services provided by the corporation such as claims settlement, supply of information, maximum liability fixed and various policies and guarantees issued to the policyholders and level of satisfaction of the policyholders in Coimbatore region. He also

\textsuperscript{13} Arunachalam.A in his Ph.D. thesis titled “A Study on Export Performance of Textile units in Karur District” submitted to the Bharathidasan University, June 2011.

\textsuperscript{14} Venugopal.P in his Ph.D. thesis titled “A Study of the Problems in and Potentials of Leather and Leather goods Exports of India” submitted to the Alagappa University, August 2004

\textsuperscript{15} Sridharan.G in his Ph.D. thesis titled “Performance Evaluation of Export-Import Bank of India” submitted to the Madurai Kamaraj University, December 2002
analysed the business and financial performance of the corporation, utilisation of export finance by exporters and problems faced by the exporter relating to export finance\textsuperscript{16}.

Manmohan Singh (1964) in his study had discussed that export prices are determined by world demand and supply. If the exporting country is small, the exporter cannot much influence the world’s demand and supply. If a country is a major world exporter of any particular commodity, it has distinct possibilities of exercising control over the export prices by influencing the volume supplied. Those who regard a lack of external demand as the major cause of India’s poor export performance are presumably referring to those variables of the demand functions for Indian exports which are beyond India’s influence as an exporting country. The domestic factors that determined India’s export, according to him are domestic demand and the like\textsuperscript{17}.

Deepak Nayar (1976) in his study argued that the fundamental explanation for the actual trends in exports is to be found in internal rather than external factors. Inadequacy of supplies for traditional goods, domestic policies like investment licensing or inadequate infrastructure facilities, shortage of material inputs, the non-price factors designing effective advertising, after sale service and delivery high price are the internal factors\textsuperscript{18}.

A World Bank Report (1980) confirmed that India’s exports did not keep pace with the general growth in exports even from the less developed countries (LDCs)\textsuperscript{19}.

Jain.P.K(1984) has proved “The industry has attained a dimension and capability unrivalled anywhere in the developing world with an exhaustive export list that ranges from small pins to heavy engineering goods”\textsuperscript{20}.

Maneet Kumar (1987) has studied whether “The engineering industry has made rapid strides since the beginning of the planned era. This industry has come to occupy a place of prominence in the economy of the country. As a result of this strengthening of the base and

\textsuperscript{16} Muthusamy.A in his Ph.D. thesis titled “ECGC Services to Exporters a Study with reference to Coimbatore Region” submitted to the Alagappa University, January 2005
\textsuperscript{17} Manmohan Singh, India’s Export trends and the prospects for self-sustained growth, Clarendon press, Oxford University, 1964, pp.19-24
\textsuperscript{18} Deepak Nayar, India’s export and export policies in 1960’s, Cambridge University press, 1976, pp.33-42.
\textsuperscript{19} World Bank, World Bank Report, Oxford University press, New York, 1980, pp.7-19
\textsuperscript{20} Jain.P.K.“Export marketing of Indian goods”, Deep and Deep publication, New Delhi, 1984
diversification of the industry, the country has started exporting engineering products in larger and larger quantities\textsuperscript{21}.

Goldar Biswanath (1989) examined the Determinants of India’s export performance in engineering products. He has analysed in his paper the determinants of India’s export performance with special reference to engineering goods of machinery and transport equipments. The methodologies adopted in this paper are econometric models and time series analysis. The paper determines the determinants of exports as cumulative output, total factor productivity, exchange rate, market conditions, demand etc. the paper provides suggestions regarding the growth of exports engineering goods by formulating proper price competitive strategy. The hypothesis of the paper is “higher productivity leads to better export performance”, but it got rejected due to lack of strong empirical support and lack of data. However, this paper concludes that since engineering products do not form a major part of India’s exports, the economic growth cannot be increased or influenced by its export performance\textsuperscript{22}.

Mitra.N (1991) in his study, “Indian tea industry- Problems and Policies”, observed that tea industry is one of the traditional plantation based industries and India holds a prime position for production, consumption and export of tea. Till recently, together with cotton textile and jute, tea was the main consumption to India’s much needed foreign exchange reserve. It accounts for only about 1.5 per cent of the total export earnings. The reasons thereof may be attributed to the diversification of India’s industrial and foreign trade structure in recent times. Coupled with this is the issue of the sluggish growth in tea production compared to a steady ascend in domestic consumption\textsuperscript{23}.

Jacques Liouville (1992) revealed that the degree of involvement in exports does not directly determine business profitability. It is impossible to confirm that specialized businesses are able to increase their profitability by investing more on foreign markets. This is due to the fact that export means added costs, product adaptation, stock increase, and credit increase consequently; specialization businesses may realize economies of scale in

\textsuperscript{21} Maneet Kumar, Export marketing of non-traditional items: Problems and Prospects, Ajanta Publications, Delhi, 1987
production when they increase exports. It becomes obvious that businesses diversifying in correlated activities benefited from exports when the international environment was more peaceful24.

According to the study of Kaur (1993), Exports, being a major part of India's foreign trade, have assumed a place of paramount importance and play a significant role in economic development process through generating investible surplus and financing imports by earning foreign exchange25.

Singh.D (1994) concluded that the shift towards import liberalization as a tool for export promotion incorporated in India’s export policies in the 1980s had a positive impact on improving India’s competitiveness in several categories of manufactured exports including garments, engineering goods and chemicals26.

Sengupta A.K and P.K.Keshari(1994) in their article, "Study of export trade financing in India with particular reference to commercial Bank: Problems and Prospects" pointed out the role and share of commercial banks in export financing and issues in export financing, that is aspiration and requirements of borrowers and discontentment of banks with the prevailing regulations of export credit. The authors suggested the ways of increasing the flow of bank credit to export sector and restructuring the interest rates. They stressed the need for introducing new innovative service of counter-trade, overseas borrowing, forfeiting, international factoring and bankers’ acceptance facility for accelerating promotion of export27.

Parampal singh and Pankaj Munshi (1994) in their study observed that services given by Banks, Government guidelines, currency risks, increased competition and transportation are the major problems faced by the exporters of the region irrespective of their industry. Enhancing the company’s image by improving the product through technological updating is the main motivational force entailing small exporters to explore international markets28.

Kumar (1995) has contributed an interesting study which analyses the broad trends in India’s export of leather and leather products in the last few years. He remarks that in recent years there has been a great increase in the demand for leather and leather goods in the international market, especially in some of the developed countries, where timing operations are being discouraged due to growing pollution problems and increased labour costs with the abundant availability of the livestock. India is in a good position to take advantage of this situation. In this regard he suggests various steps such as

- Financial incentives
- Expansion of production base
- Modern designs and
- Quality control and standardization

Stephens (1996) revealed that the availability of export credit insurance helps exporters focus on the product development and manufacture. It boosts the confidence, offers protection against commercial risks, provides cost-free information on foreign importers, and opens up access to export finance from commercial banks in the form of pre-shipment and post-shipment credit.

Brahmbhatt et.al. (1996) put forth similar arguments. He finds that the elasticity of export supply doubled, after the government introduced measures to promote exports including exempting export profits from tax, reducing import duties on capital goods and providing export-related loans at low interest rates.

Douglas and Hipple (1997) calculated the Export Attainment Index, Export Potential Index and Export Performance Index. Export Performance Indices were used to indicate the relative level of export attainment versus its potential for each of the 8 metropolitan areas in Appalachia. It was found that only one of the eight regions has attained exports in excess of the amount predicted by the export potential index. The figures for two other metro areas suggest that they are both exporting at nearly the national average and may have little room for more export development. The other five metro areas have significantly less export

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activity than the export potential index would suggest. The degree of deficiency ranges between 6 to 8 percent less than the national average for the five other metro areas\textsuperscript{32}.

Chandran D.Wadhava (1998) found that the failure of India’s exports so far to take off to self-sustaining high growth rates can be directly traced to the (containing) weakness and even failure of India’s policies both at macro and micro level to bring up the required global standard. Specifically, India’s relatively low export performance can be attributed more distinctly to the domestic supply side constraints than to the adverse impact of unfavourable external factors\textsuperscript{33}.

Reddy T.S and Reddy L.V., (1998) show that the small scale industries have made a significant contribution to the Indian economy by increasing exports, generating, large scale employment opportunities, dispersing industrial activities and reducing concentration of economic power\textsuperscript{34}.

Shoham (1998) contends that a firm’s export performance is a composite of its international sales, profitability and export growth. The construct of export performance is important to both firms and nations alike\textsuperscript{35}.

David.B.M.C. and Anley Andrew (1999) in their study examined the relationship between initiating export stimuli and export performance within the context of four specific types of export marketing strategies. The nature of the export stimuli is seen to be associated with performance for some types of strategy but not for all consequently, export marketing strategy act as a moderator of the relationship between export stimulation and performance of an export venture\textsuperscript{36}.


Lall, (1999) provides arguments in favor of the importance of skill formation and technology in determining the changing structure of Indian exports. Therefore, the literature review on determining the factors on Indian exports is rich and diverse with authors coming up with various solutions to help explain India’s export behavior\(^{37}\).

Viviers and Calof (1999) suggested that the value embedded in firms determine their export capability, which in turn influence their conduct of exporting activities and ultimately export performance. This perspective underscores the view that export performance is a responsibility of the firm and its management\(^{38}\).

K.R.Pandit in his article, Export Orientation for Small Scale Enterprises in India” has analysed the performance and problems faced by SSI exports. Most of the Indian SSEs have low and medium technologies in the manufacturing process; many of them sell their goods to trading agencies, merchant exporters as they do not have their own resources to engage themselves in the price competition with multinational enterprises abroad\(^{39}\).

Lall, (2000) has analysed whether the export performance of developing countries changing at different rates and in different directions; some are rapidly expanding export earnings and raising their ‘quality’ (shifting export structures from low-technology, low-skill, and largely labour-intensive products to high-technology and high-skill products) and others are stagnating in terms of both export earnings and quality\(^{40}\).

Leonidou’s work, (2000) is one of the most cited papers that develop a conceptual framework to explain and classify export barriers. He proposed 20 barriers in the field of exporting; existence of keen competition abroad, inability to offer satisfactory prices, deteriorating of economic conditions abroad, lack of government assistance, limited information to locate and analyze foreign markets, high political risk or instability abroad, perception of high business risks and costs abroad, shortage of working capital, high tariff and non-tariff barriers, inadequate transportation and infrastructural facilities, restrictions


\(^{39}\)Pandit K.R.,”Export Orientation for Small Scale Enterprises in India, margin vol.32, No.1 Oct-Dec 1999

imposed by rules and regulations, different customer habits and attitudes, difficulty in locating and obtaining representation, unfavourable foreign exchange rates, different product standards and specifications, inadequate and untrained staff, unfamiliarity of foreign business practice, different cultural traits and language abroad, difficulty in handling documentation and procedures and inability to offer technical after sales service. Using a sample of 100 Cyprus-based exporters, his study categorized these barriers in six groups: corporate resource constraints, environmental differences, export bureaucracy and legislation, government apathy, foreign market entry and operating difficulties and competitive pressures. Then he concluded that problems associated with export competitiveness, including the existence of keen competition abroad and inability to offer satisfactory prices had the greatest obstructing effect.

“Change in India’s Export Composition in the Post Liberalisation Era” an article written by B.Bhattacharyya and Prithwis K concluded that reforms have resulted in a change of the export composition, the movement in favour of technology and knowledge intensive goods and labour intensive products during the period 1991-92 to 1997-98. They have further stated that after liberalization Indian exporters have shifted towards more value added product categories.

Desai.Y.B (2001) in his article titled”Exim Bank’s Evolving Role” has explained the services offered by Exim Bank of India to Indian exporters and financial institutions.

De Silva and De Rocha, (2001) studied 69 exporters from Brazil and indicated that inadequate incentives, strong international competition and exchange rate policies are the most influential obstacles to export activities.

Lu & Beamish (2001) affirmed that at firm level, a better understanding of export performance is important because exporting improves utilization of productive capacity, improves financial performance and competitive edge as well as provides a foundation for future international expansion.

Dr. Badar Alam Iqbal (2001) in his article “India and China Emerging Trends in Trade and Investment” highlighted the commodity-wise exports and imports from China and major constraints like non-tariff barriers adopted by the government in terms of import licensing arrangements, commodity inspection and evaluation and other factors like of information gap and language barriers.  

Rajendran G (2002) the president of Southern India Engineering Manufacturers’ Association (SIEMA), pointed out that the quality of pumps manufactured by the small scale engineering units matched those of MNCs’ quality and was also reasonably priced. He also found that the Indian Pump Manufacturers are in the process of producing goods at the price level of Chinese brands with better quality and better performance. He has suggested that all the organized sectors have to adopt ISO 9000 quality assurance system. This will help the industry to improve quality and enable them to enter into international market.

Dr. Ramesh, B. Agadi, P. Parameshivaiah (2003) in his article, “Export Policy-Promotion and Performance”, has analysed India’s share in world trade and studies the prospects and recent trends in export policy. He suggested that incentives shall be linked with export performance.

Sundaram C.R.S (2003), the secretary (SIEMA) published an article on “Review of Pump Supply Sector in India”. He has pointed out that the similarity between India and Southern, East African countries in respect of soil, monsoon, pattern, climate, literacy level, electric system and users’ method make more demand for India made pump in the African countries market.

As per the study of Ortega (2003), it is important to achieve a better understanding of export barriers, since these barriers waste the resource of firms and threaten the efficiency and effectiveness of a firm’s operations. The negative impact that export barriers can have on

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48Ramesh, B.Agadi,P.Parameshivaiah., The Management Accountant, May 2003
medium and small enterprises’ internationalization behaviours and activities has attracted the attention of many researchers in international business\textsuperscript{50}.

Wu (2003) applied an extended Hecksher-Ohlin model to compare the export performance among the Chinese regions. Variables like government spending, non-state sector development, and foreign direct investment has been included in the model and it has been observed that they affect import intensity positively. Infrastructure development and government spending also have a positive influence on export efficiency. State sector also plays an important role for boosting regional export potential, but the foreign direct investment does not necessarily have any positive influence on export efficiency. It is found that Chinese regions have on an average achieved above 70 per cent of their export potential during 1992-2001. Regional export efficiency indices were calculated and it has been shown that Chinese regions, in general, preformed better in 1998-2001 than the period before 1998\textsuperscript{51}.

Reddy et.al, (2003) computed Nominal Protection Coefficients (NPCs), Effective Protection Coefficients (EPCs), and Domestic Resource Cost (DRC) to measure trade competitiveness. Trade competitiveness was estimated using the three measures for rice in India using the data from Karnataka on the basis of importable hypothesis for the two periods, pre-liberalization (1985-86 to 1991-92) and post-liberalization (1996-97 to 2000-01). Trade competitiveness of a commodity reveals whether a country has an opportunity to engage in export trade. It was found that rice, which is the major crop in the state of Karnataka, had been largely competitive on an importable basis with its NPC values being below unity during the reference period. EPC estimates showed a value of greater than unity in only five years during the 17-year reference period, indicating that the state had protected the crop only in those years. However, for the reference period, the average EPC revealed that Karnataka is an efficient producer of rice. The estimates of DRC revealed that the state had a comparative advantage in rice production\textsuperscript{52}.

\textsuperscript{51} Wu, Yanrui “Export Potential and Its Determinants among the Chinese Regions”, School of Economics and Commerce, University of Western Australia, 35 Stirling Highway, Crawley WA 6009, Australia, 2003.
\textsuperscript{52} Reddy, B.V. Chinnappa; M.S. Raghavendra and Lalith Achoth (2003); “Global Competitiveness of Medium-Quality Indian Rice: A PAM Analysis” in Impact of Globalization on Rice Farmers.
Krakoff (2003) used trade flow analysis to find the potential products and their markets. The different non-tariff barriers and ad valorem duties were used to measure the real barrier to trade for South African exporters. Consumption and import penetration ratio were also estimated to identify the markets\(^{53}\).

Kishor Sharma (2003) also evaluates India’s export behaviour, but with a focus on the influence of increasing foreign direct investment in India on export supply capability. Sharma argues that the success of the East and South East Asian countries suggests that FDI is a “powerful tool of export promotion” as multinational companies, which account for the bulk of the FDI have “well-established contacts” and “up-to-date information about foreign markets”\(^{54}\).

Gorakhia (2003) reveals that closer contracts by participating in international trade fairs/exhibition will expose our garments to buyers in these countries\(^{55}\).

Shanthi Venkataraman (2004) studied the Indian textile industry watering up from a prolonged period of hibernation. Suggesting from over capacity, out-dated technology, labour problems and debt levels that strained profits, the industry has taken a long time to get its act together\(^{56}\).

According to Gopalakrishnan (2004), State Governments and promotional agencies are coming out with plans for developing clusters for a wide range of products-Automobile components, Power looms and Handlooms, Jeans, Knitwear, Food products Grinder, Machine tools, Rubber, Coir, Ceiling fans, Engineering Fabrication, Pharmaceuticals etc\(^{57}\).

Ahmed et al., (2004), interviewed 61 exporters and non-exporters to identify export barriers. Five factors are highlighted in their study’s conclusion: lack of government


assistance, competition from firms in overseas markets, pricing and promotion policies, high foreign tariffs and lack of financial capital\textsuperscript{58}.

Sebastian Morris, Rakesh Basant (2006) in their study found out that small firms bear a very heavy burden in dealing with government. There is a need to come out of the inspector raj syndrome to simplify the umpteen laws and regulation ranging from Labour Compensation Act to the Unionization Act, which needs to be merged. Many specific macroeconomic policy-induced distortions work against the small-scale sector such as tariff inversion, conservative monetary policy, non-aggressiveness of exchange rates, tight credit, perverse incentives in banks, erroneous Sickness Data, underdeveloped venture capital incentive, reservation etc.\textsuperscript{59}

Shri Asherf Illiyan (2006) The study found that Indian engineering exports have shown phenomenal growth over many years and are making distinctive contribution to the overall export effort. It reflects the increased acceptability of Indian engineering products in international market, aggressive marketing strategy, entry into new market, promotional role of Engineering Export Promotional Council and more liberal policies of the Government especially after 1991, etc. The importance of capital goods and management and consultancy services has gone up while those of non-ferrous metals and consumer durables have declined. The major problems of engineering exports are: stiff competition, technological problems, high cost of industrial inputs, high transaction cost, trade barriers, infrastructural bottlenecks and so forth. Setting up of engineering export processing zones, focused approach in terms of identified thrust products and thrust markets, up gradation of technology, sales promotion effort, prompt delivery and after sales services, support to small-scale units, more involvement of large-scale units, setting up of joint ventures, attraction of foreign direct investment, establishment of free trade area or preferential trade agreements, etc. are a few suggestions emanating from the study\textsuperscript{60}.


Helmers and Pasteels (2006) carried out an analysis through formation of a decision tree using four indicators: A) Trade potential at the sector level, based on the gravity equation specification, B) Trade flow analysis at the commodity level, C) Trade costs at the commodity level, and D) Supply and Demand conditions at the commodity level. It measured the trade potential at the sector level using the International Trade Centre’s (ITC) TradeSim1 gravity model. Trade flow analysis at the commodity level indicates different parameters like current trade, indicative trade potentials (measured through the complementarities of trade between countries) and other parameters like average annual growth rates, unit value etc. It also takes into account the competitors in the exporting countries. The trade cost takes into account the import tariff, trade policy instruments and transportation costs. To assess the supply/demand conditions at the commodity level, the paper takes into account the quantitative production data, other production variables (like rate of utilization of production capacity, production efficiency etc.), product characteristics and consumer preference, FDI etc. It identified a few products where all the criteria have been satisfied. By the nature of the approach, it does not arrive at single numbers, indicating precisely the magnitude of export potentials, but at broad qualitative conclusions. Nevertheless, these qualitative assessments allow for identification of products that bear potential and to narrow down the products under analysis61.

The CITI chairman, Mr. Shekhar Agarwal (2006) said that Proactive policy framework, calibrated fiscal interventions like nationalization of excise duties and importantly TUFS were the key drivers of growth, both in production and in investment62.

Syam Salim and Palanisami (2006) explained that export growth estimates for the commodities indicated that there was significant growth in the export parameters for the major marine products with the emergence of new commodities for export, although there was decrease in unit value realization.

The post liberalization period scenario of marine products export registered considerable geographic diversification with the emergence of export markets like South East Asia and Middle East as compared with the pre-liberalization period. The absence of proper

infrastructure to maintain quality standards of marine products is likely to affect Indian exports to a large extent because of rejection of consignments on quality grounds. Rathod, C. B., (2007) described the importance of small scale industrial sector and also the contribution of Indian small scale entrepreneurs in world economy. The main objective of the study was to study the growth and pattern of the SSI sector and identify the reasons for success/ failures, to evaluate the impact of globalization on SSIs and export opportunity and to identify the barriers and constraints that SSIs were facing to cope with globalization. The study analysed that SSI sector in India has been exhibiting a striking export performance export had grown up to double digit from the last ten years. The study concluded that both opportunities and challenges were raised as the impact of globalization on Indian Industry as a whole and the small scale sector in particular. The study found that a major portion of our exports would have to gear up to the new era of boundary less economy. The study has suggested that there was need for simplified legal and regulatory framework, good governance, sufficient and accessible finance, suitable infrastructure and competitive environment.

Moser, Nestmann, and Wedow (2008) described the effectiveness of the export promotion institutions to be positive with empirical evidence as exporting firms overcome the hidden cost of political risk.

For Sousa, Martínez-López, and Coelho, Wheeler, Ibeh, and Dimitratos (2008), Export performance is regarded as one of the key indicators of the success of a firm’s operations. Research into export performance has grown considerably during the past few decades.

Kneller, Pisu and Yu,(2008) in their studies confirmed that firms face export barriers in the form of imperfect distribution of information between buyers and sellers, which

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translates into additional costs to obtain basic information about export markets, identifying the first contact point, as well as divergences in culture as key factors acting as export impediments in international trade.\(^{67}\)

Pillania K Rajesh (2008) published “An exploratory study of Indian Foreign Trade.” He has provided a trade scenario of exports since 1950-51 to 2006-07. The paper shows the progress in foreign trade through various statistical and graphical tools since 1950. The analysis concludes that India’s trade has been dominated by manufactured goods and services for past many decades. It provides a descriptive view of the commodity composition of trade as well as the direction of trade. The author on the basis of his analysis concludes that with a large size of economy, high growth rate, small share in world trade and with the help of various economic theories, it is seen that there is huge untapped potential for Indian foreign trade in years to come.\(^{68}\)

Roy (2009) studied India’s economic liberalization program that did away with the “web of restrictions on trade and investment including FDI” sparked a wave of interest and a vast amount of literature both empirical and theoretical to explain the demand and supply factors that affect India’s export behaviour.\(^{69}\)

Navarro et al., (2010) examined and found that the Export performance can also be defined as the outcomes from the firm’s international activities. From this perspective, export performance is the extent to which the firm achieves its objectives when exporting a product to a foreign.\(^{70}\)

Stoian, Rialp and Rialp (2011) accepted the Multi-dimensionality of export performance, but there is disagreement about which indicators should be used to measure the variable. Most researchers consider two different dimensions; economic (objective) and strategic (subjective). It is believed that objective and subjective measures are complementary


\(^{69}\) Roy, Saikat Sinha, The Determinants of India’s Exports Working Paper #03-09, October 2009, UNCTAD-JUECON Programme, Jadavpur University

in nature and it is advisable to make use of both in an interrelated way in order to provide a more comprehensive picture of export performance\(^7\).

Koksal and Kettaneh (2011) defined export barriers as the attitudinal, structural, and operational and other constraints that hinder a firm’s ability to initiate, develop or sustain international operations\(^2\).

Mpinganjira (2011) studied in Malawi and classified 17 export barriers in six main groups. This research referred to the importance of human-related factors as personnel barriers, including insufficient knowledge about export opportunities and lack of personnel knowledge in exporting\(^3\).

Aman Chadha (2013) in his article has proved that a sharp dip in rupee value against dollar and other major currencies has yielded no gains to exporters who are reeling under a severe slowdown in global demand and have seen their shipments drop, calling for very urgent measures from the government and the industry. While rupee has depreciated about 10 per cent in the last two months against the US dollar and other major currencies, exports of engineering products, among the largest segments of the Indian merchandise export basket, too went down almost in the same ratio, instead of benefitting from currency erosion, Engineering Export Promotion Council, India\(^4\).

Anupam Shah (2014) in his article has mentioned that engineering exports from the country can surpass the $70 billion target in 2014-15, if 3 per cent interest subvention is extended for the entire financial year. Engineering exports in 2013-14 aggregated $62 billion. The US alone accounted for about 15 per cent of the shipments. He said that the current budgetary allocation on this account is Rs 1,200 crore and an additional amount of Rs 500 crore will cover the entire sector. He added that exporters across different manufacturing lines are receiving orders due to an impressive revival of the US in the second quarter of the year, they must get working capital at competitive rates, so that their zeal for higher shipments become...


\(^{74}\)Aman Chadha, “Rupee Depreciation not Helping Exporters: EEPC India”, SME Times, New Delhi, July 18, 2013.
pronounced and maintained. Once enabled, there is no reason, engineering exports cannot exceed $70 billion and emerge among the top sectors in the export basket of the country.\textsuperscript{75}

1.10 NEED AND IMPORTANCE OF THE STUDY

Export business has become complex as well as competitive. The exporters are facing various problems. These problems are related to the government, finance, logistics, human resources, market, infrastructure and interest rates. The industrial growth expects demand in the engineering sector to remain healthy primarily on account of the Government’s increased thrust on infrastructure development. The export market provides more opportunities, and the Indian engineering goods market is looking to contribute significantly to export. The manufacturing and power industries are estimated to contribute to the development of the engineering goods industry. The reasons for selecting the study are:

- For an intensive study, it is advisable to select a southern region which is an important export thrust area in the state of Tamilnadu, Karnataka, Andhra Pradesh and Kerala, because most of the engineering industries are located in this area.
- More importantly, the study is a unique one and the research findings will be useful for engineering goods exports of India. Safeguard measures which are undertaken by the government, such as eradicating tariff protection on capital goods, allowing 100 percent Foreign Direct Investment and lowering custom duties, have contributed positively to the growth of the engineering industry in India.

1.11 SCOPE OF THE STUDY

Commodity-wise and Country-wise export performance of engineering goods in India during the twenty years study, 1995-96 to 2014-15 constitutes the scope of the study. The researcher has analysed the overall export performance of engineering goods in India for the period of twenty years based on secondary data. Also, a sample engineering goods exporters in the southern states of India, Tamilnadu, Karnataka, Andhra Pradesh, and Kerala, is interviewed and surveyed to ascertain the level of satisfaction of engineering goods exporters towards export incentive schemes and export finance schemes.

The different schemes of engineering goods export promotion like Market Development Assistance (MDA), Market Access Initiative (MAI), and Focus Area Programme and also the export earnings of engineering goods are analysed in this study with

\textsuperscript{75} Anupam Shah, “Engineering Exports can Cross $70 Billion this Fiscal: EEPC India”, SME Times, Mumbai July 07, 2014
elicited opinions through primary data. These schemes are now merged into the Merchandise Exports from India Scheme (MEIS) and Services Exports from India Scheme (SEIS) of New Foreign Trade Policy 2015-20. The Foreign Trade Policy 2009-14 putting the Status of Export Holders as Export House, Star Export House, Trading House, and Premier Trading House that certificate has now been changed New Foreign Trade Policy 2015-20 as One, Two, Three, Four and Five Star Export House. The export performance for recognition of Status Holder has been changed from Rupees to US dollar earnings in New Foreign Trade Policy 2015-20. The researcher has taken the Foreign Trade Policy 2009-14 for the study.

1.12 OBJECTIVES OF THE STUDY
The objectives of the study are given below.

- To present an overview of Foreign Trade Policy of India regarding engineering exports.
- To study the commodity-wise export performance of engineering goods in India.
- To study the country-wise export performance of engineering goods in India.
- To study the dynamics of export earnings of engineering goods exports in India.
- To measure the extent of finance and non-finance problems faced by the engineering goods exporters and provide suitable solutions.

1.13 HYPOTHESES OF THE STUDY
The following hypotheses are formulated and tested by the researcher in the present study, namely

1. There is no significant difference in the values of commodity-wise export performance of engineering goods in India.
2. There is no significant difference in the values of commodity-wise export of engineering goods during the period of 1995-96 to 1999-00.
3. There is no significant difference in the values of commodity-wise export of engineering goods during the period of 2000-01 to 2004-05.
4. There is no significant difference in the values of commodity-wise export of engineering goods during the period of 2005-06 to 2009-10.
5. There is no significant difference in the values of commodity-wise export of engineering goods during the period of 2010-11 to 2014-15.
6. There is no significant difference in the values of country-wise export performance of engineering goods in India.

7. There is no significant difference in the values of country-wise export of engineering goods during the period of 1995-96 to 1999-00.

8. There is no significant difference in the values of country-wise export of engineering goods during the period of 2000-01 to 2004-05.

9. There is no significant difference in the values of country-wise export of engineering goods during the period of 2005-06 to 2009-10.

10. There is no significant difference in the values of country-wise export of engineering goods during the period of 2010-11 to 2014-15.

11. There is no significant difference in the values of Region-wise export performance of engineering goods in India.

12. There is no significant difference in the values of Region-wise export of engineering goods during the period of 1995-96 to 1999-00.

13. There is no significant difference in the values of Region-wise export of engineering goods during the period of 2000-01 to 2004-05.

14. There is no significant difference in the values of Region-wise export of engineering goods during the period of 2005-06 to 2009-10.

15. There is no significant difference in the values of Region-wise export of engineering goods during the period of 2010-11 to 2014-15.

16. There is no significant difference between the personal variable and the level of satisfaction towards government measures to improve the competitiveness of the exporters.

17. There is no significant difference between the ownership pattern and capital structure of sample export units.

18. There is no significant difference between the ownership pattern and commodity-wise exports.

19. There is no significant difference between the types of exporter and commodity-wise exports.

20. There is no significant difference between the ownership pattern and preferred mode of payment.

21. There is no significant difference between the market information provided by EEPC and types of exporter.
22. There is no significant difference between supplies of trade information provided by EEPC and ownership pattern.
23. There is no significant difference between status of the exporters and best exporters award.
24. There is no significant difference between status of the exporters and subscription paid for publication.
25. There is no significant difference between ownership pattern and utilisation of export finance from lending institutions.
26. There is no significant difference between commodity-wise export and the utilisation of export finance.
27. There is no significant difference between the types of exporter and the level of satisfaction about export credit scheme.
28. There is no significant difference between the types of exporters and their opinion about the pre-shipment export finance given by the bank.
29. There is no significant difference between minimum premium charged by ECGC and the attitude level of policy holders.
30. There is no significant difference between subsequent minimum premium charged by the corporation and the attitude level of the policy holders.
31. There is no significant difference between the status of exporters and their opinion about the Duty Drawback.
32. There is no significant difference between the types of ownership and the sufficiency of Market Development Assistance.
33. There is no significant difference between types of subsidies and the level of satisfaction about subsidies which is equal to the hypothesis level of the exporters.
34. There is no significant difference between the opinion of ISO certified and ISO non-certified companies about ISO parameters.
35. There is no significant difference between southern states of sample exporters and the level of satisfaction about the infrastructure facilities.
36. There is no significant difference between the types of exporters and the level of satisfaction about the infrastructure facilities.
1.14 OPERATIONAL DEFINITION OF THE STUDY

Foreign Trade

The exchange of goods and services between two or more countries is called foreign trade or international trade.

Export trade

The sale of goods and services to a foreign country is called export trade. The term export means shipping the goods and services out of the port of a country. The seller of such goods and services is referred to as an "exporter" and is based in the country of export whereas the overseas based buyer is referred to as an "importer". In International Trade, "exports" refers to selling goods and services produced in the home country to other markets.

Import trade

The purchase of goods from a foreign country is called import trade.

Trade Balance

The trade balance is also known as the Balance of Trade (BOT). It is the calculation of a country's exports minus imports. Balance of trade is the largest component of a country's balance of payments. Debit items include imports, foreign aid, domestic spending abroad and domestic investments abroad.

Clearing Agents

Clearing agents are the specialized persons engaged in the work of performing various formalities required for taking delivery of goods on behalf of others. They charge some commission for performing these valuable services.

Forwarding Agents

Forwarding agents are the specialized persons engaged in the work of performing various formalities required to forward the goods to the ports of destination on behalf of others. They charge some commission for the valuable service rendered.

Shipping Agents

Shipping agents are specialized agents familiar with shipping companies and with the nature and duration of journey for which the vessels are booked. They being agents do the work on behalf of the exporters and charge commission.
Export Credit

‘Export credit’ is the credit extended to exporter for financing the export transaction.

Small Exporter’s Policy Holders

This is fixed on the basis of anticipated export turnover for the periods of one year not exceed Rs.50 lakhs76.

Merchant Exporter

A merchant exporter is one who does not manufacture the goods, but who purchases goods from local manufacturers and then exports. These exporters book orders directly or through agents.

Direct Export

When a manufacturer or exporter sells directly to an importer or buyer located in a foreign market area, this is called on Direct Export.

Export Promotion

The export promotion policy of government of India may take the form of reducing the rate of interest chargeable by banks on export finance, guaranteeing bank advances to exporters by way of packing credit and export bill purchases, providing insurance cover for exports, and allowing duty drawbacks or cash incentives to exporters.

Foreign Contracts

Goods are traded between two countries under contract of sale/purchase agreed upon by the buyers and sellers. Such contracts not only specify the quality, quantity, price and the period of supply of the goods to be bought and sold, but they also stipulate the mode of delivery, the terms of payment of freight and insurance charges and the mode of payment for the goods.

Foreign Exchange Risk

When the international marketer is to receive payment in a currency other than that of his or her country, the risk exists of a decline (devaluation) in the foreign currency during the time between the signing of the contract and the receipt of the foreign currency. This is also known as Foreign Exchange Risk.

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76 ECGC Booklet, 2014
1.15 METHODOLOGY OF THE STUDY

This study is both descriptive and analytical method. The data required for this study are both primary and secondary. A comprehensive and duly pre-tested questionnaire has been used to collect primary data. The sample selection is based on proportionate sampling followed by random technique. The statistical tools such as Compound Annual Growth Rate, Exponential Smoothing Model, Trend analysis, Gravity Model Frequency Analysis, Garrett Ranking, Chi-Square test, ANOVA, t-test, and Factor analysis are used in this study.

1.16 TYPES OF DATA

This research study is based on both primary and secondary data.

**Primary data**

The researcher designed a questionnaire for collecting primary data, with the assistance of selected Manufacturer Exporter, Merchant Exporter and Manufacturer-cum-Merchant Exporter. Questions related to various aspects of capital, infrastructure facilities, insurance, market development assistance, market access initiative, export finance, duty drawback schemes and required facilities were incorporated in the questionnaire. The questionnaire was duly pre-tested and pilot study undertaken. During the course of the study, discussions were held with experts in export field, Engineering Export Promotion Council (EEPC) Chennai, Southern India Engineering Manufactures Association (SIEMA), Coimbatore and Academicians for designing the interview schedule.

The researcher has collected the Engineering goods exporters addresses from EEPC office at Chennai. The primary data was collected through structured questionnaire in person and 250 samples of Engineering Goods Exporters were collected. Out of the 250 sample exporters, 220 exporters had responded and gave their opinion on level of satisfaction about export of engineering goods in Southern States of India. The researcher has collected the primary data through schedule from 65 out of 80 exporters and from rest of the 155 exporters through questionnaire method.

**Secondary data**

The secondary data were collected from important publications and reports such as (i) Annual published reports of the Engineering Sector in India and Newsletter (ii) Text book of related topic and journals of repute. The researcher utilized the offices of the apex bodies of foreign trade in India, such as Engineering Export Promotion Council, Federation of India Export Organisation, Reserve Bank of India, Southern India Engineering Manufacturers' Association, Department of Economics and Statistics, Director General of Commercial
Intelligence and Statistics, Director General of Foreign trade in India, Centre Monitoring Indian Economy.

The researcher has collected the data regarding export of engineering goods such as Library services available in the Institute of Financial Management and Research, Chennai. Alagappa University, Karaikudi, Bharathiyar University, Coimbatore, Bharathidasan University, Trichy, Madurai Kamaraj University, Madurai and other Universities were utilized by the researcher for collecting secondary data.

1.17 PRE-TESTING AND PILOT STUDY

The researcher distributed the questionnaire to select twenty five respondents at random for the purpose of pilot study. The exporters’ suggestions relating to the construction of questionnaire were carefully assessed and incorporated suitably to make the questionnaire a comprehensive data collection tool.

1.18 TOOLS OF ANALYSIS

The following statistical tools were employed to analyse and interpret the data.

1. Trend Analysis

To study the trend in the area under Commodity-wise, Country-wise and Region-wise export performance of engineering goods in India and in the study area, regression equation of the following form was used.

\[ Y_t = a + bt \]

Where

- \( Y_t \) = Export Value
- \( t \) = Time in years
- \( a \) = Constant
- \( b \) = Regression co-efficient

2. Compound Growth Rate

The compound growth rate with regard to export of engineering goods has been estimated on the basis of the semi-log or exponential function.

\[ \log Y_t = a + bt \]

Where
Y = Exports of Engineering Goods (Rs. in Millions)

\( t \) = Time

‘a’ and ‘b’ are the parameters to be estimated

Compound growth rate = \([(\text{anti log} \ b - 1) \times 100]\)

3. Time Series Modelling and Forecasting

Exponential Smoothing (Holt’s Method) model is applied for forecasting.

The equation used in carrying out exponential smoothing is as follows:

\[
S_t = \alpha X_t + (1-\alpha) (S_{t-1} + b_{t-1})
\]

\[
b_t = \beta(S_t - S_{t-1}) + (1-\beta) b_{t-1}
\]

\[
F_{t+m} = S_t + m \cdot b_t
\]

Where \( m \) = the number of months ahead to be forecasted,

\( F_{t+m} \) = forecast \( m \) periods ahead

\( S_t, S_{t-1} \) = smoothened value \( S_t \) time \( t \) and \( t-1 \)

\( \alpha = \) general smoothing coefficient, \( \beta = \) trend smoothened coefficient

\( b_t = \) trend component.

4. Frequency Analysis

The frequency distributions of the variables were calculated with the help of simple percentage, by writing the formula

\[
FD = \frac{F}{N} \times 100
\]

Where

\( F \) (frequency) denotes the number of respondents, and \( N \) denotes the total number of sample population.

5. Henry Garrett Ranking Techniques

Percentage position = \[
\frac{100(R_{ij} - 0.5)}{N_j}
\]

\( R_{ij} \) = Rank given for \( i^{th} \) item \( j^{th} \) individual

\( N_j \) = Number of items ranked by \( j^{th} \) individual

The percentage position of each rank thus obtained was converted into scores by referring to the table given by Henry Garrett. Then for each factor the scores of individual respondents were added together and divided by the total number of respondents for whom
the scores were added. These mean scores for all the factors were arranged in the order of their ranks and inferences were drawn.

6. Chi-square Test

The Chi-square test is a useful method to compare experimentally obtained data with those expected theoretically. The following formula has been used to compute the test.

$$X^2 = \frac{(O-E)^2}{E}$$

$$E = \frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}$$

O – Observed Frequency
E – Expected Frequency
DF – Degrees of Freedom
DF = (r-1) (c-1)
R – Row
C – Column

If the calculated P-value is less than the particular confidence level, say 5% level, it is concluded that the level of attitude is dependent upon the variable on which Chi-square is computed.

7. Opinion about the aspects in a Likert Five Point Scale

Exporters have given their opinion about the aspects in a Likert five point scale viz., Strongly agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree attaching weights of 5,4,3,2 and 1 are assigned in order to give several expressions, the direction of the weighted average, being determined by the favourable and unfavourable selection of the variables.

Opinion of Exporters

The responses of exporters were given scores to their expressions and the total variables were obtained. Arithmetic mean and Standard Deviation was computed from total
opinion score of all exporters. In order to classify the exporters as per opinion, total scores of the five variables were taken into account.

- The exporters’ total scores were equal or more than that of mean score plus S.D were considered to have opinion which is high.
- The exporters Scores were below mean score minus S.D were considered as their opinion is low.
- The exporters Scores between mean plus standard deviation and mean minus standard deviation were considered as opinion is moderate.

8. Factor Analysis

It is carried out for reducing the dimensions of the variables. This multivariate statistical technique is used for three primary reasons:

- Reduce the number of variables, from large to small
- Establish underlying dimensions between measured variables and constructs, and
- Provide construct validity evidence

9. Gravity Model

The gravity model is widely used in econometric analysis of international statistics. For the foreign trade, the gravity model analyses the determinants of bilateral trade flows, the goal being the development of more precise predictions on the bilateral trade.

The econometric model proposed to explain India's trade with partner countries has the following form:

\[
\ln BTF_i \text{ (Engineering Goods)} = \beta_0 + \beta_1 \ln GDP_i + \beta_2 \ln \text{Per Capita GDP}_i + \beta_3 \ln \text{Distance}_i + \beta_4 \text{Language dummy} + \epsilon,
\]

- BTF$_i$ represents the bilateral trade flows between India and the partner country $i$
- GDP$_i$ is the gross domestic product of the partner country $i$
- Per Capita GDP$_i$ is the measure of the partner country $i$
- DIST$_i$ is the distance in kilometres between New Delhi and the capital of the partner country $i$
- Language dummy is a dichotomical variable that indicates whether the partner country made significant difference in language of India or not.
1.19 SAMPLING SCHEME OF THE EXPORTERS IN SOUTHERN STATES OF INDIA

The sample selection was based on random technique. The total membership of the council for Southern State of Engineering Export Promotion Council with 2,203 during 2014-15 constitutes population of this study. The population covers southern states of India such as Tamilnadu, Karnataka, Kerala and Andhra Pradesh and 10 per cent of the respondents from each state were selected as sample respondents. The details of the sampling plan are furnished below in table 1.1

<table>
<thead>
<tr>
<th>State</th>
<th>Total Population(Exporters)</th>
<th>10% of the sample units for the Total Population(Exporters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamilnadu</td>
<td>1250</td>
<td>125</td>
</tr>
<tr>
<td>Karnataka</td>
<td>403</td>
<td>40</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>301</td>
<td>30</td>
</tr>
<tr>
<td>Kerala</td>
<td>249</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2203</strong></td>
<td><strong>220</strong></td>
</tr>
</tbody>
</table>

Table 1.1 reveals that the researcher has chosen 125 sample exporters in Tamilnadu, 40 sample exporters in Karnataka, 30 sample exporters in Andhra Pradesh, and 25 sample exporters in Kerala. The sample units are located in Chennai, Coimbatore, Salem, Bangalore, Mysore, Belgaum, Hyderabad, Secunderabad, Trivandrum, Cochin and Ernakulum.

The researcher has collected the information from Status of the exporters in Southern States of India such as 125 exporters Tamilnadu cover 66 for Small Exporter(SE), 35 for Export House(EH), 8 for Star Export House(SEH) and 16 for Trading House(TH), 40 exporters Karnataka cover 27 for Small Exporter(SE), 7 for Export House(EH), 2 for Star Export House(SEH) and 4 for Trading House(TH), 30 exporters Andhra Pradesh cover 12 for Small Exporter(SE), 10 for Export House(EH), 5 for Star Export House(SEH) and 3 for Trading House(TH), and finally 25 exporters Kerala cover 14 for Small Exporter(SE), 6 for Export House(EH), 3 for Star Export House(SEH) and 2 for Trading House(TH).

1.20 PERIOD OF THE STUDY

India has been exporting engineering goods for a very long time. This study has taken a period of 20 years from 1995-96 to 2014-15. Exports of engineering goods during the 20 years period is analysed in this study. The primary data was collected during the period from March 2014 to February 2015.
1.21 COLLECTION OF DATA AND PROCESSING OF DATA

The secondary data were collected from the various websites of engineering goods export performance in India during the study period of twenty years only (1995-96 to 2014-15). To obtain primary data, the list of the exporters of southern states of India was collected from the four states. Using this list, the exporters were randomly sampled, as detailed in the sampling plan.

The sample engineering goods exporters were interviewed for Tamilnadu (65 out of 80) Manufacturer Exporter, Merchant Exporter and Manufacturer cum Merchant Exporter and the rest of the exporters through questionnaire method. A good rapport was created with the exporters before the interview was started. The interview was quite informal and in the natural conversational style. The interview schedules thus prepared were thoroughly checked to ensure accuracy, consistency and completeness. On an average each interview was about more than an hour. Manual analysis of data has been done. For applying statistical tools in the analysis, statistical packages have been used.

1.22 FRAMEWORK OF ANALYSIS

The collected data were processed with due care and attention and the tabulation done based on the nature and size of the data gathered. Relevant statistical tools were used for analysis.

Statistical tools such as Frequency analysis, statistical summary such as mean, standard deviation, co-efficient of variation, compound annual growth rate, trend analysis, and test of significance based on F-statistics. CAGR has been used to find the export growth during the past twenty years 1995-96 to 2014-15. The trend analysis has been done to study the export trend during the period under study.

1.23 PREPARATION AND CONTENTS OF THE QUESTIONNAIRE

The questionnaire consists of the following parts.

Part-I consists of the questions relating to the profile of the exporters such as age, sex, marital status, educational qualification, types of business and experience in export business.

Part-II contains questions relating to export performance, such as types of the exporter, status, capital structure, 100% export oriented units, Usage of Electronic Data Interchange, membership in engineering export promotion council, best exporter awards,
participation in trade fairs, commodity exported and exporting countries with value of exports, and methods of payment.

**Part-III** elicits the information on ECGC policies taken by the exporters, such as ECGC policies taken by exporters, period, time taken by ECGC issue policy, premium rates, settlement of claim nature of credit availed, sources of borrowings, problems faced by exporters for availing export finance, purpose of pre-shipment and post-shipment advance, amount of credit availed, recommended interest rates.

**Part-IV** consists of questions relating to export incentive schemes/Financial assistance taken by the exporters such as sources of borrowings, duty drawback, market development assistance and market access initiative and focus area programme, export earnings subsidy, and ISO certified.

**Part-V** consists of questions relating to satisfaction of engineering goods exporters towards financial and non-financial problems and infrastructure facilities. The responses are recorded in the Likert’s five point scale (strongly satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, strongly dissatisfied).

### 1.24 LIMITATIONS OF THE STUDY

The present study has the following limitations

- The study is limited to twenty years period of the commodity-wise and country-wise export performance of engineering goods in India.
- The researcher has collected information from 220 sample engineering goods exporters in southern states of India only.
- In the study area, majority of the exporters are Professional & Technical level and even well reputed companies hesitate to give required information.
- The state-wise (southern) export performance of engineering goods data is not analysed for this study.
1.25 PLAN OF THE STUDY

The study is divided into six chapters. Chapter I is “Introduction and Research Design of the Study” that deals with Introduction, Overview of Foreign Trade policy, Statement of the Problem, Objectives of the Study, Scope of the Study, Review of the Related Literature, Period of the Study, Operational Definition, Methodology, Preparation and Contents of the Questionnaire, Pre-testing and Pilot Study, Sampling, Statistical Tools used, Research Hypotheses and Chapter Classification.

Chapter II contains “Commodity-wise and Country-wise Export Performance of Engineering Goods Exports of India”. India’s main competitors and commodity-wise India’s share in world market are analysed in this chapter.

Chapter III contains “The Dynamics of Export Earnings of Engineering Goods Exports in India” that examines the Gross Domestic Product, Per Capita GDP, Geographical area, Language difference, Export and Import performance trade balance relating to engineering goods export performance of India and partner countries.


Chapter V titled “Financial and Non-Financial Problems faced by the Engineering Goods Exporters in Southern States of India” analyses the problem of export documentation, factors affecting the export price of the product, delay in availing export finance, problem of infrastructure facilities at the port, level of satisfaction towards financial and non-financial problems faced by the engineering goods exporters and level of satisfaction of government measures.

The final chapter of the research study is “The Summary of Findings, Suggestions and Conclusion”. It also reveals various problems confronting the engineering goods exporters and valuable suggestions to improve the effective production of the engineering goods exports of India.