

**DETERMINANTS OF FIRM EXPORT PERFORMANCE AND
MODERATING EFFECT OF SPECIAL ECONOMIC
ZONE PROGRAM**

Thesis
Submitted to the University of Calicut
for the award of degree of
Doctor of Philosophy in Commerce

By

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DECLARATION

I hereby declare that the thesis entitled **Determinants of Firm Export Performance and Moderating effect of Special Economic Zone Program** submitted to the University of Calicut for the award of Degree of Doctor of Philosophy in Commerce under the guidance and supervision of Dr. P.M.Habeeburahiman , is a record of bonafide research work done by me and no part of the thesis has been presented for the award of any degree, diploma, fellowship, or other similar title or recognition of any University/Institution before.

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ABBREVIATIONS

AEZs	-	Agriculture Export Zone
ANOVA	-	Analysis of Variance
APR	-	Annual Performance Report
ATM	-	Automated Teller Machine
AVE	-	Average Variance Extracted
BoA	-	Board of approval
BTPs	-	Bio-Technology Parks
CFA	-	Confirmatory Factor Analysis
CSEZ	-	Cochin Special Economic Zone
DC	-	Dynamic Capability
DC	-	Development Commissioner
DGCIS	-	Directorate General of Commercial Intelligence and Statistics
DGFT	-	Directorate General of Foreign Trade
DTA	-	Domestic Tariff Area
EHTPs	-	Electronic Hardware Technology Parks
EPCES	-	Export Promotion Council for SEZs and EOUs
EPPs	-	Export Promotion Programs
EPZs	-	Export Processing Zones
EU	-	European Union
EXIM	-	Export Import
FAQ	-	Frequently Asked Questions
FDI	-	Foreign Direct Investment
FPs	-	Free Ports
FSEZ	-	Falta Special Economic Zone
FTZ	-	Free Trade Zones
FZ	-	Free Zones
GST	-	Goods and Service Tax
HTMT	-	Heterotrait-monotrait
IEs	-	Industrial Estates
IGST	-	Integrated Goods And Service Tax
IT/ITES	-	Information Technology/Information Technology Enabled Service

KSEZ	-	Kandla Special Economic Zone
LoA	-	Letter of Approval
MAT	-	Minimum Alternative Tax
MCS	-	Management Control System
MEPZ	-	Madras Export Economic Zone
MNCs	-	Multinational Corporations
MoCI	-	Ministry of Commerce and Industry
MSTC	-	Metal Scrap Trade Corporation Limited
NPA	-	Non Processing Area
NSEZ	-	Noida Special Economic Zone
PLS-SEM	-	Partial Least Square-Structural Equation Modelling
R&D	-	Research and Development
RBV	-	Resource-Based View
RSE	-	Residual Standard Error
RTC	-	Resource Transformation Capability
SCB	-	Structure Conduct Performance
SDF	-	Standard Design Factory
SEEPZ	-	Santacruz Special Economic Zone
SEZ	-	Special Economic Zone
SMEs	-	Small and Medium Enterprises
STPs	-	Soft Technology Parks
SWCM	-	Single Window Clearance Mechanism
TNEB	-	Tamilnadu Electricity Board
UAC	-	Unit Approval Committee
UEZs	-	Urban Enterprise Zones
UTs	-	Union Territories
VIF	-	Variance Inflation Factor
VSEZ	-	Vizag Special Economic Zone

Chapter 1

Introduction

1.1 Background of the study

One of the most popular ways to enter international markets is exporting due to minimum resources, lower risks and allow for greater structural and strategic flexibility (Czinkote & Ronkainen, 2007). Exporting plays a vital role in the economic growth of a country. The growth of the economy and export are positively related. When the former increases, the later also increases. Increase in export leads to increase in domestic production thereby increase in employment, balance of payment and overall standard of living. Having highest export trade is essential to be a developed economy. The export success of a country depends upon the individual performance of export ventures. Exporting is not that easy, it involves a number of hurdles starting from procedural hindrances to environmental obstacles. Hence the export performance of a firm has been influenced by macro and micro level factors. The internal factors are within the control of the firm. However, the external factors are beyond the control of a venture. In order to increase export performance, the firms are required to identify the internal factors influencing their performance and bring them under control.

At the macro policy level, governments around the world are concerned about ways to improve their exporting firms' performances in the export markets, since exports are considered an engine of economic growth. Promoting national exports is therefore a top priority of many public policy makers, mainly because national exports provide the means to increase employment opportunities for local people, generate foreign exchange to finance imports, enrich public funds with additional tax revenues, create backward and forward linkages in the economy, and achieve higher economic growth and living standards (Archer & Steven, 1989) For this, the government have been implementing various programs to motivate

exporters to achieve competitive position in the export market. The government intervention has thus created positive impact on export growth. They act as a facilitator in export by controlling barriers and framing transparent policies to enhance export.

The foreign trade policy of the government has a great role in integrating local economy with global economy by giving special treatment to firms engaged in international business to increase the competitive position of the country. The govt. is framing and implementing new policies and programs to boost export from India and making changes to it as and when needed. Government has established a number of organizations to provide different types of assistance to the exporters. Apart from the organizations established exclusively for the export promotion of a particular product or industry like tea and coffee board, rubber board etc., there are a number of other institutional set ups that assist the export sector.

Among these Special Economic Zone scheme is an important one, which has been started as a part of Export Import (EXIM) policy, 2000.

1.1.1 Special Economic Zone Program in India: The concept

In India, SEZs concept was introduced in the EXIM policy statement of 1997-2002, almost a decade after the introduction of India's reform processes, and in response to challenges emerging out of economic liberalisation initiated all over the world. In fact, SEZ is modified policy with a number of adjustments made along with a new set of instrument. Generally, SEZs are defined as geographically delimited areas administrated by a single body, offering certain incentives to businesses, which physically locate within the zone. The category 'SEZ' covers a broad range of Specific Zones including Free Trade Zones (FTZs), Export Processing Zones (EPZs), Free Zones (FZs), Industrial Estates (IEs), Free Ports (FPs), Urban Enterprise Zones (UEZs) and others. These different terms have been used over time reflecting the variety of activities performed in Zones.

The concept of SEZ is based on the framework of the cluster system. SEZs are considered as industrial clusters where industrial and business units realize

economies of scale and other advantages, which help in reducing the cost of production of the operating units. Due to the large incentives provided by the centre and the state governments, removal of bureaucratic controls, availability of infrastructural facilities and non-application of labour laws, many firms (both Indian and foreigner) would find it economical to locate their units in SEZs. The competitive advantage within these zones would attract massive investment and make them an engine of growth and industrialization. The massive investment in these zones would generate many employment opportunities and would help in shifting the workforce from agricultural sector to industrial and tertiary sectors.

1.2 Statement of the Problem

In international business, some firms succeeded while others failed. In order to be a successful exporter, one has to gain knowledge and expertise in exporting. The success in an export depends upon a number of factors. Understanding the factor that has a positive impact on firm's export performance is the crucial step in internationalisation. According to the Resource Based View of strategic management, a firm having export related resources and capabilities would succeed in the market. Nevertheless, these things are internal to a firm.

Large number of studies have been made in different parts of the world on the area of determinants of export performance. The main theory contribute to this study is Resource Based View(RBV). Initiated in the mid-1980s by Wernerfelt (1984), Rumelt (1984) and Barney (1986), the Resource-Based View (RBV) has since become one of the dominant contemporary approaches to the analysis of sustained competitive advantage (Bridoux, 2004). Early treatments of the RBV identify resources as the basis for firm success. Resources are a bundle of tangible or intangible assets like resources, capabilities, knowledge, commitment etc. the firm has that enable the firm to implement strategies which lead to efficient and effective firm performance (Barney, 1991).In the case of dynamic capabilities , capabilities are given more preference rather than resources that lead to firm performance and then to success. (Morgan, Vorhis, & Mason, 2009). Capabilities consist of the internal routine, skills and processes that helps the firm to adapt to the

external environment and make use of the resources well (Teece, Pisano, & Shuen, 1997). While analysing the studies related with export performances, the researcher found that there is no homogeneity in the selection of dependent variables. Each study is unique in choosing dependent variable of export performance. Therefore, the results of the studies are contradictory. There is no consensus in selecting a uniform definition in connection with model development and hypothesis formulations for determining the factors, which influence the firm export performance (Freeman, 2009).

In addition to firm specific factors, there are several external factors which are beyond the control of the firm like export barriers which prevents the growth in export. In order to overcome these hurdles information, experience and resources are needed for the firms (A.K.Shamsuddoha, 2004). Here arises the importance of export promotion programs of govt. They provide information, knowledge, experience and resources to the firm. Export Promotion Programs motivate the business community and enable them to achieve competitive advantage. Govt of India has implemented bundle of programs and schemes to promote export. Some schemes are market focus some are product focus.

Special Economic Zone programme is a distinct one which was introduced in 2000 as a part of EXIM policy. The objective was to provide an internationally competitive environment for exports that would in turn earn precious foreign exchange for India. However, this did not gain confidence in investors. Therefore, the govt. Enacted SEZ Act in 2005. The new law aimed at encouraging Public Private Partnership to develop excellent infrastructure and attract investment, boost economic growth, exports and employments. The main purpose of setting up of SEZ was increasing export from India by providing fiscal and non-fiscal incentives. The growth rate of total export from India is -3.9% in 2019-20 compared to 18% in 2018-19. However, the growth rate of SEZ export is 13.6% in 2019-20 compared to 20.7% in 2018-19. The contribution of SEZ export in total export was 5% in 2005-06, but it has reached at 35.9% in the year 2019-20. These statistics shows the uniqueness of the program itself.

However certain criticisms are raised against SEZ policy of India like imposing of Minimum Alternative Tax (MAT) de-motivated entrepreneurs, SEZ procedures in each stage of operation are complex, units are working only for availing tax benefits, starting a business unit outside SEZ is more fruitful than operating within SEZ premises, the programme has not much relevance to the beneficiaries, bulk revenue is forgone by the govt in the form of tax exemption etc. The units operating inside SEZs are facing a number of problems. Problems include low quality of infrastructure, unavailability of certain infrastructure, problems with governance, problems with custom clearances, authorities' attitude on dealing the complaints and withdrawal of MAT (Minimum Alternative Tax) benefits.

The role of export promotion programs in the export performance or use of export promotion programs have also attracted the attention of many scholars. In relation with Special Economic Zone, studies are mainly focused on the side of beneficiary (firms situated in SEZs) and developer. From the developer's side, most studies are concentrated on four main topics. The first category included studies on the performance evaluation of Special Economic Zones. It includes the evaluation of SEZ program as a whole, comparative study of various SEZs or comparison of India's SEZ with other countries especially China. The second area of study involves the social cost benefit analysis of SEZs, which shows the success of the program by comparing the benefits generated by the program with the costs involved in it. The third category contains the studies related with the environmental and developmental issues like land and rehabilitation problems. The final category of studies are related with the working condition and well-being of workers in the SEZ. From the beneficiaries' point of view, some studies analysed the effectiveness of the policy through the perceived level of satisfaction by the exporters. However, a comprehensive study on the role of special economic zone in export performance is lacking.

The solution to all the above-mentioned problems can be found out by conducting a study measuring the effectiveness of the policy. It will tell what factors influence the export performance of firms, the relevance of the policy and its impact

on the beneficiaries' performance (exporting firms). The success of any policy depends upon the satisfaction of its beneficiaries. Therefore, the performance of SEZ programme can be evaluated from the perspective of entrepreneur. This study will light upon the strength and weakness of the policy by reviewing the export performance of SEZs in India for the past 20 years, measuring various benefits provided by the program to the beneficiaries and moderating effect of the program along with other factors on the export performance.

Therefore, this study tries to find out answers for these questions;

- What is the export performance of SEZs in India?
- How much does it contribute to the total export of India?
- Is there any variation in the contribution sector wise, zone wise, state wise and ownership wise?
- What are the zone levels factors determining the export?
- What factors attracted the exporters to locate their units at SEZ ?
- Whether the availability of the incentives was, the major factor attracted them to SEZ?
- What is the level of satisfaction of units with reference to infrastructure, governance access to outside facilities and incentives?
- How much useful the policy is?
- What are the factors influencing the export performance of firms?
- Do the benefits on being situated in Special Economic Zone strengthen the relationship between determinants of firm export and its export performance?
- If yes, which are they?

1.3 Significance of the Study

The SEZ Act 2005 envisages key role for the State Governments in Export Promotion and creation of related infrastructure. It is expected that this will trigger a large flow of foreign and domestic investment into SEZs, in infrastructure and productive capacity, leading to the generation of additional economic activity and creation of employment opportunities.

Many export promotion programs are available to an entrepreneur who wishes to start an exporting unit including Market Development Assistant scheme, Duty exemption and Remission scheme, Merchandise Export from India Scheme etc.. Apart from this, An SEZ programme is a unique one. Because, it provides almost all the benefits under one mechanism. It not only provides assistances but also infrastructure facility, various fiscal and non fiscal incentives, easy procedures in all the phase. The latest data on share of SEZ export in total export of India (5% in 2005-06 and 35.9% in 2019-20) shows a growth compared to the diminishing growth of total export from India (25.3% in 2006-07 and -3.9% in 2019-20).

However, SEZ export is showing a diminishing trend. It was 51.6% in 2006-07 and stood at 13.6% in the year 2018-19. The SEZ export was at its peak in the year 2009-10 (121.4 %) but it never came back to that glory later. New units are coming to SEZs to establish their export, but several units have stopped their operation and started their business at Domestic Tariff Area (DTA). In fact, a number of units registered under SEZ program is not in operation now. This situation has to be taken into serious consideration. This study aims evaluation of the program from the perception of units located inside SEZs.

Therefore, this study will provide information regarding the attitude of entrepreneurs towards SEZ scheme who are the important beneficiaries of the programme. The usefulness of the scheme can be measured from the satisfaction level of entrepreneurs. This study lights upon the impact of SEZ scheme on export performance of units. Hence, it reveals the relevance of the SEZ program in determining the export success of firms operating in it.

It is hoped that the study will be of great use to the policy makers as well as industrialists and researchers. For the exporters/industrialists, the study will guide them in understanding the factors to be considered while exporting in order to be successful and make them understand the importance of the program. For the policy makers, this study will help them in identifying the drawbacks of the SEZ policy and composition of export sector wise and zone wise. This information will guide them in redesigning the scheme to attract more businesses and investors into SEZ. Apart from that the developer, private parties or govt. can understand the factors determining zone export. They will understand which factor is having more impact on zone export. Hence, they can increase the availability of that factor in order to have more export. This study will contribute into the existing Resource Based View theory of factors determining export performance. The researchers are going to get the knowledge about the role of govt. programs in promoting export from the country.

1.4 Scope of the study

This thesis is built within the following boundaries and scope;

1. This study is descriptive and exploratory in nature and it will provide a macro view on the export performance of SEZs in India and the determinants of firm level and zone level export.
2. The scope of the data used in the study includes secondary and primary data. For the secondary data analysis, three data sets have been used. First data set consists of total export of SEZs in India from 2000-01 to 2019-20 for analysing export growth. Second data set contains the export from SEZs in India for the period 2018-19 for analysing the sector wise and zone wise contribution. Final data set includes the export of Cochin and Madras zones.

For the purpose of primary data, units working in Central govt owned Special Economic Zones are considered namely Cochin Special Economic Zone and Madras Special Economic Zone. Only manufacturing units functioning under these zones are selected.

3. The scope of the topic covered for the study comprises the export performance of SEZs operating in India, determinants of zone-level export, factors attracted the firms to locate their units in SEZs, exporters' satisfaction with SEZ program, factors influencing firms' export performance and impact of SEZ on the export performance of firms .
4. The scope of variables under study includes the benefits of SEZ policy is taken as moderator, Resources, Capabilities, Export Commitment, Export Knowledge as exogenous variables, average export and export growth rate of units as endogenous variables .

Hence, the scope of the study is export performance of SEZs and usefulness of the program perceived by the beneficiaries in general and moderating effect of Special Economic Zone programme on export performance of units in specific.

1.5 Objectives of the study

Following are the important objectives set for the study:

1. To analyse the export performance of SEZs in India.
2. To identify the factors influencing the zone level exports
3. To find out the core factor that attracted the exporters to locate their units in the SEZs
4. To measure the satisfactory level of exporters on the quality of infrastructure provided, quality of governance , access to outside facilities and usefulness of incentives
5. To evaluate the effect of Resources, Capabilities, Commitment and Knowledge on Export performance of units
6. To test the direct and moderating effect of usefulness of Special Economic Zone policy on the export performance of units.

1.6 Conceptual Model

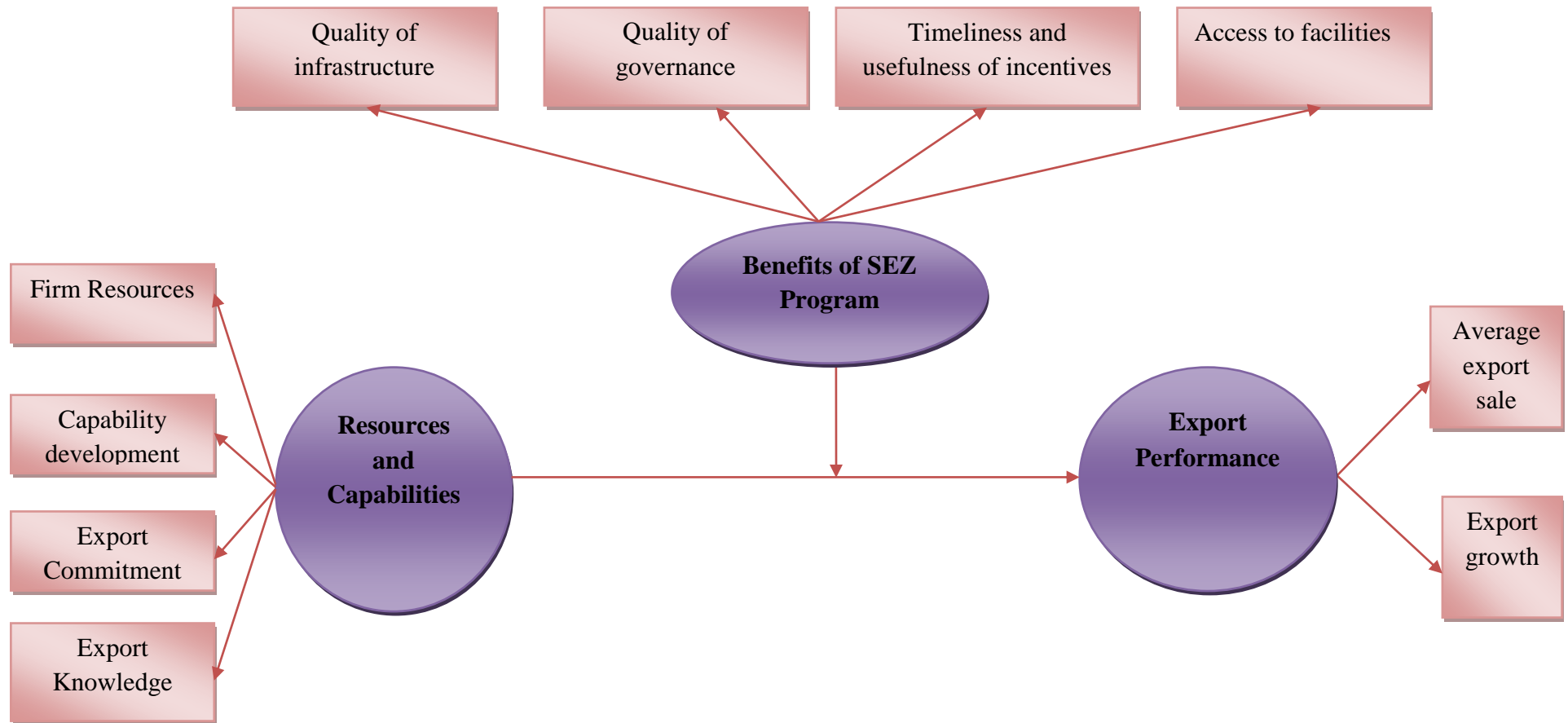


Figure 1.1: Conceptual model developed for the study

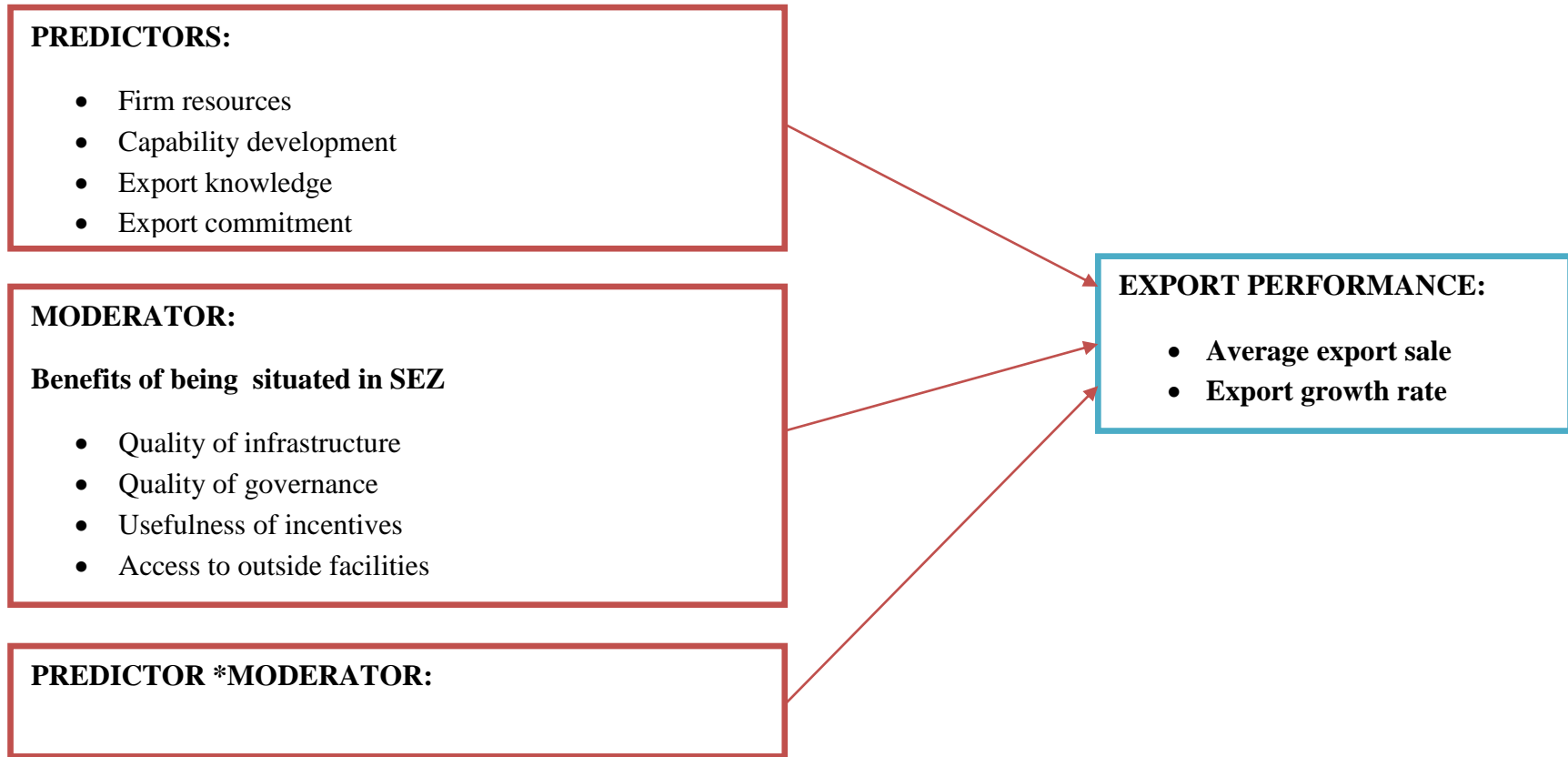


Figure 1.2 Conceptual Model with moderation

The model is based on three latent variables namely, Resources and capabilities, Benefits of SEZ program and Export Performance. The model checks the impact or influence of two independent variables (Resources and capabilities and Benefits of SEZ program) on dependent variable (export performance). The model also checks the moderating effect on independent variable, “Benefits of SEZ”, on export performance

1.7 Variables used for the study

The study seeks to answer the important research question, *what are the factors influencing Firm Export performance and the moderating effect of SEZ program on Firm Export performance?*

Following list of variables are used for fulfilling this objective.

Table 1.1
Variables used for the study

Objective	Variables used	Sub-variables
Performance evaluation	<ul style="list-style-type: none"> • SEZ Export zone wise (2018-19) • Total export from SEZ from 2000-01 to 2019-20 • Export data of CSEZ and MSEZ from 2005-06 to 2019-2020 	<ul style="list-style-type: none"> • Sector wise export • Zone wise export • Categories of SEZ based on SEZ Ac • Growth of export from Cochin and Madras SEZs • Share of Cochin and Madras SEZ in total SEZ export
Zone level export determinants	<ul style="list-style-type: none"> • Export • Import • Investment 	NA
Factors attracted to SEZ	<ul style="list-style-type: none"> • Physical infrastructure • Easiness of export business in SEZ • Availability of incentives and concessions • Social infrastructure • Port accessibility 	NA

Objective	Variables used	Sub-variables
	<ul style="list-style-type: none"> • Better governance and support from authorities • Favourable business environment • Presence of Single Window Clearance Mechanism 	
Satisfaction with benefits of SEZ	<ul style="list-style-type: none"> • Quality of infrastructure 	<ul style="list-style-type: none"> • Road • Security arrangement • Car parking • Water supply • Sewage and effluent system • Continuity of power supply • Telecoms and internet facility • Power backup • Basic medical facilities • Fire protection system • Space for conducting business • Warehouse/logistic arrangement • Availability of banking service with ATM • Canteen • Creche facility
	<ul style="list-style-type: none"> • Usefulness of incentives and concessions 	<ul style="list-style-type: none"> • Timeliness of incentives • Timeliness of concessions • Income tax exemption • Exemption from service tax • Exemption from GST
	<ul style="list-style-type: none"> • Quality of governance 	<ul style="list-style-type: none"> • Satisfaction with rules of SEZ • Informing new rules • Satisfaction with transparency • No delay in decision making

Objective	Variables used	Sub-variables
		<ul style="list-style-type: none"> • Helpful in customs related services • Dealing with labour issues • Working of Grievance redressal mechanism • Time allotted for submitting APR • Satisfaction with format of APR • Digitisation and user friendliness of APR • Satisfaction with attitude of SEZ officials
	<ul style="list-style-type: none"> • Access to outside facilities 	<ul style="list-style-type: none"> • Commercial complex /shopping mall • clinic and medical facilities • educational institutions • residential complex
Factors influencing export performance	<ul style="list-style-type: none"> • Export performance(dependent variable) 	<ul style="list-style-type: none"> • Objective measures <ul style="list-style-type: none"> ○ Export growth ○ Export sales(average of 3 years)
	<ul style="list-style-type: none"> • Firm resources (Independent variable) 	<ul style="list-style-type: none"> • Physical resources <ul style="list-style-type: none"> ○ Technology ○ Production capacity • Human resources <ul style="list-style-type: none"> ○ Experience • Organisational resources <ul style="list-style-type: none"> ○ Planning and coordination • Financial resources <ul style="list-style-type: none"> ○ Capital
	<ul style="list-style-type: none"> • Firm capability development(Independent variable) 	<ul style="list-style-type: none"> • Information • Relationships • Product development
	<ul style="list-style-type: none"> • Export Commitment (Independent variable) 	<ul style="list-style-type: none"> • Frequent travel • In-house market research facilities • Bringing innovation in

Objective	Variables used	Sub-variables
		manufacturing <ul style="list-style-type: none"> • Learning export procedure and documentation • Appropriate organisational structure • High priority to export • Level of effort and time commit to export • Level of financial resources commit to export • Level of human resource commit to export
	<ul style="list-style-type: none"> • Export Knowledge(Independent variable) 	<ul style="list-style-type: none"> • Easy to prepare and manage export document • Salespeople knowledge about export market • Know foreign govt regulations • Aware of economic condition • Overall knowledge
	<ul style="list-style-type: none"> • Benefits on being located at SEZ(Independent and moderate variable) 	<ul style="list-style-type: none"> • Quality of infrastructure • Quality of governance • Access to outside facilities • Usefulness and timeliness of incentives
Demographic variables		<ul style="list-style-type: none"> • Type of SEZ • Firm size • Number of years firm exports • Number of countries firm export to • sectors

NA-Not applicable

1.8 Operational definition of the terms

Export performance

It is the result of exporting activity by an exporter in the export market. The financial outcome expected by a firm because of the export activity which satisfies their objectives with respect to exporting and strategic goals are achieved.

Firm Resources

The resources in the form of human, financial, physical and organisational allocated by an export venture for the export activity. It is rare, precious and uneasy to imitate, hence, helps to achieve competitive advantage.

Capabilities Development

Firm's ability to build and organise internal and external resources in order to cope with the changing export environment. It includes information, relationship and product development used within the firm.\

Export knowledge

The knowledge possessed by exporter in handling export procedures and about export market environment.

Export commitment

The level of time, effort and finance allocated to export. It shows the general readiness by the management to dedicate finance, human and managerial resources to exporting activity.

Benefits of SEZ

The services and facilities offered by the SEZ authority and policy to the units set up in SEZ premises. It is the total of infrastructure, governance, incentives and access to facilities.

1.9 Hypotheses of the Study

➤ Performance of SEZs

- H₁: There is significant difference in the export value of SEZs across various sectors
- H₂: There is significant difference in the export value of SEZs under seven DC offices
- H₃: There is significant difference in the export value of SEZs across various zones for the year 2018-19

There is significant difference in the export of IT/ITES sector zones and others for the year 2018-19

There is significant difference in export during the period 2018-19 in different zones and sectors

- H₄: There is significant difference in the export performance among central SEZs prior to SEZ Act, State or Pvt SEZ prior to SEZ Act and SEZs notified after SEZ Act

➤ Factors influencing zone level export

- H₅: There is significant relation between SEZ wise import and Investment on the individual export performance of each zone.

➤ Reason for locating business in SEZ

- H₆: There is significant difference in factors attracted to SEZs with regard to type of SEZ, Scale of operation, number of exporting countries, sectors and number of years exporting.

➤ **Satisfaction with SEZ program**

- H₇: There is significant difference between Cochin and Madras SEZ units in the perceived level of satisfaction in quality of infrastructure, usefulness of incentives , quality of governance and access to outside facilities
- H₈: There is significant difference across small, medium and large scale units in the perceived level of satisfaction in quality of infrastructure, usefulness of incentives , quality of governance and access to outside facilities
- H₉: The perception of units with regard to the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and quality of governance across various sectors are not equal.
- H₁₀: The perception of units with regard to the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and quality of governance does not differ across various levels of years of operation/export.
- H₁₁: The perception of units with regard to the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and quality of governance differ across various levels of countries of operations

➤ **Factors influencing firms' export performance.**

- H₁₂: Resources and capabilities are reflected by the dimensions such as Resources, Commitment, Knowledge and Capabilities.
- H₁₃: Perceived benefits of SEZ are reflected by the dimensions like Infrastructure, Ease of Access, Incentives and Governance
- H₁₄: The level of Resources and capabilities and Perceived benefits of SEZs are positively related to Export performance

- H₁₅: The Resources available, Capability development, Export Commitment and Export Knowledge are not equal between Cochin and Madras SEZ units.
- H₁₆: There is significant difference in Resources available, Capability development, Export Commitment and Export Knowledge among small , medium and large scale units.
- H₁₇: The Resources available, Capability development, Export Commitment and Export Knowledge are not equal across units exporting to different countries.
- H₁₈: There is significant difference in the Resources available, Capability development, Export Commitment and Export Knowledge with regard to the number of years the units are exporting
- H₁₉: The Resources available, Capability development, Export Commitment and Export Knowledge are not equal across units working under various sectors.
- **Moderating effect of benefits of SEZ on Export performance**
- H₂₀: The Level of perceived benefits of SEZ moderates the relationship between level of resources and capabilities and export performance. The relationship will be stronger when the satisfaction with SEZ benefits increases.

1.10 Research methodology

The following section will explain the methodology used in this study to find out answers to all the research questions

1.10.1 Research design

The research is descriptive and exploratory in nature.

- (a) **Source of data:** The study has depended both primary and secondary sources for information

➤ **Secondary data :**

The secondary data needed for the analysis has been taken from the official website of Special economic zone in India, websites of various DCs official records of Cochin and Madras special economic zones. Some data has been extracted by filing RTI request to seven central Govt. owned -multi product zone's development commissioner offices.

Other secondary data is collected from the following sources including periodicals, journals, books, websites and study reports.

- RBI website
- Website of respective zones
- Website of DGFT (Directorate general of foreign trade)
- Website of Ministry of Commerce and Industry
- Website of DGCIS (Directorate General of Commercial Intelligence and Statistics)
- Website of EPCES
- Reports of Ministry of Commerce
- Research Dissertations and Theses
- Books , Journals, Articles, Periodicals, Working papers and Newspaper reports and other publications
- Other websites and Blog.

➤ **Primary data**

Primary data has been collected from the units situated at Cochin and Madras Special Economic Zones. Only manufacturing units are selected. The units/firms that has been exporting for the last 3 years has been chosen as samples. Primary data

were collected with the help of structured questionnaire during the period 2018-19 from exporters who had started their unit at SEZ

(b) Sampling design

i. Population

As per the latest report of SEZ India (2019-20), 5109 units are working under SEZs, which is spread across 240 zones all over India. Out of these 25 are multiproduct zones and remaining under sector specific zones. . These 25 multiproduct SEZs are again classified as seven conventional multi product zones owned by central govt and 18 multiproduct zones owned by private parties.

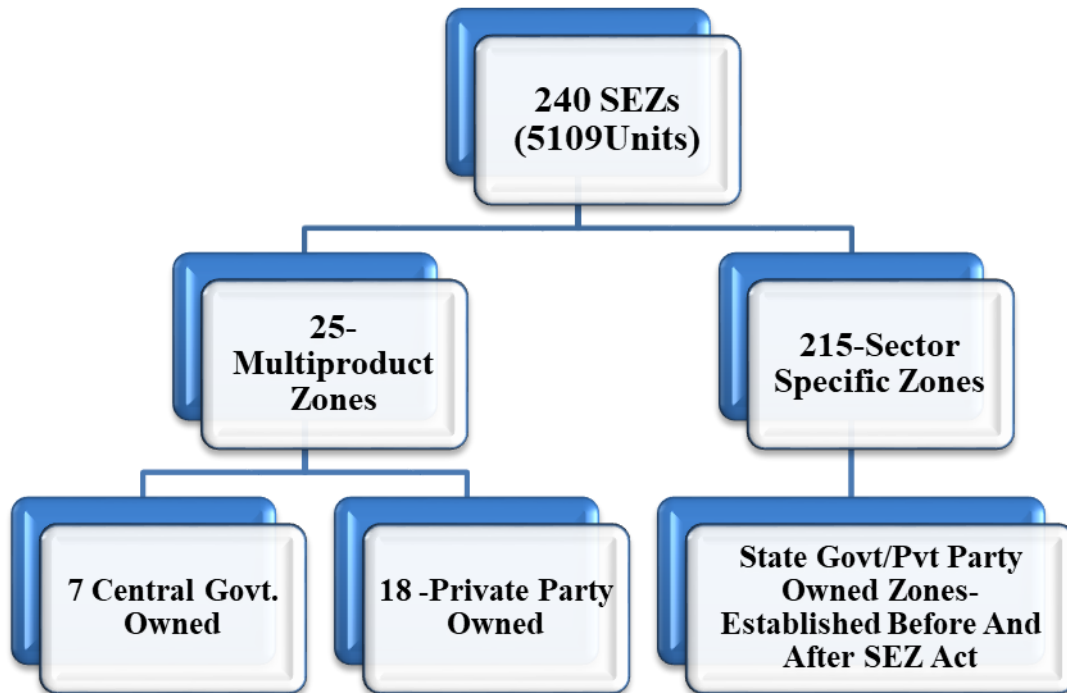


Figure 1.3 Population of the study

Although there are 240 operating SEZs, the number of SEZs exported during the period 2018-19 is 230. Hence, for the secondary data analysis, data related with these 230 SEZs are considered.

ii. *Selection of samples*

For collecting sample units, conventional SEZs are considered as sub-population. Conventional SEZs refers to those Special Economic Zones, which started their operation as Export Processing Zones and later transformed to SEZ status. At present, there are seven Conventional SEZs functioning in different parts of the country.

The reasons for selecting central govt owned SEZs at time of enactment of SEZ act are;

- To ensure homogeneity in the samples: Most of the SEZs in India are from IT sector, textiles sector, engineering sector, biotechnology, food processing and they are spread across different parts of the country. If we need to compare the performance or satisfaction of exporters with regard to SEZ program, it is difficult to find another sample SEZ having the same nature. Hence, this selection of conventional SEZs as our population will ensure homogeneity in the samples. So conventional SEZs are selected to ensure homogeneity.
- They are governed by the same developer i.e., Central govt. Therefore, it will be easy for comparison and generalisation of results.
- The focus of the study is impact of being situated in SEZ on the export performance of firms. Hence, for the impact analysis only manufacturing units are considered since the variables affecting the performance of service sector units are different from manufacturing sector units. In multiproduct zones, it is easy to find manufacturing units of various sectors like plastic and rubber, electronics, textiles, gems and jewellery etc. Therefore, there is heterogeneity in manufacturing sector within a homogeneous settings. This will help to identify the importance of the policy on each sector.

iii. **Sample size**

The total number of units working under 242 SEZs are available which is 5109. However, the sub population used for the study is manufacturing units working under seven central govt. owned zones. The following formula shows the how to calculate sample size from infinite population. Since the number of population is finite, after the application of infinite formula, correction factor for finite population is applied.

The highest std. Deviation among variable is taken for calculating sample size.

$$n_0 = \left(\frac{zs}{e} \right)^2$$

n_0 = number of sample size

z = standardized value corresponding to a confidence level (1.96 for 95% confidence level)

s = sample standard deviation or estimate (1.54)

e = acceptable magnitude of error (assumed as 0.293)

$$n_0 = \left(\frac{1.96 \times 1.54}{0.293} \right)^2 = 105.4$$

The sample size is refined after applying the correction factor for finite population.

$$n = \frac{n_0 N}{n_0 + (N - 1)}$$

$$n = \frac{105 \times 5109}{105 + (5109 - 1)} = 102.9$$

The sample size is finalised as 103

iv. Sampling method

For primary data analysis, cluster sampling is used. Cluster sampling refers to the process of selecting sampling group at random, and then selecting samples from the group randomly. In this study each conventional SEZs is considered as a Cluster.

Then two clusters are selected randomly. From each clusters, sample units are selected at random.

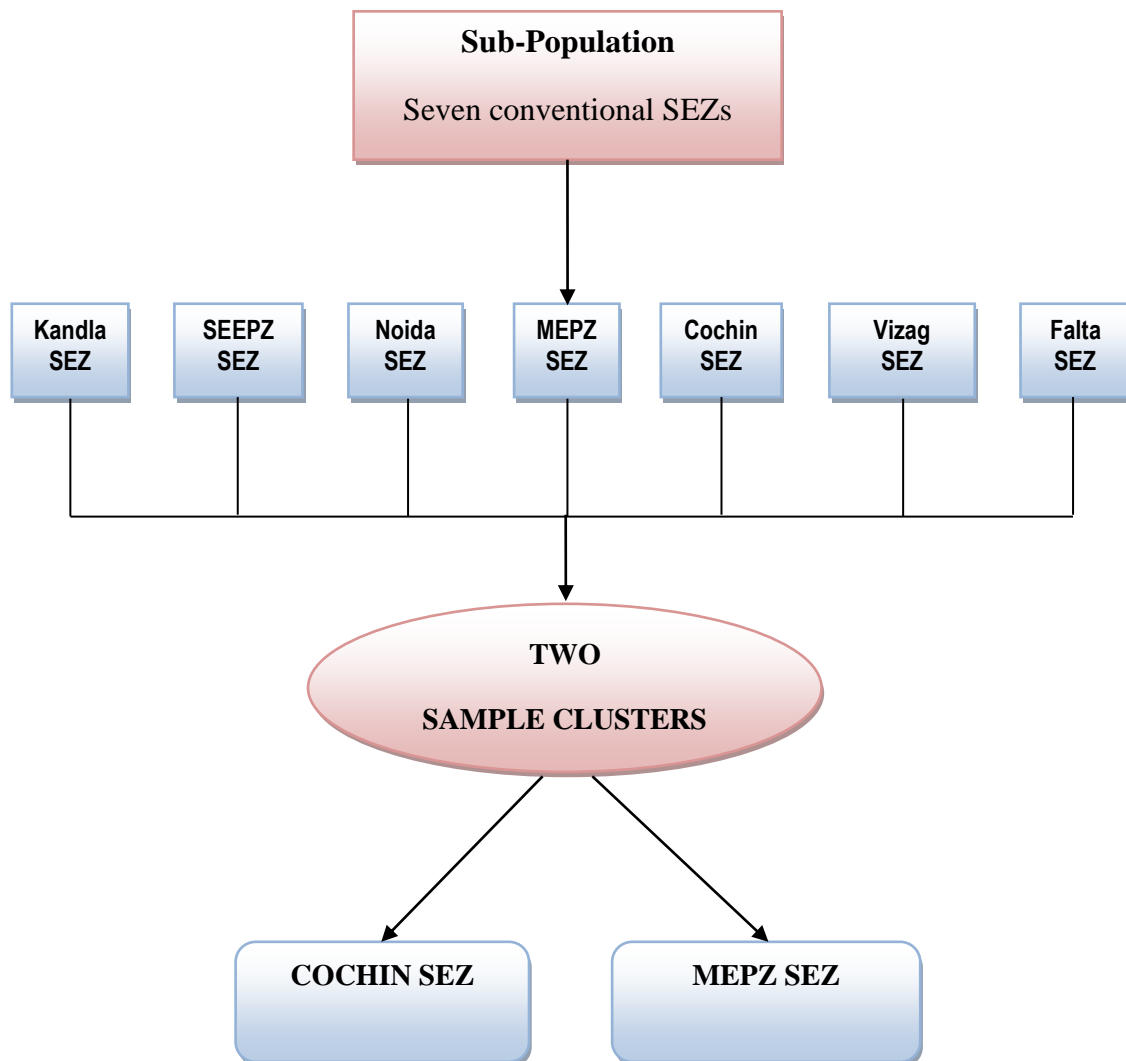


Figure 1.4: Selection of sample clusters

From the seven clusters two clusters, Cochin and Madras have been selected

Table 1.2
Composition of sample firms

Sl. No	Sector	CSEZ		MEPZ	
		Population	Sample	Population	Sample
1	Textiles, Leather & Readymade garments	3	3	12	7
2	Agriculture and food	10	9	0	-
3	Gems and Jewellery	4	4	12	1
4	Chemical, Plastic & Pharmaceuticals(includes rubber in case of Cochin SEZ)	9	8	21	14
5	Engineering	12	11	26	15
6	Electronic hardware	4	4	9	8
7	Electronic software (IT/ITES)	30	Not considered	12	Not Considered
8	Miscellaneous	16	14	13	5
9	Trading	7	Not considered	3	Not Considered
Total		95	53	108	50

From each clusters sample firms are selected using simple random sampling method with replacement. Firms not engaged in manufacturing business like IT and trading sectors are excluded from the sampling frame.

1.10.2 Measurement of Research instrument

By reviewing literature, it is found that most of the studies used questionnaire or interview schedule for collecting data from exporters. Out of six objectives, four are covered with the help of primary data. For getting the perception of exporters, structured questionnaire was developed by reviewing literature, discussion with the managers of three units and officials of Cochin special economic zone office. It has been finalised with the help of expert advice covering all the

aspects of SEZ policy. The questionnaire starts with general information related with the units succeeding the factor attracted, level of resources and capabilities, availability and quality of infrastructure, incentives, perception about governance, ease of access to facilities etc.

❖ ***Pretesting and revision of instrument***

The pretesting helps to find out any weakness or faults in the questionnaire hence ensure the credibility of it. Pretesting included all aspects of instrument including the time taken to fill, clarity and bias of sentences, existence of irrelevant and ambiguous questions, flow and continuity, question wording etc. Pre testing was made possible with the support of 5 units and 3 zone officials in CSEZ and two subject experts in the field. They were asked to provide suggestions to improve the instrument. They put minor changes forward including converting rank question into scale type, avoiding confusing questions and changing negative sentences into positive sentences,. This helped the researcher to incorporate useful changes in the questionnaire to make it more precise, structured and content oriented.

1.10.3 Scaling technique

This section involves the operationalisation of constructs. The operationalisation addresses the issue of how a construct is to be measured. After the constructs has been defined well, it was measured using some scale. The scale was either self constructed by the researcher or adopted from the past studies or the combination of both.

Table 1.3**Source of measurement scale adopted**

Construct	Measurement indicators	Source	Measurement scale adopted	Questions
Factor attracted	<ul style="list-style-type: none">• Physical infrastructure• Easiness of export• incentives Availability• social infrastructure• port access• governance and support• favourable environment• Presence of SWCM.	<ul style="list-style-type: none">• (C.Vijay, 2009)• New items.	5 point scale starting from not at all influenced to highly influenced.	10.1 to 10.8
Firm Resources	Physical Human Organisational Financial	(Freeman, 2009)	5-point scale starting from strongly disagree to strongly agree	11.1 to 11.9
Firm capabilities	Information Relationship Product development	(Freeman, 2009)	5-point scale starting from strongly disagree to strongly agree	12.1 to 12.9
Export commitment	Human Finance	(Navarro, Acedo, Robson, Ruzo, & Losada, 2010)	5- point likert scale starting from very low to very high.	13.1 to 13.6

Construct	Measurement indicators	Source	Measurement scale adopted	Questions
	Organisational	(A.K.Shamsuddoha, 2004)	5-point likert scale starting from strongly disagree to strongly agree	13.7 to 13.9
Export knowledge	Export knowledge	(A.K.Shamsuddoha, 2004)	5-point likert scale starting from strongly disagree to strongly agree	14.1 to 14.5
Quality of infrastructure	Quality of each infrastructure	(Aggarwal, 2004) New items	5 point scale starting from very low to very high.	15.1 to 15.15
Ease of access	Access to outside facilities	New items	5 point scale starting from very low to very high	18.1 to 18.4
Quality of incentives	Availability of incentives Usefulness of incentives	New items	5 point scale starting from strongly agree to strongly disagree 5 point scale starting from highly useful to not at all useful	19.1 to 19.5
Quality of governance	Transparency Attitude of official APR related service Customs service Labour issue dealing	(Aggarwal, 2004) (burau, 2015)	5 point scale starting from strongly agree to strongly disagree	20.1 to 20.11

1.10.4 Pilot study

In order to ensure the validity and reliability of the research instrument, a pilot study was required which will provide additional information to the researcher so that the research instrument can be improved and finalised before going for final data collection. The study was carried out by taking 25 units from Cochin SEZ and proper modifications were incorporated before final data collection Pilot study was done in the month of December 2018.

1.10.5 Reliability and Validity

Reliability and validity are used to validate the scale.

- ***Reliability***

Reliability is the degree to which the observed variable measures the ‘true’ value and is “error free”; thus, it is the opposite of the measurement error. When we check the measure repeatedly and we get the same measure consistently, it can be assumed as a reliable measure. A more reliable measure will be consistent even after several repeated measurement. (HairJR., Black, Babin, & Anderson). Hence the reliability shows how much reliable the research instrument or scale is even it gives same result when the measurement is repeated.

Reliability coefficients are a type of correlation coefficient . In this study , Cronbach’s Alpha Reliability Coefficient is used to test the internal consistency of the scale. The value of cronbach’s alpha ranges from 0 to 1. To retain an item in the scale the alpha must be equal to .70 or higher.

Table 1.4
Reliability Statistics

Sl.No	Construct	No of items	Cronbach alpha
1	Firm Resources	9	0.870
2	Firm capability	9	0.906
3	Export Commitment	9	0.890
4	Export knowledge	5	0.891
5	Ease of access	4	0.655
4	Quality of infrastructure	15	0.748
5	Quality of governance	11	0.894
6	Quality of incentives	5	0.645

For all the constructs except quality of incentives and ease of access, cronbach alpha is greater than 0.70. The constructs ease of access and quality of governance have alpha close to 0.70. Hence it can be ensured that the scale ensure internal consistency.

- **Validity**

Validity can be defined as the extent to which research is accurate (black, hair Anderson) “Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. Validity can also be thought of as utility. In other words, validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested” (Kothari, 2004). In this study, two types of validity are tested content validity and construct validity.

- **Content validity**

Content validity means checks “the elements within a measurement procedure are relevant and representative of the construct that they will be used to measure” (Haynes et al., 1995). Content validity is ensured with the assistance from expert in the field. The researcher consulted various experts in the field of Special

Economic Zones including managers of units in SEZs, govt. officials in zones, Doctorates in the field and subject experts. The questionnaire has been shown to statistician, supervising guide, analysts and senior academicians.

The researcher has done extensive review of literature in the field of export and Special Economic Zone. This could also help to identify the items in the scale and modify the scale as per the need of the situation. Hence, with these entire medium, the researcher ensured the content validity of the research instrument.

▪ ***Construct validity***

“The extent to which a set of measured variables actually represent the theoretical latent constructs they are designed to measure” (HairJR., Black, Babin, & Anderson). To ensure construct validity, both convergent and discriminant validity are checked. These are checked at the time of testing the outer model in Smart PLS.

i. Convergent validity

Convergent validity can be ensured if the items in a scale under a latent variable is sufficiently correlated with the latent variable (K.P., 2019). Convergent validity is the extent to which a measure correlates positively with other measures (indicators) of the same construct. The researcher has to consider outer loadings of the indicators and Average Variance Extracted (AVE) to establish convergent validity. The rule of thumb is that a latent variable should explain a substantial part of each indicator’s variance, usually at least 50%. This means that an indicator’s outer loading should be above 0.708 since that number squared (0.708²) equals 0.50. Here the Researcher checked both outer loadings and AVE, the outer loadings are above 0.708 and AVE for all the constructs are greater than 0.50. Hence the convergent validity is ensured .

ii. Discriminant validity

A construct is truly different from the other constructs by empirical standards to the extent. There are two standards;

- **Cross-loadings;** An indicator's **outer loadings** on a construct should be **higher than all its cross loadings** with other constructs
- **Fornell-Larcker criterion;** “The square root of the AVE of each construct should be higher than its highest correlation with any other construct” (Fornell & Larcker, 1981)

In the present study, the square root of AVE of each construct is higher than its correlation with any other construct. Hence, present research fulfils the discriminant validity criterion.

1.10.6 Normality

In order to get accurate result, an efficient analysis has to be performed, for which powerful tests have to be applied. A powerful test gives reliable results, at the same time they demand certain assumptions like normality, homogeneity etc. to be fulfilled. Normality demands the data to be distributed normally. There are univariate and multi variate normality. For checking univariate normality, Kolmogorov-Smirnov and Shapiro-Wilk tests , Normal Q-Q plot and P-P plot and skewness and kurtosis are widely be used. In the case of Kolmogorov-Smirnov and Shapiro- Wilk tests, the null hypothesis says the data is normal. Therefore, to attain the assumption of normality, the null hypothesis has to be accepted. For that, the p value should be above 0.05. In case of Q-Q and P-P plots, If the points are close to the diagonal line, it is said to be normally distributed. In a normal distribution the values of skewness and kurtosis must be zero. Positive values of skewness means majority of the scores are concentrated on the left side of the distribution and negative value shows that most of the scores are concentrated on the right side of the distribution. A peaked and heavy-tailed distribution is represented with positive value of kurtosis and a flat and light-tailed distribution indicates negative value of kurtosis. If the value deviates from zero, the data also will deviate from normal distribution. (Field, 2009). The researcher checked normality under all the conditions.

In the present study, the p values of Kolmogorov-Smirnov and Shapiro-Wilk tests for some constructs are less than 0.05. Hence, the data is non-normal. The researcher checked the limit of skewness and kurtosis values . “Absolute values of univariate skewness indices greater than 3.0 seem to describe extremely skewed data sets and, kurtosis greater than 10.0 may suggest a problem” (C.P. & P.M., 1995) .In the study ,the skewness and kurtosis are within the limits hence univariate normality is ensured. Therefore, parametric tests can be applied.

There is no way to ensure the multivariate normality. Hence, it is assumed that if a variable is univariate normal, it is multivariate normal too.

As per the central limit theorem whatever be the shape of the data we collected , the distribution of big samples are normally distributed “We also know from the central limit theorem that in big samples the sampling distribution tends to be normal anyway – regardless of the shape of the data we actually collected . Which means if the sample is 30 or more, the distribution is meant to be normal (Field, 2009).

The assumption of homogeneity says that the variance of outcome variable should be same in all groups. Leven’s test is used to test the homogeneity of variance.

1.10.7 Tools for Analysis

Following are the tools and tests used for primary and secondary data analysis.

Mean, Std.deviation, percentage

Mean is a measure of central tendency. It is the average or most common value in a collection of numbers. Std deviation is the square root of the means of the squared deviations from the arithmetic mean. Percentage simply means per hundred and is used for comparing the information of two different groups.

Independent sample t test

It is a test for comparing the means of two independent groups to check the significant difference between them. "The independent *t*-test is used in situations in which there are two experimental conditions and different participants have been used in each condition." (Field, 2009)

One-way ANOVA

One way Analysis of Variance test is a parametric test used to compare more than two the group means. one of the assumption of ANOVA is variance in the group must be homogeneous. this can be checked with the help of leven's statistics. If the *p* value is less than 0.05, the variance is assumed to be heterogeneous. In this case , *F* test should be adjusted to correct this problem. Welch test can be used to correct the heterogeneity. Wherever the variance is found to be heterogeneous, the researcher used welch's *F* test .

Post hoc analysis

Post hoc test is useful when the researcher has found significant difference in the group means with the help of ANOVA. The next step is to find the difference. Finding difference can be pre-planned comparison or totality approach. In planned comparison researcher would assume that significant difference exist between specific groups and runs post hoc test of those only. In the other method, the researcher without any prejudice runs the post hoc analysis between all the groups. Tukey post hoc test is one of the popular. Researcher has used tukey post hoc test in the present study.

Two-way ANOVA (Factorial ANOVA)

In two- way analysis, we have two independent variable or factors and we are interested in knowing their effect on the single dependent variable. Here two one-way ANOVA are performed to check the main effect of both independent variables on dependent variable separately. Then it checks the interaction effect of these two variables together on the dependent variable.

Mann-Whitney test

Man-whitney test is a non-parametric alternative to independent sample t test. This test allows us to compare two mean ranks or median. It is a statistical procedure used to compare the differences between two independent groups when the dependent variable is either ordinal or interval, but not normally distributed.

Kruskal-Wallis test

This is an alternative to one way ANOVA. It tests significant differences on a continuous or ordinal dependent variable by a categorical independent variable with more than two groups. This used when normality assumption in one-way ANOVA is not met.

Correlation

It is a statistical measure, which shows the relationship between two variables. It says how two variables move in relation to the other variable. The value ranges between -1 and +1.

Multiple Regression

Multiple regression explains the cause and effect relationship between one dependent or outcome variable and several predictors or variables. Here the dependent variable is predicted with the help of several independent variables.

PLS-SEM

“Partial Least Squares (PLS) is an OLS regression-based estimation technique that determines its statistical properties. The method focuses on the prediction of a specific set of hypothesized relationships that maximizes the explained variance in the dependent variables, similar to OLS regression models. PLS-SEM is suitable for applications where strong assumptions cannot be fully met and is often referred to as a distribution-free “soft modelling Approach” (Hair, Sarstedt, Ringle, & Mena, 2011).

1.10.8 Period of the study

Secondary data: Three data sets have been used in the study as secondary data. First data set consists of the Export data of India and SEZ for the period 2000-2020.

The second set consists of export data of SEZs in India for the period 2018-19.

The third set contains the export data of CSEZ and MSEZ for the period 2005-2020.

Primary data: primary data has been collected during the period December 2018 to May 2019 from Cochin and Madras SEZ.

1.11 Limitations of the study

The present study is subject to the limitations given below;

- Only central govt. owned SEZs are considered as sub-population.
- Among the units, the perception of IT/ITES are excluded from study since the factors effecting their export performance is different from that of manufacturing sectors.
- The researcher faced non availability and difficulty in collecting data from units. The units were reluctant to give their export data. Hence the researcher collected the data through DC offices.
- There was no cooperation from some of the respondents.
- Geographical area of sample clusters was another problem
- The researcher faced time constraints since the respondents were units. It was difficult to collect data
- For analysing the sector wise and zone wise contribution and factors influencing zone level export , data for a single period is only available and is used

- The factors influencing export performance has been limited to Resource Based View of strategic management.

1.12 Organisation of the Thesis

Following is the chapterisation of the thesis

- ***Chapter 1: Introduction***

This chapter acts as a preamble of the thesis. It contains the problem statement, significance of the research, scope, methodology, objectives, hypotheses, conceptual models, variables, tools and tests and limitations of the study.

- ***Chapter 2: Literature Review***

The reviews of literatures are presented under this chapter. The reviews are classified based on the objectives of the study. The classification includes the Special Economic Zone related, determinants of export performance (Resource Based View). Impact of export promotion programs on export performance etc.

- ***Chapter 3: Model and Hypothesis Development***

This chapter is fully devoted to the hypothesis development and model development. Here it justifies the reason for selecting the variable for the study , the relevance of the constructs . This chapter reviews the conceptual model of previous studies and explains how the researcher ended with developing own conceptual model for the study .

- ***Chapter 4: Special Economic Policy in India: Theoretical framework***

The history of SEZ in the world and India is briefly summarized in this chapter. This chapter explains the journey of Special Economic Zone policy of India from EPZ framework to SEZ framework.

- ***Chapter 5: Performance Evaluation of Special Economic Zones in India***

This chapter analyses the secondary data associated with the performance evaluation of special economic zones in India. It measures the export performance

of SEZ in India, identify the factors influencing zone level export and evaluate the export performance two sample zones selected for the study i.e., CSEZ and MSEZ.

► ***Chapter 6: Exporter perception towards benefits of SEZ and Determinants of Export performance***

This chapter deals with the analysis related with factors that attracted the units to zones and the level of satisfaction perceived by the respondents with the facilities offered like quality of infrastructure, quality of governance, usefulness of incentives and ease of access to outside facilities.

► ***Chapter 7: Determinants of Firm Export Performance and Moderating effect of SEZ program on Firm Export Performance***

The chapter exclusively deals with the factors influencing the firm export and the moderating effect of SEZ program on the export performance. It deals with running the conceptual model.

► ***Chapter 8: Summary, Findings, Suggestions and conclusion***

This chapter is a self-contained report of the whole work done. It includes the summary of the work done, findings derived from the study, suggestion put forward by the researcher and conclusion to the study.

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Chapter 2

Literature Review

2.1 Introduction

The present study explores the performance of Special Economic Zones in India and includes the factors influencing the zone export, the factors attracting exporters to SEZs and the satisfaction of exporters regarding Quality of Infrastructure, Quality of Governance , usefulness of incentives and access to outside facilities. It also tries to find out the factors that have a huge impact on the export performance of units in SEZs and particularly the impact of being situated in SEZs on their export performance. The researcher has attempted to include all the literature coming under the scope of the study to find out the research gap. From the review process, it became possible to classify the literature into three categories. They include;

- Literature related to Special economic zone
- Determinants of export performance: Resource-based view
- The impact of export promotion programs on export performance.

These are further classified. The reviews related to Special Economic Zones Cover Performance evaluation related, Social cost-benefit analysis related, Land settlement and rehabilitation related, Labour issues and working condition etc.

The second section summarizes the previous studies associated with the factors influencing export performance. The third section contains the reviews in connection with the effect of export promotion programs on export performance.

The final section contains the conclusion to the chapter.

The detailed reviews under each category are given below

2.2 Special Economic Zone related literature;

This section deals with literature related to all the aspects of Special Economic programs published inside and outside India.

(a) Performance evaluation related

Warr & Menon, October (2015) studied whether the establishment of SEZ in Cambodia was successful or not. The researcher found that Cambodia could attract a high level of FDI and create a large pool of employment through SEZ. A comparison between firms inside and outside the zone has been made. The observation suggests that firms in zones lack technology transfer and investment in R&D than the firms outside the zone. Firms Outside the zone have great access to the domestic market rather than firms inside the zone. However, SEZ firms could create a demonstration effect. Researchers hope that by proving as a pioneer in attracting investment, SEZs may indirectly promote foreign investment outside the zone. They also pointed out that less govt. intervention may reduce red-tapism and establishment cost. They also reminded me of the importance of increasing investment in human capital.

Morisson (2015) the study focused on the assessment of various types of economic zones in ASEAN countries. It also discusses the rationale behind the usage of zones as a strategy for economic development. There has a shift from manufacturing-oriented growth to knowledge-based growth in economic zones. This created doubt among the countries in choosing the appropriate type of zone suitable to their economy. The decision of India to enter into African countries will negatively influence other country's economy. Competition among zones hinders growth. The decision to develop economic zones depends upon the phase of economic development of a country. The report suggests least developing or developing countries have to focus on technology-oriented zones while developed countries should create more knowledge. The strategy used for competitive development must cope up with the country's economy.

Palanisamy (2014) in his study titled "Performance Evaluation Of Special Economic Zones In India" analyzed the export & import Performance and contribution made by SEZ towards Balance of Trade, Foreign Direct Investment, employment etc. The researcher explored the growth of SEZ with the help of an exclusive trade performance index. The study is related to the performance of three zones namely, Cochin Special Economic Zone, Madras Special Economic Zone, Vishakhapattanam Special Economic Zone. The study concludes that export, import, employment generation and foreign direct investment of three zones are satisfactory. However, Balance Of Trade shows an unstable trend even though it satisfies the criteria for its operation. A major portion of the export is contributed by a few sectors of zones, which will lead to the dependence of SEZs on these sectors. This will negatively affect the balanced development of the country.

Bhuvaneshwari (2014) made a detailed analysis of the problem and prospectus of special economic zones in India. The study highlighted that the export, employment and investment in SEZ has increased rapidly. Current exports are increasing mainly from old SEZs, which are converted from EPZs/FTZs to SEZ. She concluded that SEZ policy has made a huge impact on these zones, even though the share of FDI in total SEZ investment is below expectation, it shows an improvement.

Lonarkar (2013) assessed the export performance, employment generation concerning law and percentage of female employees of public sector SEZs. He discussed the infrastructural facilities provided to these zones and investment in them. The study also pointed out the difference in the performance of seven public sector zones. He analyzed the export performance with the econometric model "Structural Stability Model". The researcher found that the EPZ policy has played an important role in employment generation, creation of additional economic activity through linkage with the domestic economy, attracting foreign investment and earning foreign exchange. It has helped in building infrastructural facilities and thereby developing backward areas. In his findings, Santacruz Electronic Export Processing Zone ranks first in attracting the number of units, share in total EPZ

export, per unit export and generating more employment. He observed that trend of the total export from seven SEZs has been increasing after 2000. He also observed that all the SEZs are offering physical and financial infrastructure but fails to provide social infrastructure. The researcher points out that SEZs are concentrated mainly in some specific states and that too in specific sectors or area.

Tantri M. L (2012) conducted a detailed study on the fiscal implication of SEZs by considering the cost incurred, revenue forgone and foreign exchange earned. The researcher concluded that govt. has incurred huge initial expenses in the form of infrastructure cost and revenue sacrificed through customs and central excise duty. The seven SEZs could generate revenue essential for the maintenance of administration expenses. Nevertheless, they had to depend on the govt. for meeting capital expenditure. While analyzing the resource cost of SEZs, the researcher found the fact that resource cost per unit of Net Foreign Exchange has increased drastically over the period. However, the rate of contribution is low.

Tandel (2012) studied the performance of Surat SEZ. The researcher checked the issues faced by entrepreneurs in starting the unit. The report focuses on the vital argument raised against the SEZ i.e., whether the availability of incentives and concessions pulled to start a unit under SEZ. The study uncovers the fact that the units are facing difficulties in starting up. Price hike in output due to rise in input, lack of market intelligence, changing pattern of preference of consumers in international trade, difficulty in obtaining raw materials, especially skilled employees in case of diamond sectors etc are the big concern for the units. The researcher has found that the availability of incentives and concessions and better export exposure are the main factors that attracted them to SEZ. The researcher put forward suggestions like providing better infrastructure, better working condition, effective functioning of single window clearance facility and stable tax policies etc.

Tantri M. L (2011) in her working paper undertook an analysis on the performance of zones and the impact of SEZ policy on the performance of these. The study revealed that the enactment and implementation of SEZ policy has created a favourable impact on the performance of seven central owned SEZs. The research

proves the argument that SEZs are not supposed to ensure regional disparity in the location. Because most of the good performing SEZs are located in, highly developed states that too in few districts.

Singh D (2011) analyzed the SEZ scheme, growth of SEZ -state-wise and sector-wise, the impact of SEZ on employment, Foreign Direct Investment, infrastructure and skill formation etc. researcher's major finding is that there is growth in the number of SEZ after enactment of the act. The researcher emphasized the point that majority of the SEZs are mainly concentrated in few states. SEZs have a huge positive impact on employment, investment and export. He points out those SEZs that are weak in conducting R&D, are limited in skill formation too. On the other Side, SEZs have succeeded in creating a better working environment.

Tantri M. L (2010) explored the efficiency of SEZ over 22 years. The researcher measured the efficiency of seven central owned SEZs by using the Cobb-Douglas production function. The study focused on estimating efficiency and the factors responsible for it. She evaluated the efficiency separately for the EPZ period and SEZ period. Findings show that the technical efficiency of SEZ over 22 years ranges from 0.3% to 0.75%. During the EPZ period, efficiency is low whereas it is high during SEZ period. The researcher says that the major factors influencing the efficiency of enclaves are the area of SEZ, govt. investment and policy implication of govt.

Vijay (2009) appraised the performance of Madras Special Economic Zone (MSEZ). He focused the study on the perception of unit owners. Transportation and communication are the essential things needed to do business in SEZ followed by Infrastructure and marketing services. The owners are more satisfied with the environment clearance services of MSEZ authorities. The most attractive factor for starting a unit is the availability of fiscal incentives. The facilities offered by authorities are not sufficient.

Aggarwal, Hoppe, & Walkenhorst (2008) compared the EPZs in three south Asian Countries which has a long tradition in SEZ. The three countries could attract foreign investments that create additional economic activities. The zone units

failed to create backward linkage compared to firms outside the zone. The diversification effect of SEZ is different in the three countries. Some sectors add more to the present export whereas some firms bring new products into the country.

Akthar (2003) analyzed the performance of the Karachi Export Processing Zone (KEPZ) by considering the variables like ownership pattern, production activity, marketing strategies, and human resource profile and investment climate. The study found that non-availability of raw material within the zone due to the poor quality supply is a great concern. High risk, lack of currency stability and lower infrastructure facility hinder the investment climate in Pakistan. KEPZ fails to ensure industrial linkage with the domestic economy whereas it has won in employment generation of revenue. The researcher concluded that international quality infrastructure, sustainability of incentives and coordinated agencies' support are the key factors to the success of EPZ.

Johansson & Nilsson (1997) studied whether EPZ can influence the total export performance of the country. The researcher focused on Malaysian EPZs. The study reveals the fact that EPZs have improved the total export performance of the countries, even if the effect varies across countries. It further proves that in the case of Malaysian EPZ, the catalyst effects are working. However, the effect is constant over the years.

(b) Socio economic impact

Manikrao (2015) had undertaken a critical analysis of SEZ and the impact of SEZ on rural development. The researcher was focusing mainly, the socio-economic impact of SEZ on rural people and analysis of performance also. He states that the export performances of SEZs are declining since 2011-12. People show a negative response to the civil amenities created by SEZ in the village. Landowners were unaware of the land acquisition process and the purpose or type of SEZ being established. Lands are acquired forcefully and the compensation was inadequate. Units were ineffective in generating employment opportunities. The public is ignorant about SEZ and its policies. The researcher concluded that the supply of

water, road transportation, telecommunication facility and electricity distribution is very poor in these areas.

K B (2014) examined the relationship between the incentives and economic contribution. The researcher seeks an answer to the question of whether the CSEZ could set off the loss that occurred due to providing tax incentives with the contribution in the form of investment, employment and export. The researcher found a constructive relationship between both. So the loss of govt. in revenue due to the tax incentives is compensated by the way of promoting exports, generating investment and creating employment opportunities.

Agarwal (2014) checked the role of SEZ in developing entrepreneurship. The study shows that most of the units are set up as public enterprises or by giant private parties. A sole proprietorship is not encouraged in SEZ due to the difficulties faced in attaining foreign exchange because of heavy expense occurring out of export. The study seeks to reduce the time taken for each legal procedure required to set up units. The researcher suggests offering cooperation from SEZ authorities to avail technologies and concludes by suggesting improving telecom facilities, power back up and basic medical facilities.

Wang J (2013) examined the impact of SEZ on the local economy by considering factors like FDI, Domestic investment, Total Factor Productivity growth, wages and Consumer Price Index. The study summarizes the economic impact of SEZ on the local economy before, during and after the expansion of SEZ. The study found that new zones generated larger distortion in FDI and an increase in wages compared to old ones. A Single municipality with more number of SEZs has a larger effect than that of the other municipalities with one SEZ.

K B (2013) measured the performance of SEZ in India by conducting a case study of Cochin special economic zone. The researcher evaluated the performance by using different criteria. He analyzed the social benefit of CSEZ based on foreign exchange earnings, wages income and net profit earned. Costs are calculated based on locally available raw material and public utilities consumed by units, administrative cost and infrastructure cost. He compared the contribution of CSEZ

in generating export, employment and investment during the post and pre SEZ Act period. A social cost-benefit analysis has been carried out by using Warr Peter G's formula. According to the researcher, the social costs incurred for its establishment are less than the benefits generated from it. There existed a positive correlation between the tax incentives offered and the economic receipt generated. Value of export, investment and employment generation show an increase after enactment of SEZ Act 2005. Managers are satisfied with the quality of infrastructure and governance. The majority of the workers are fully satisfied with all the facilities provided. The researcher concluded that the CSEZ is functioning well and fulfilling its objectives.

Fu & Gao (2007) found that EPZ has increased FDI inflow, trade and employment from foreign-funded enterprises. The zones could employ skilled female workers compared to domestic firms. The quality of labour is not promising except in the case of the Shanghai zone. The zone could attract more technicians and scientist and they are demanding highly skilled workers, which has lead to training and skill up-gradation in China. The formation and smooth working of workers' union are strictly prohibited in some MNCs in the zone. Even though there is a workers' union for females, they are weak in negotiation. The companies are giving due importance to Corporate Social Responsibility. Even if the social impacts of the zone in China differ across various fields, the overall impact of the Zones is positive.

Jenkins (2005) discussed the social and economic effect of EPZ and the level of backward linkage from EPZ firms to Costa Rica Economy. Research shows that EPZ has boosted Non –Traditional export of the country from 8% in 1989 to 47% in 2001. Investment has also shown a sudden jump. EPZ tends to create employment opportunity for more uneducated women. He directs the authorities to check the labour practices followed and recommends promoting Non-textile /electric or electronic firms, as they could not create more backward linkage. The researcher concludes his work by stating that the capital intensity & ownership pattern of the firms have a favourable effect on linkage. To increase the backward linkage, high

capital intensive and foreign-funded firms must be encouraged to set up in the economy.

Warr P. G (1989) examined the cost and benefit of EPZ. The report suggests, EPZs are not enough to enhance development. The benefit received from EPZs is very limited. To bring development, foreign investment should be made in domestic industry. This is possible by giving benefits available to EPZs to the industries outside EPZs. EPZ can act as a role model to make firms outside the zone internationally competitive.

Rondinelli (1987) studied the economic and social development in Asia due to the setting up of EPZ. From the researcher's point of view, EPZs are creating an adverse effect on the local economy of some Asian countries. To solve this, the govt. should take proper actions like reinvesting the return from investment in EPZ to the local economy, encouraging the supply of raw material by local firms to EPZ units and ensuring useful tie between EPZ and local firms.

Fitting (1982) measured the social, economic and political impact of EPZ on Taiwan and China. Economically and politically, EPZs are creating a positive impact on Taiwan economy whereas the social impact has been negative. In Taiwan, the protection of labour rights is one of the key issues it faces. However, the zones will trigger growth and increase the standard of living of people. In the case of China, zones are going to face difficulty in the beginning stage. The underdeveloped infrastructure will hinder the growth of SEZs. The preference given to the import of technology has to be changed. Preference must be given to labour intensives industries and reducing the import of technology. Since SEZs has been empowered to decide central govt. for gaining economic growth, the social impact of Chinese zones on the community will be severe. It will be difficult for the social system to adjust to the SEZs. Politically, the establishment of zones will induce the govt. to sacrifice their central authority for the sake of economic growth.

(c) Land settlement and rehabilitation related

Murugesan (2011) made an attempt to study the extent to which the monetary compensation, rehabilitation and resettlement package offered to local people is whether justifiable and helps them to ensure a sustainable livelihood. The researcher's thrust area is finding out the rationality behind local agitation against land acquisition for SEZ. The study reveals that the land for SEZs has been acquired through agents. People sold it because of the non-availability of irrigational facilities. The monetary compensation allocated to them is not satisfactory. The researcher concluded that the rural resistance against land acquisition is rational and monetary, rehabilitation and resettlement packages are not sufficient

(d) Policy related

Mukherjee & Bhardwaj (2016) studied the problems faced by the new service SEZs like Free Trade Warehouse Zones, Power SEZs, Finance SEZs and Aviation SEZs. The study lays down the policies to make service SEZs successful. Guidelines put forward by the researchers are compiling of instructions and notifications into a single document, ensuring coordination among Ministries of Departments of Central and State govt., following a stable incentive policy, making coordination between regulators and stakeholders. Finally, the Board of Approval should be careful in approving proposals.

Zeng (2015) evaluated the Chinese experience and African's findings with SEZ. He points out that China has successfully implemented SEZ. But Africa couldn't follow the Chinese Model completely, conversely, it has to weave such a model that suits African Economy. Chinese investment in African SEZ must be exploited well to replicate Chinese success in Africa. To ensure this, the Chinese govt. & investors should analyze the variations in the development stages, the legal governance system and the institutions, social and cultural norms and even mindsets etc.

Kumari, Mittal, & Jain (2015) brought down the challenging issues of SEZ. The study called for a public or Public-Private Partnership model of

management. For SEZ to be profitable, the requirements of land for SEZ establishment should be relaxed.

Zhang & Ilhéu (2014) analyzed the feasibility of adopting the Chinese model SEZ in Mozambique. They examined this by taking the factors leading to the success of Chinese SEZ. By comparing Mozambique's actual condition with these factors, the researcher found that it is feasible to develop SEZ in Mozambique by benchmarking the Chinese model. Because most of the factors for the success of the Chinese model are in line with Mozambique's actual condition.

Zimmerman (2013) studied the reason for the de-notification of SEZ in Maharashtra and the lack of Special Economic Zones in Goa. The main impediments to these are (1) the problem faced at the time of acquiring land (2) corruption in getting approval (3) environmental difficulties raised by the public. Goa has not delayed adopting SEZ; it has been searching for alternatives. Its problem lies in the lack of land for starting SEZ, whereas, in the case of Maharashtra, the problem is between farmers and project developers. The people in Maharashtra have lost faith in the company. Their concern is on the acquisition of land, actual usage of land and allocating Non-Processing Area to real estate group

Altbeker, McKeown, & Bernstein (2012) concludes that SEZs are the best for creating job opportunities, developing the economy and industry, and building competitiveness in the world market. At the same time, it lacks some broader national development strategy. Researchers suggest that better governance, providing high-class infrastructure and a flexible labour market that develop the skills of workers are the mantra for SEZ to be successful globally.

Rawat, Bhushan, & Surepally (2011) discuss the issues arising out of setting up of Special Economic Zones in Poleppally. The study focuses on the impact of SEZ on people who had contributed their land to construct SEZ premises. The study highlights some of the consequences of acquisition. The people were given information that green park is coming in the area and they are going to get employed, which was misleading. The acquisition was not made with their consent. The acquisitions of lands were illegal. The lands reserved for Dalits, tribals and

backward communities were acquired as "alienated" land under special amendments. Even after all these injustices, they have not compensated adequately. The compensation was only for the lands, the other assets like wells, cattle sheds, trees etc were not considered for compensation. They found it difficult to buy land in the nearby area. They had to work for a low wage in the companies, which negatively influenced their food security. They had to depend on neighbours or ration shops for food. Since the pharmaceutical units started working, the quality of water began to deteriorate. There were social and health impacts. The people were divided in the name of caste. The researcher concludes that the rehabilitation and compensation were consensual and adequate in papers only, not in practice.

Farole & Kweka (2011) analyzed the institutional framework for Special Economic Zone in Tanzania. It lays down various institutional and administrative setup needed to improve the competitiveness, job creation and investment in the zone. They figured out the existing institutional framework, the deficiencies of it and the ways to address them.

Balasubramaniam (2007) discussed the policy implications related to Special Economic Zone. The researcher believes that locating and promoting SEZ in a backward region has created a burden of gigantic infrastructure cost to the govt. Political interests have become more important than economic growth and export promotion activities. The dichotomy of powers creates a conflict of interest between the union govt. and state govt. who has been assigned to promote and set up SEZs. Withdrawal of incentives after a time horizon is a significant setback to the units in SEZ. It would dull investment and growth in SEZ. The researcher suggests setting up SEZs under Public Private Participation.

Aggarwal (2006) found that SEZs are a good instrument for eradicating poverty. Enhancing employment opportunities, especially female opportunities will lead to poverty alleviation. The role of SEZs in human capital development is limited due to the lack of skill up-gradation. Anyway, the researcher is of the hope that new zones that attract skill-oriented jobs may increase the role of SEZ in human capital development by training workers for handling skilled works. The scope for

R&D in zones is limited because of large contract manufacturing. It further suggests, govt. should develop a clear policy to deal with the problems faced by SEZs and the bargaining power of SEZ workers must be strengthened.

Associates, Nishith Desai (2006) presented complete details about the Special Economic Zone. It includes the concept of SEZ, procedures to be followed for starting an SEZ and SEZ unit, facilities, incentives and concessions available and responsibilities of units. The setting up of SEZ has created a large volume of export. Investment has also been made in infrastructure and trade. Technology up-gradation has happened among domestic units. SEZ act has made a positive impact on SEZ implementation. The author is of the doubt that whether India could win over China and be known as the place for ease of doing business. The document can be considered as a good guideline for people who are interested in SEZ.

(e) Labour issues and working condition

Parwez (2015) the study focus on the awareness and satisfaction of labourers on labour welfare measures and the impact of measures on labour. The researcher concluded that SEZ authorities should implement better ways to improve the job satisfaction of SEZ employees to enhance organizational commitment and thereby increase productivity. Workers are unaware of the welfare measures .hence they are most exploited.

Jacob (2013) comments that the IT and ITES sector of the Cochin Special Economic Zone is highly competitive, but with more Labor standards. The researcher substantiates the notion that competitiveness maintained by SEZs has a consequence on Labor standards. The study reveals the fact that labour rights are not protected in the zone and the workers especially those working on a contract basis are often weak to raise their voice against it. He opines that labour exploitation is most common in sectors like Gems and Jewellery.

Hertanti & Chaturvedi (2012) Compared and evaluated the working and living conditions in SEZ. The researcher made a comparative study between India and Indonesia. In this study, the researcher points out the rationality behind

switching overproduction by MNCs into countries particularly India and Indonesia. The field study comprises two SEZs Batam free trade & port zone and Nokia Tech Park of India. The researcher has the conclusion that the wages paid by both SEZs are enough to cover the living expenses of a single worker i.e., insufficient to cover the expense of a family. Lack of education results in unskilled labour that again reduces the bargaining power of employees. MNCs are attracted by the low cost of labour. Ignorance of govt. towards the implementation of labour laws is another issue. The researcher opined that shifting of authority in connection with labour right from Labor commissioner to Development commissioner was a wrong decision by the govt. Workers should have the freedom of forming union and govt. should take necessary action for forcing labour rights.

Chandran (2007) evaluated various aspects of quality of work-life among the Industrial Estates of Kerala. He found that the employees are not satisfied with the compensation, facilities for sports and games, reading and health care, the attitude of supervisor etc. Employees do not have sufficient opportunities for continued growth and security. Facilities for participatory management is not satisfactory. The workers are unable to keep a proper balance between personal and work life. The levels of quality of work-life of employees are below average. The physical working conditions of industrial workers are not so good. He concluded that many of the employees, particularly factory workers are not in a position to meet even their basic needs because of their inadequate compensation.

Labour and Social Issues relating to Export Processing Zone (1998) Report light upon the Labor relation in the Zones all over the world. It checks whether National Labor laws are applicable in the zones of certain countries like China, Singapore, Malaysia, Vietnam etc and if applicable, is practised or followed well in the zones. The report explains that some countries have included zones under its current National Labor laws, whereas some other countries like Bangladesh have completely excluded them. The report is concluded by stating major issues faced by the zones like lack of backward linkage with the local market, the investment made by one country or sub-region causing the output to be exported to one important

market, lack of suitable human resources development programs and status of women workers in the zone.

2.3 Determinants of export performance (Resource-based view)

Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon (2019) studied the factors influencing export performance by applying RBV along with a management control system (MCS). The mediating effects of dimensions of MCS and capabilities on the relationship between firm resources and export performance are analysed. In the case of resources except for physical and financial resources, the study found a significant relationship between the scale of operation and knowledge through experience on export performance. In connection with capabilities, a relational capability found significant impact whereas product development and informational capability lacked a direct relationship with export performance. Concerning MCS, social informal control on external dealers had a significant influence on export performance. Even there lacked a direct influence of financial and informational capability on export performance, they both influence export performance through the mediating effect of MCS.

Boso, Annan, Adeleye, Iheanachor, & Narteh (2018) studied the mediating effect of the capability of resource transformation in the relationship between market orientation and entrepreneurship orientation on export performance. They studied this with the help of exporting firms from the UK and Nigeria. The industries include manufacturing and services units. The authors studied how resource transformation capability (RTC) mediates the relationship between entrepreneurial orientation (EO) and export performance, how it mediates the relationship between market orientation (MO) and export performance. It also studied how RTC mediates the combined effect of EO and MO on export performance. He used CFA and SEM for assessment. The study says that RTC helps to mediate the effect of EO and MO on export performance. The study says to concentrate on building Resource Transformation Capability rather than concentrating on market opportunities and market orientation. Internal resources must be transformed efficiently. The RTC is the channel that links EO and MO and

the export performance of the firms. Managers have to build knowledge-based assets to improve performance.

Gnizya, Cadoganb, Oliveirac, & Nizamd (2017) conducted research on the impact of a different mode of entry on export performance. They have also analyzed the moderating effect of institutional barriers faced, the level of uncertainty it faces in the export market and the number of countries to which it exports on export performance. The finding of the study includes the greater the diversity in export entry mode, the greater will be the export performance of the firms. It will help the firms to spread the risk related to one entry strategy with another. It would be better to use multiple channels when the firms had to face institutional barriers in the export environment. The geographical scope has a positive impact on export entry strategy, which leads to higher export performance. When a firm exports to more countries, it will help them to be flexible with all the market circumstances.

Skarmeas, Lisboa, & Saridakis (2016) checked whether intrapreneurship helps the firms to innovate, adapt to the changes in the internal and external environment and improve their export performance. The study is based on RBV and Dynamic Capability(DC) theories. The construct intrapreneurship which is studied with the help of dimensions like new business venturing, innovativeness, self-renewal, and pro-activeness and are considered as a strategic resource and export market exploitation and exploration are considered as the mechanism (DC) that transform the resource into better export performance. The study reveals that both resources and capabilities enhance export performance i.e., intrapreneurship and exploration and exploitation have a significant influence on export performance. It shows that the combination of different intrapreneurship dimensions act as the foundation for different export capabilities and different combination of export capabilities has a different influence on export performance.

Kim & Hemmert (2016) studied the factors influencing the export performance of subcontracting SMEs in three industries in South Korea. The study is built in line with RBV theory and network theory. The resources and capabilities including technical resources, marketing resources, financial resources and

managerial capabilities and customer network features including several subcontracting ties & strength of subcontracting ties are considered as independent variables. The impact of Resources and capabilities on export performance is assumed to be positive. Whereas the impact of the number of subcontracting ties on export performance is assumed to have an inverted U shape relationship. Where the strength of subcontracting ties has a U shaped relationship with export performance. Here the firm size and firm age are taken as controlled variables. Export orientation and intensity are considered as dependent variables. The study finds that the technological resources and managerial capabilities positively influence both dependent variables of export performance. However, the other two dimensions of resources and capabilities have a weak relationship. In the case of the network system, the variable number of subcontracting ties has an inverted U shape relationship with export orientation and intensity. The dimension strength of subcontracting ties has U shaped relationship with export orientation not with export intensity.

Dhliwayo (2016) verified that export experience has an association with firm export performance. The study discovered that level of export experience has a relation with sales performance and profitability. The export sales and profitability increase with an increase in export experience. The savings performance has no association with export experience. This can be because younger firms spend their profit instead of saving it.

Singh & Chugan (2015) measured the impact of organisational commitment on export performance. The study strongly supports the positive influence of commitment on export performance.

Makrini & Chaibi (2015) did a meta-analysis of 65 studies related to the impact of management commitment on export performance. The studies selected for analysis were mostly done in developed countries. The researcher used quantitative and non-quantitative Meta-analysis. Both analyses emphasise a strong positive influence of management commitment on firm export performance. However the majority of studies lacked a well-defined theoretical framework, hence the

conceptual framework in connection with the effect of commitment on firm export performance is in its development stage.

Nalcaci & Yagci (2014) examined the resources and marketing capabilities that play an important role in the export performance. The resources include informational resources and financial resources. The Capabilities include management capabilities and customer relationship capabilities. The study points out that informational resources like information about the market and competitor have a positive effect on export performance. The high performing firms use financial resources in a planned manner to access market information, understand product and market, take new opportunities etc. While low performing firms are unaware of the proper use of financial resources. They simply do research based on the secondary data available in their office. In the case of management capabilities, high performing firm employs systematic methods in decision making with the help of highly talented management. Whereas low performing firms give the decision-making authority to the focal firm. The customer relationship maintained by high performing firms is highly useful for them in unforeseen situations. The low performing firms' superficial relation with customers or distributors does not help them in achieving their goals.

Kumlu (2014) seeks answers to the question "How the SMEs increased export by applying intangible resources and competitive export strategies?" The study covers companies from different sectors of industries in Turkey. The study keeps track of the RBV approach. The export performance is taken as a dependent variable. The Intangible resources including intellectual property asset, managerial assets, network asset etc and competitive export strategies including product differentiation and cost leadership are taken as the independent variables. The researcher checks whether the combined effect of Intangible resources and market strategies have more effect on export than the individual intangible resources and competitive strategies. All the variables except product differentiation have more influence on export performance. Cost leadership strategy has been contributing more to export performance than differentiation strategy. The study presents an

important generalization that an exporting unit that holds intangible resources and makes use of both cost leadership and differentiation strategy will succeed in its export.

Morgan, Katsikeas, & Vorhies (2012) studied the impact of export marketing strategy implementations on firm financial and market performance and the effectiveness of dynamic marketing capabilities in implementing these strategies. The capabilities include architectural, specialized, and integrated export marketing capabilities. The Strategy implementation includes internal and external strategy implementations. The study finds that capabilities are effective in implementing both strategies however architectural and specialized capabilities fail to implement external strategies effectively. Marketing capabilities influence export performance indirectly through the implementation of marketing strategies than directly affecting them.

Kaleka (2012) checked the impact of resources and capabilities on export performance. Export performance is measured with the items market share, profitability and revenue from the new product. The researcher finds out that the higher the experience and information capability, the higher the market share will be. Experience and information capability influence profit positively. The scale of operation and financial resources impact export performance positively. Customer relation and product development found insignificant relation with export performance. However, the interaction of product development and information capability has a significant impact on export performance.

Gilaninia, Ganjnia, & Amini Jelodarloo (2012) found out a significant relationship between export experience and commitment of firm and export performance.

Niringiye & Tuyiragize (2010) tried to find out the factors determining the export activity of firms in Uganda. The factors considered are firm-level factors and business environment factors. The dependent variable is the propensity to export measured as the ratio of export to total sales. The firm-level factors are geographical location, sector, technical efficiency, firm size, firm age and ownership. The

findings say that the factors determining propensity to export are capital-labour ratio, firm size, Asian ownership and being an agro and chemical firm. The same factors influence the decision to export. Hence the researchers say that the govt. has to bring specific incentives like tax holidays to attract units into agro and chemical sectors. Opportunities must be created to grow the smaller firms and finally, FDI must be attracted to improve infrastructure facility, provide training to workers and gain political confidence.

Navarro, Losada, Ruzo, & Diez (2010) explored the effect of export commitment and marketing tactics adaptation on the export competitiveness and performance of a firm by taking a sample of 150 firms. They found that export commitment and export competitive advantage have a direct positive impact on firm export performance. Export commitment influences marketing tactic adaptation and marketing tactics impact competitive advantage. However marketing tactic adaptation has no direct influence on export performance, but it indirectly influences export performance through competitive advantage. The researchers suggest managers be more committed to the export activity, frame suitable marketing strategies consistent with the market need and conduct market research frequently.

Papadopoulos & Martin (2010) studied the relationship between internationalization and export performance in a comprehensive model connected with Uppsala conceptualization, behavioural theories of the firm and resource-based international growth model. Here the researchers have included international experience and international commitment as independent variables. The researcher tries to prove that international experience and commitment positively influence internationalization, level of internationalization has a positive impact on international experience and export performance. The model has been estimated with PLS-SEM. The major finding is, first internationalization positively influence international experience and thus international experience lead to high international commitment. International commitment has a significant influence on internationalization. Finally, internationalization influence export performance

positively. The study suggests policymakers enhance a higher level of internationalization among firms to high better export performance.

Brouthers, Nakos, Hadjimarcou, & Brouthers (2009) Studied the factors which are crucial for the success of small and medium enterprises. The study is based on a sample of exporters taken from Greek and Caribbean countries. The researchers have included all the categories of industries in the sample. Export sale performance of the company with domestic performance and export profitability compared with domestic performance have been taken as dependent variables. The numbers of countries the company export to and export intensity are taken as the independent variables. The findings of the study are distribution channel and geographical distance has an impact on export performance, a company's distribution channel helps them to concentrate more on the particular market thereby improving export performance. The numbers of countries to which the firm export do not influence the export performance. The study suggests the small firms concentrate their export to fewer countries to fully utilize their managerial, financial resources and talents. So the key factor for the successful export performance of small enterprises is to export to few markets, rather than concentrating on several countries.

Morgan, Kaleka, & Katsikeas (2004) analyzed the export performance of ventures by clubbing resource-based view (RBV) and Structure Conduct Performance (SCB), 2 rival theories. The researcher says how the export resources based variable along with competitive intensity influence the export performance of ventures. RBV theory tells that resources available and capabilities in using the resources are the most important factor influencing the export performance. SCB theory suggests that the rivalry intensity and firm's positional advantage are the most influencing factor on export performance. The findings of the study are a positional advantage in the foreign market has a high impact on export performance. Positional advantage has a close association with resource availability and capabilities. It is not related to competitive strategy. Hence, the study supports RBV theory. The study

concludes that resources and capabilities are more important than industry or market characteristics.

Toften & Olsen (2003) developed a conceptual model showing a direct relationship between information use and export performance and the mediating effect of export knowledge on the relationship between information use and export performance. The study suggests a direct influence of information use on export performance and an indirect effect through export knowledge.

Styles & Ambler (2000) Studied the impact of exporter's commitment towards the export market and relation with distributor on the export performance of venture by taking small and medium enterprises as samples from UK and Australia. The study found a significant positive influence of export market commitment and relational commitment on the export performance of the venture. Market commitment positively influences relational commitment. Trust and market knowledge have found significant influence on export market commitment.

Shoham (1998) tried to define export performance with the data collected from 93 exporters. The researcher mentions the importance of three dimensions as measures of export performance which is inconsistent with the views of Madsen (1987) and Shoham (1991,1996). The three dimensions are "sales", "profitability" and "change". The managers of the sample firms focus on short-term goals like profitability and sales than long-term goals.

Hoang (1998) checked the causal relationship between firm characteristic, export marketing strategies and firm export performance. The study of 355 units says that international marketing strategies like promotion strategy, product breadth strategy and market expansion strategy positively influence firm export performance. These strategies are strongly influenced by firm characteristics size, experience and intensity of international involvement. However firm characteristics have an indirect effect on export performance than a direct effect.

Katsikeas, Piercy, & Ioannidis (1996) studied the determinants of export performance in the European context. They developed a model for this. The model

consists of three independent variables and one dependent variable. The size of the firm and exporting experience is considered crucial factors affecting export performance. The researchers considered that the proactive stimulus helps the firms achieve better export than the reactive stimulus. Exporting problems influence the firms export performance negatively and competitive advantage influence it positively. The export commitment is measured by evaluating the Separate export department, foreign market entry, customer selection criteria, Regular export market visits, Export planning and control. The study finds that among the export stimulus, only "national export policy" has a positive influence on export performance. This support the importance of export promotion programs in export. Among the export barriers(exporting problem), the only problem with information/communication with the export market has a negative influence. In the case of competitive advantage, only marketing capability has a direct linkage with export performance. Export marketing strategy plays a moderating role. The exporting market research has a strong positive relationship with export performance and export planning has a negative relation with export performance. Firm size and export experience has no impact on export performance.

Cavusgil & Zou (1994) the researchers have used two independent variables in their model namely internal forces and external forces, one mediating variable i.e., export marketing strategy and the dependent variable measured in strategic and economic terms. The dimension firm characteristics include the resources and the skills the firm possess including the size, international experience, international business involvement and resources. Product characteristics include culture-specificity, the strength of patent, unit value, uniqueness, age, and service/maintenance requirements of the product. Industry characteristics include the degree of technology orientation and the extent of price competition in the industry. The export market characteristics include the degree of competitive intensity, the extent of legal and regulatory barriers etc. the model checks whether the export marketing strategy mediates the relationship between the determinants and export performance. Here the export marketing strategy is evaluated based on the degree of standardisation and adaptation. The study says that marketing variables, export

marketing strategy, commitment and firm competence have a huge impact on export performance.

Donthu & Kim (1993) studied the influence of export commitment, export size, number of employees, export marketing policies on export growth. The findings show the significant positive relationship between commitment and export growth and attitude of management and export growth. The international marketing strategy does not influence export growth. However, customer-specific product adaptation policy has an impact on export growth. The study reveals the influence of export assistance on export growth.

Barney (1991) analysed the relation between firm resources and sustained competitive advantage. He checked whether heterogeneous and immobile resources a source of sustained competitive advantage? For that, the researcher has developed a resource-based model of sustained competitive advantage framework and he relates this model with other disciplines like social welfare, organisational theory and behaviour and firm endowment.

Aaby & Slater (1989) the researchers have identified two main independent variables influencing export performance through an extensive literature review. They are external environment and internal influences. The internal influences include functional level things like firm characteristics & competencies and business strategy. Firm characteristics include firm size, management commitment, perception on distribution, pricing, competition etc. the firm competencies include technology, market knowledge, market planning etc. export strategy consists of market selection, product mix, use of intermediaries etc. as per the comprehensive reviewing of literature by the researchers, they have finalized the model as above. According to the review done, firm size does not affect export performance, while commitment, better management system competencies and export environment have an impact on export performance.

2.4 Studies on the Impact of Export promotion programs on Export performance

Manolopoulou, Chatzopoulou, & Kottaridic (2018) measured the role of resources on firm export performance. It also checked the moderating effect of exporter perception of institutional quality of export performance. The study assumed a negative influence of corruption, bureaucracy and regulations in the domestic market on the export performance of the firm. According to the study, they believe that when corruption, bureaucracy and regulations in the domestic market increase the focus of exporters shifts from the domestic economy to abroad, they will allocate more resources to export. Thereby the quality of the institution impacts positively through resources. The study found out a negative association between bureaucracy and export performance as expected. But a positive relationship between corruption and export performance and no relation between regulation and export performance has been found contrary to their expectation. Corruption and bureaucracy act as moderators between resources and export performance. When corruption increases, firms allocate more resource to export. Finally, the study supports the institutional theory of firm export performance. It concludes the institutional environment influences a firm's strategies. At the same time, to increase the resource base of SMEs, govt. has to reduce the bureaucracy and regulations in the economy.

Jindal (2018) assessed the importance of Export Promotion Programs(EPPs) in enhancing the export performance of firms in textiles, gems& jewellery, leather, chemical and engineering sectors. The program is found to be more significant to gems & jewellery, and less significant to leather sectors. The role of EPP is different across different sectors. In aggregate, EPPs help the firm to attain a new market, increase sales volume, enhance the quality of product, improving the return on asset and overall increase profit.

Wang, Chen, Wang, & Li (2017) tested the mediating effect of marketing implementation capabilities on the relationship between information related EPPs and export performance. The study also checked the moderating effect of finance-

related EPPs on the relationship between information related EPPS and marketing implementation capabilities.

Broocksa & Biesebroeckb (2017) analysed the influence of export promotion assistance on firms in Flanders, Belgium to expand their export market outside the European Region. Here two types of firms are selected, firms with no prior export experience anywhere and second firms with no prior extra EU export experience. The promotion activities include action, communication, question and subsidy. Firms receiving only communication and question facilities were regarded as control firms whereas firms receiving all the facilities were regarded as supported firms. The findings are the firms receiving more intensive support as subsidies and action are more likely to start exporting than firms getting mere support in the form of communication and question. The export promotion programs guide the firms to the export market. Subsidies in combination with action programs show large effects.

Singh (2015) studied the impact of usage of export development programs on export performance of the firms by keeping firm size and experience as moderating variables. The researcher studied the role of clusters and their influence on the relationship between export development program usage and the firm's export performance also. The study used ordinary least square regression analysis for examining the relationship between variables. The important findings of the study are export facilitation programs usage has no effect on export commitment and the size of the firm has no impact on the export performance of firms. Management expertise and commitment are having more influence on a firm's export performance followed by clustering, export facilitation program's usage. However, the firm size and international experience of the firm has a low contribution to the export performance.

Jindal & Gakhar (2015) presented reviews of literature related to the influence of export promotion program on firm export performance. The major findings are the export promotion program has a positive direct and indirect influence on export performance but varies based on the stage of export

involvement. A firm's export strategy is influenced by the export promotion program it avails. In addition to that EPPs influence, the firms to attain certain competencies like sales, marketing etc. since the EPPs are provided according to the needs of the firms, it will help them to get more information, resources and experience. More aware the firm is about EPPs, there is more chance for it to succeed in the export market.

Jalali (2012) hypothesised the direct relationship between the effect of export promotion program and export performance as well as the indirect effect through, export knowledge, commitment and strategy. The study proved a significant direct and indirect relationship between EPPs and export performance. EPPs indirectly influence export performance through export strategy. Export knowledge act as a mediator between EPPs and export strategy and then export strategy on export performance. The mediating effect of export strategy between EPPs and export performance through export commitment is weak compared to export knowledge. Hence, it can be concluded that EPPs influence export knowledge and export commitment, then Export commitment and export knowledge help to achieve good export strategy, and better export strategies help to attain better export performance.

Freixanet (2012) evaluated the impact of export promotion program on export performance and competitiveness among passive, regular with little structure, regular with complete structure, consolidated and multinational exporters. The study says that EPPs help them to achieve competitiveness but the overall achievement is beyond the control of the program. The program is helpful to exporters of early-stage, later the use of it reduces as the stages of export involvement raises. The usage of direct promotion assistance helps them to reach more and more markets.

Leonidou, Palihawadana, & Theodosiou (2011) analyzed the role of export promotion programs in achieving better financial performance in the export market. The study has been based on UK based high technology manufacturing sector. They studied the impact of export promotion programs on a firm's financial performance by strengthening the firm's resources, capabilities, developing a better

marketing strategy and thereby achieving a better competitive position. The study accepted all hypotheses except three. The adoption of education and training related programs on export-related resources and capabilities and export product competitive advantage on export financial performance. EPPs work as an external agent in enhancing resources and capabilities that lead to developing better marketing strategy and thereby achieving competitive advantage. The study shows a direct impact of export-related competitive advantage on a firm's export performance. The researchers suggest policymakers to formulate customized programs than formulating one program for all.

Wilkinson & Brouters (2006) analysed the impact of export promotion programs like trade shows, trade missions and identification of agents on a firm's satisfaction by controlling variables like the total number of employees, export intensity etc. and firm resources. The study briefs the impact of the control variable only on export performance is lesser than models with resources and controlling variables. The impact increases further with the inclusion of three EPPs in the model. The trade show that helps to identify agents service and export resources together have a great impact on a firm's export performance. However, the trade mission does not influence the export performance. The promotion programs have been more useful to small-scale exporters.

Lages & Montgomery (2005) assessed the determinants of firm export performance, pricing strategy and export assistance. The international experience is a better antecedent of export assistance than export market competition. International experience and export experience act as the determinants of pricing strategy. Competition does not influence pricing strategy directly. The pricing strategy is the important factor affecting the export performance directly that too negatively. Export assistance has a significant positive influence on export market improvement and an indirect negative influence through pricing strategy. Export market competition has a positive impact on export performance.

Shamsuddoha (2004) conducted a study on the extent to which export promotion programs (EPPs) influence the firm's export performance. He checked the

direct effect of EPPs and the indirect effect of EPPs through other determinants of export performance on the export performance of firms. The study has been conducted in Bangladesh. He developed a model for the study. The result shows that market related EPPs have a positive influence on the perception of manager's export market environment, whereas finance-related EPPs have no relation with the perception. Market development programs help to increase export knowledge especially participation in international trade fairs. Commitment towards export has been influenced indirectly by market-related EPPs through export knowledge. This showed that market-related EPPs increase the knowledge of exporter thus motivates them to be committed to export. Export commitment has been directly and positively influenced by the finance guarantee related incentives. Thereby exporters can allocate more resources to export. Market-related EPPs directly influence export performance but finance related EPPs does not influence export performance. It indirectly influences export performance through export commitment. The study concluded that market-related assistance is more useful in creating a positive attitude about the export market environment, increasing export knowledge and hence influencing a firm's export strategy and performance.

Francis & Collins-Dodd (2004) studied the impact of export assistance program on firm export performance, strategies and competence. For the study purpose, the researchers have categorised exporters as pre-exporters, sporadic exporter, active exporters and majority exporters. In the case of pre-exporters, the number of use of the export program has a significant impact on their knowledge and competence. For sporadic exporters, the program not only influences knowledge and competence but also influences long term and short-term market diversification strategies. The only difference active exporters has from sporadic exporters is that in addition to the benefit perceived by sporadic, export promotion programs help them to diversify their market. In the case of majority exporters, the export promotion program has no significant impact on achieving their objectives. However, the more the usage of program, the more diversified market it has.

Genctruk & Kotabe (2001) tried to understand the factors influencing the export performance at the firm level and the role of state export assistance program's usage on it. The researchers classify exporters into passive, exploratory, experimental, active and committed exporters. The study involves the impact of organizational and managerial characteristics on export involvement. In addition to that, it also studied the impact of export involvement on export success in terms of efficiency, effectiveness and competitive position. The usage of the export assistance program is used as an independent and moderating variable. It checked the direct impact of EPPs on export performance and indirect impact through its interaction with the firm's export involvement. Export promotion programs alone are not found to be a better tool in increasing the export sales of a firm. However, there had a positive relation between EPPs and the competitive position of the firms. While considering the joint effect of export involvement and EPP's usage on export performance, the profitability in export to passive and exploratory exporters are high at low usage of EPPs. Whereas it is high among experimental exporters by average use of EPPs. For active and committed exporters profitability is high when they use a high level of export assistance.

Czinkota (1994) put forward six guidelines or criteria for framing suitable export assistance policy. He says that there should be “clarity of purpose” in the policy related to objectives and time of assistance. He advised for a “coordinated approach” inside and outside the government. More attention must be given to priority sector and sunrise industries rather than well-established ones. The area where govt. can interfere must be identified as its strength. It should help the performing firms to do best and troubled industries to move on. Export assistance has to be provided as per the needs of the export involvement of firms. There must be a courageous visualisation of the assistance that directs towards doing things correctly and doing more things that are right.

Kotabe & Czinkota (1992) checked what type of export assistances are required by the firm at each stage of development, whether these assistances are sufficient to the needs of firms and do it help them to cover export problems. For

that, the researchers have formulated 5 stages of export involvement starting from a partial interest in exporting to an experienced exporter and analysed the importance of export assistance in these stages. The major portion of government's export assistance program is allotted to exporters in their two to the fourth stage. There is a mismatch in the expectation and experience in the first and fifth stage. Hence, the government's assistance is not sufficient to cover the problems in the first and final stage of export involvement. The assistance is not sufficient to deal with the export problems like logistics, service problems and legal procedures. The sales promotion and market intelligence assistance are sufficient. The study suggests in assisting in such a way that helps the firms to attain competitiveness rather than increased profit. The attention must be redirected from stage 2 to four-stage. The assistance should be provided to exporters in the early stage to face the problems of logistics, legal procedures and foreign market intelligence.

2.5 Research gap and Conclusion

This chapter summarises the studies done before related to Special Economic Zones, antecedents of firm export performance, the impact of export promotion programs on firm export performance. From the literature review, it can be inferred that a large number of studies about Special Economic Zones have been carried out inside and outside India. However certain limitations exist in the existing literature. It is understood that works that have been published on the Special Economic Zone program can be grouped as policy implications, worker's issue, performance evaluation related etc. The number of studies conducted about the determinants of export performance is also vast. There are many kinds of literature available on the impact of export promotion programs on export performance. However, no study has been conducted on the direct impact of Special Economic Zone policy on the firm export performance.

Most of the EPPs related works talk about how the program can be made effective. Only a few studies considered EPPs as a determinant of export performance. Besides that, there is no consensus among researchers about the measurements of export promotion programs and export performance. The measures

used to determine firm export performance differs from each study. They either used export intensity, export growth, perceived satisfaction as the measures of export performance. In the case of export promotion programs, the studies have either considered the use of the EPPs or the importance of certain export promotion activities.

The consensus among researchers in the analysis is also unique. The application of the analytical tool is also inappropriate. Studies have used, ANOVA, Regression, SEM, Chi-square etc.

The review of literature has helped the researcher to identify the research gap existing in the field of study. Hence, the present study will fill the gap in the existing literature and contribute to understand the role of SEZ program in increasing firm export performance.

The SEM analysis will help the researcher to identify the direct and moderating effect of SEZ on firm export performance. This study will also contribute to a Resource-Based View of export performance.

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Chapter 3

Model and Hypothesis Development

3.1 Introduction

In chapter 2, pieces of literature related to Special Economic Zone, determinants of export performance and the impact of export promotion programs were discussed. The literature review has helped the researcher to identify the key variables for the study. The purpose of this chapter is to develop a theoretical model to identify the Determinants of Export Performance and the role of SEZ in enhancing firm export performance. The chapter is organized as; the first section deals with the brief overview of the model developed for the study. The next section deals with the constructs of the model, previous studies related to the constructs specifically its connection with the model and hypotheses developed based on the model. The final section with a conclusion to this chapter.

3.2 Conceptual model for the study

The foundation of the model lies in the Resource-Based View theory of strategic management.

3.2.1. Resource Based View (RBV)

The Resource Based View has turned to be one of the best approach to study the competitive advantage since the initiation started by by Wernerfelt (1984), Rumelt (1984) and Barney (1986) in the middle of 1980s (Bridoux, 2004). The RBV theory got its popularity through the publication of Wernerfelt's article entitled "A Resource-based view of a firm". The essence of his paper is that, for the firm, resources and products are two sides of the same coin. It says products are the by product of many resources and most resources are used in many products (Wernerfelt, 1984). Even the theory was a contribution of the discipline of *Strategic Management*, it could influence the preference of researchers in International Business and it became one of the best theories to study International Business (IB)

decision and operations. The popularity of RBV theory in International theory became more accepted after the article entitled “*The resource-based view and international business*” by Peng (2001) in the Journal of Management. The biggest contribution of IB in RBV theory is that, it identified international knowledge and experience as firm resources that fulfil the criteria like rare, valuable and hard to imitate. These resources help to identify winners in global competition apart from losers are mere survivors (Peng, 2001).

Before the formulation of RBV theory in strategic management, most studies were based on porter’s (1980) five competitive force theory, core competency theory of Prahalad & Hamal (1990)etc. In international business, the important theories that existed before RBV were the International Organisation theory and Relational Exchange theory. The international organisation theory says that the firm’s performance depends upon the characteristics of the industry in which it operates. Relational exchange theory gives importance to customer relation. The uniqueness of RBV theory apart from all these theories was that it focused on the resources and capabilities of the firms. Scholars use RBV to understand the heterogeneity of resources and how firms’ resources affect the way firms compete. In most of the studies, RBV’s definition of firm resources and how they organise and use it internally has been focal point (Ferreira, Reis, Serra, & Costa, 2013).

The RBV theory says that a firm attains a competitive advantage by using valuable resources and capabilities that are inelastic in supply. To sustain a competitive advantage a firm’s resources and capabilities must have four attributes:

1. The resources must be valuable and helpful to utilise opportunities and minimise threats in the environment.
2. The resources must be unique and uncommon among the current and potential competitors
3. The resources must be hard for the competitors to imitate
4. There should not be an equal substitute for these resources

(Barney, 1991; Barneya, Wrightb, & Ketchen, 2001; Westhead, Wright, & Ucbasaran, 2001)

Later the focus of capability development has been shifted to Dynamic Capability (DC). The main criticism that leads to the development of DC was that RBV focuses only on existing heterogeneous resources whereas it is not enough to sustain in a market where the business environment is dynamic and firms have to be proactive to be successful. The business environments are changing rapidly. Hence, DC decides the ability of the firm to coordinate, develop and configure the internal as well as external resources and functional competencies to face these situations (Teece, 2012; Teece, 2007; Teece, Pisano, & Shuen, 1997).

In reality, dynamic capability and capability development are sharing the same concept. The researcher who introduced the concept RBV, Barney(1991), in his new article co-authored with Wright (2001) and Ketchen (2001), says that the logic developed in the 1991 special issue applies as well to rapidly changing markets and dynamic capabilities as it does to stable markets and resources and capabilities. Simply changing the words with which the theory is developed cannot change the underlying theory. Put differently, “dynamic capabilities” are simply “capabilities that are dynamic.” (Barneya, Wrightb, & Ketchen, 2001).

Hence, the present model sticks to the original form of RBV theory i.e., Internal Resources available and Capability Development which help the firms to identify market opportunities, implement strategies and thereby increase export performance. The term Resources include Human, Physical, Financial and Organisational resources. The term capabilities include market-based assets like Information, Relationship and Product Development. In addition to those, the researcher has separated certain variables from the Resources and Capabilities concept i.e., Export Knowledge and Export Commitment, even though it is an integral part of the human resource dimension, it has been found from the literature that they need special attention. Hence, these 2 concepts are used as separate dimensions.

The conceptual model is given below

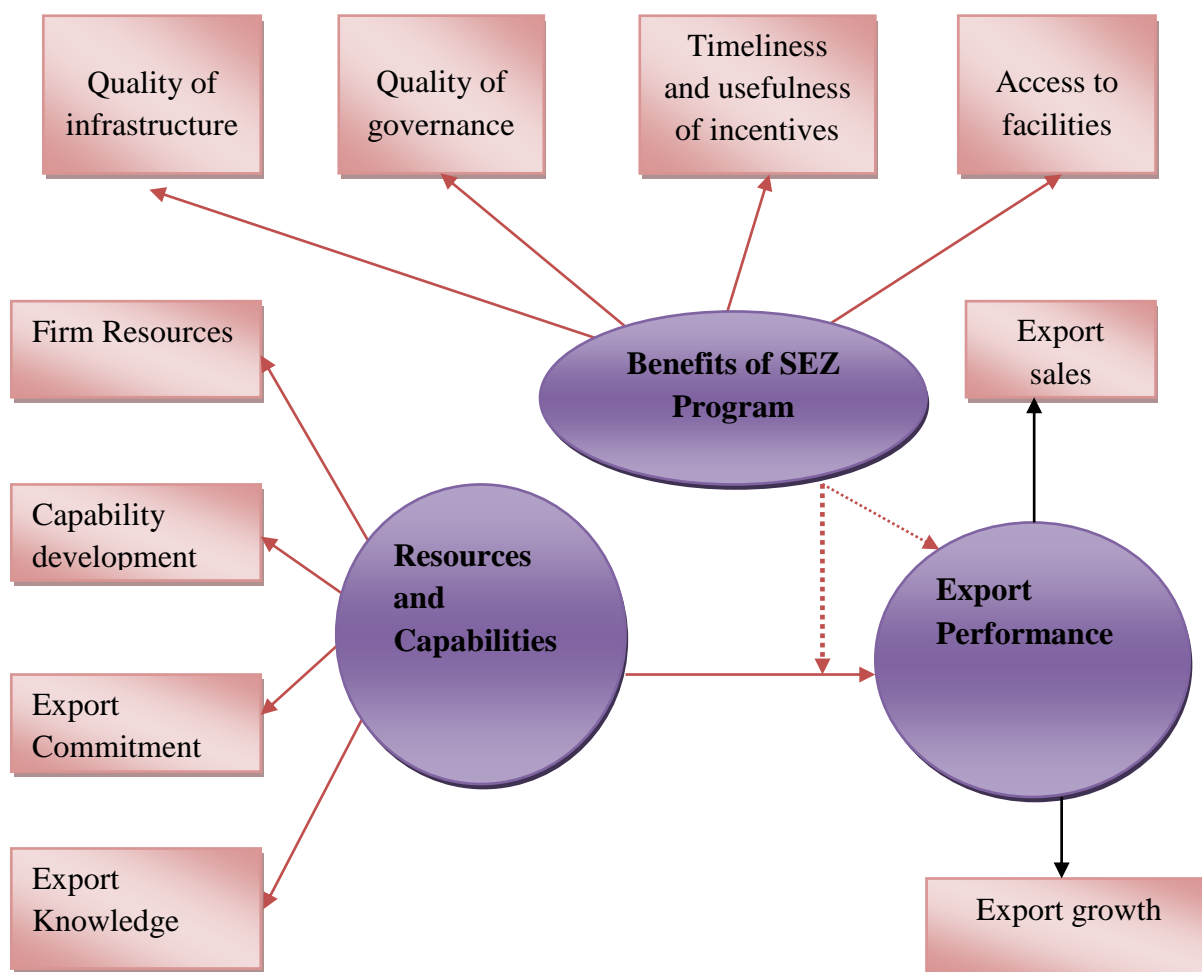


Figure 3.1 Conceptual model developed for the study

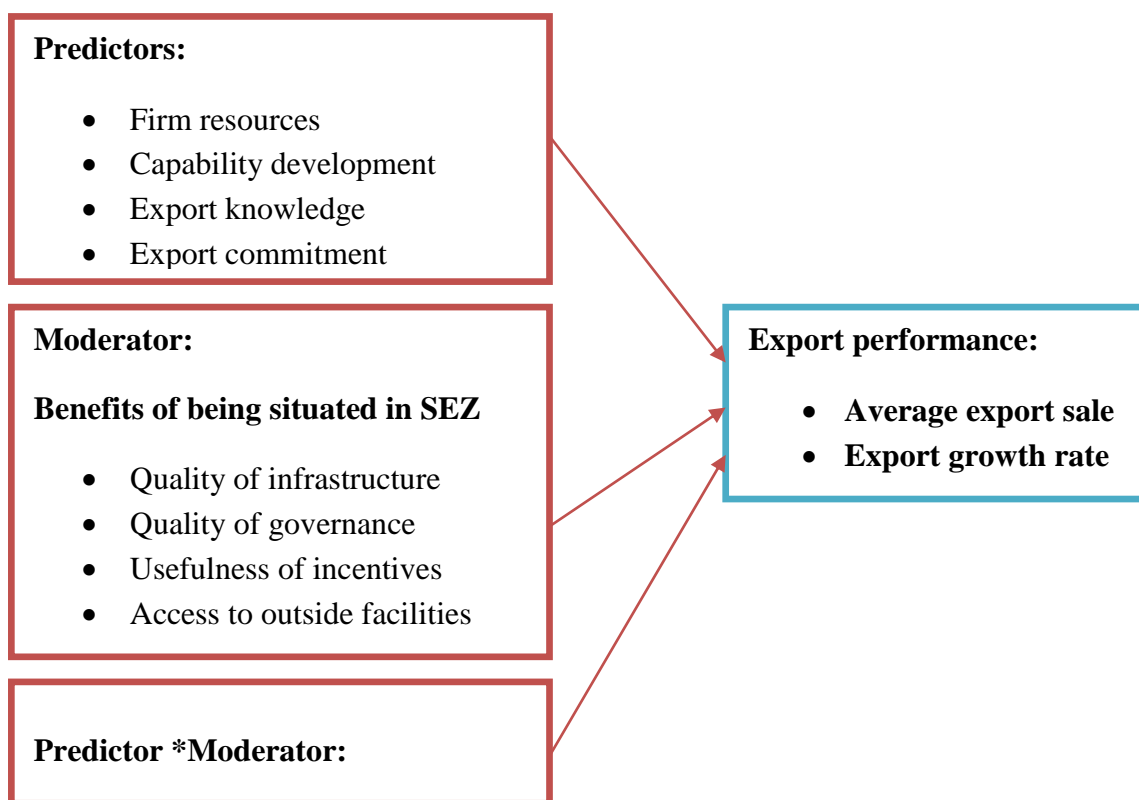


Figure 3.2 Determinants of export performance: Moderating effect of Special Economic Zone Benefits

In the model, export performance is taken as the outcome variable reflected with two dimensions Export sales and Export growth. The model contains two predictor variables i.e., Firm resources & capabilities and Benefits of SEZ program. Here the construct “Benefits of SEZ program”, act as a moderator and predictor. Resources and capabilities are reflected by the dimensions like Export knowledge, Resources, Capabilities and Export commitment. The construct, Benefits of SEZ program, is measured with the help of dimensions like Quality of infrastructure, Quality of governance, Usefulness of incentives and Access to outside facilities.

Hence the main hypotheses related with the model are;

H₁: Resources and capabilities are reflected by the dimensions such as Resources, Commitment, Knowledge and Capabilities

H₂: Perceived benefits of SEZ are reflected by the dimensions such as Infrastructure, Ease of Access, Incentives and Governance

H₃: The level of Resources and capabilities and Perceived benefits of SEZs are positively related to Export performance

H₄: The benefits of SEZs perceived by exporter strengthen the relationship between resources & capabilities and firm Export performance

Firm Resources

Resources include the internal assets needed for the firm to attain a competitive advantage. For the study, mainly four variables are used; they are physical, human, organizational and financial resources.

The physical resources take into account the production capacity of the firm and technology. The production process and technology help the firm to achieve a better competitive position in the market. The dimensions of human resources include management experience. The financial resource includes the capital resource of the firm. Organizational resources contain planning. The diagram below shows the whole view of the construct.

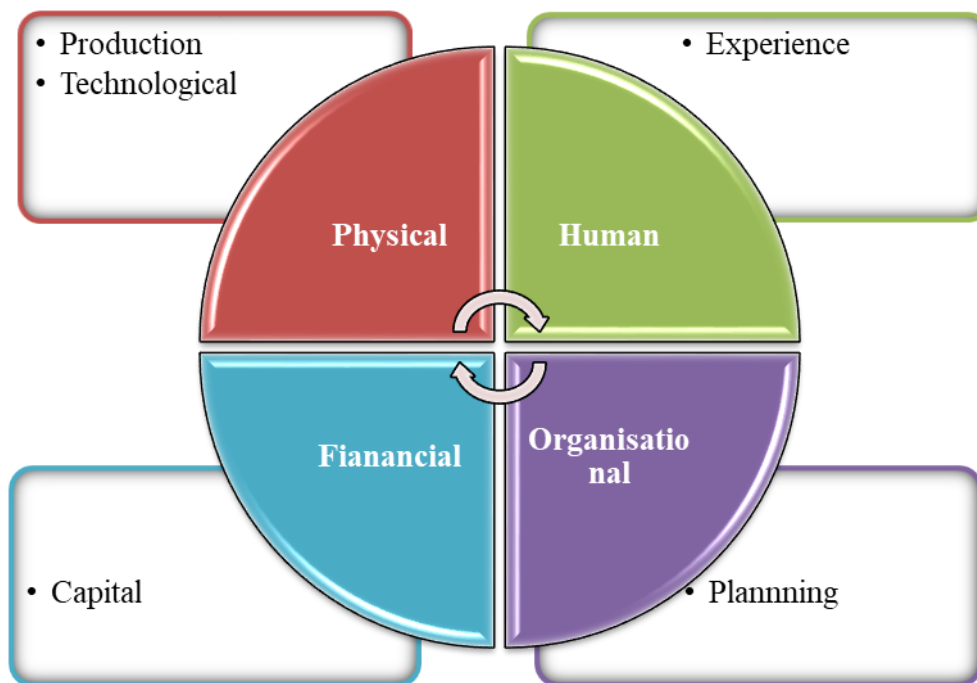


Figure 3.3 Components of Firm Resource

The table below shows the literatures related with firm resources and their relationship with dependent variable, firm export performance.

Table 3.1
Relationship between Firm resources and Export performance

Construct	Authors	Association with export performance
Physical resource	(Aaby & Slater, 1989)	(+)
	(Zahra, Neubaum, & Huse, 1997)	(+)
	(Piercy, Kaleka, & Katsikeas, 1998)	(+)
	(Shoham, Evangelista, & Albaum, 2002)	
	(Morgan, Kaleka, & Katsikeas, 2004)	(+)
	(Wilkinson & Brouthers, 2006)	(+)
	(Beleska-Spasova, 2014)	(+)
	(Kim & Hemmert, 2016)	
	(Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon, 2019)	No effect
	(Theingi & Purchase, 2011)	(+)
Human resources	(Cavusgil & Zou, 1994)	(+)
	(Katsikeas, Piercy, & Ioannidis, Determinants of export performance in a European context, 1996)	No effect
	(Piercy, Kaleka, & Katsikeas, 1998)	(+)
	(Hoang, 1998)	(+)
	(Lado, Martinez_Ros, & Valenzuela, 2004)	(+)
	(Morgan, Kaleka, & Katsikeas, 2004)	(+)
	(Beleska-Spasova, 2014)	(+)
	(Gilaninia, Ganjnia, & Amini Jelodarloo, 2012)	(+)
	(Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon, 2019)	(+)
	(Theingi & Purchase, 2011)	(+)

Construct	Authors	Association with export performance
Organizational resources	(Samiee & Walters, 1990)	(+)
	(Katsikeas, Piercy, & Ioannidis, Determinants of export performance in a European context, 1996)	(-)
	(Shoham, 1998; Samiee & Walters, 1990)	(+)
	(Li & Gabriel, 2001)	(+)
	(Shoham, Evangelista, & Albaum, 2002)	(+)
Financial	(Piercy, Kaleka, & Katsikeas, 1998)	(+)
	Wiklund, 1999	(+)
	(Morgan, Kaleka, & Katsikeas, 2004)	(+)
	(Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon, 2019)	No effect
	(Theingi & Purchase, 2011)	(+)
<p>(+) and (-) indicate positive and negative relation between firm resources and export performance respectively.</p> <p>No sign indicates, no hypothesis has been tested or framed in connection with the export knowledge and export performance.</p>		

Source: Developed for this study

H5_a: *The level of firm Resources is positively related with firm's export sales*

H5_b: *The level of firm Resources is positively related with firm's export growth*

Firm Capabilities

The term capability refers to the firm's ability to build and organize internal and external resources to cope with the changing export environment. It includes information, relationship and product development used within the firm.

Information capability refers to the gathering of market information, which is rare and valuable. This information of customer, competitor, distributor and market will help the firm to be proactive, reduce the risk in international business, and thus help the firms to attain competitive advantage.

Relationship capability refers to the ability of the firms in maintaining a relationship with its foreign parties especially distributors and agents. This relation will help the firm to gain information about the channel, understand market opportunities, identify changes in tastes and preference of customers, testing new products, ideas, identifying new know-how etc.

Product development is always irresistible. Availability of good substitutes, technological advancements, changes in customer demand etc forces every firm to bring innovations. The innovations may be an improvement in existing product, product adaptation and changing the product inconsistent with competitor product etc. New product development is a herculean task. Because it demands a change in technology, management capability, resources etc. the management capability is critical for this because they have to do innovation and easily adapt to market changes. Here the researcher has used the following framework to measure the capability development of the firms.

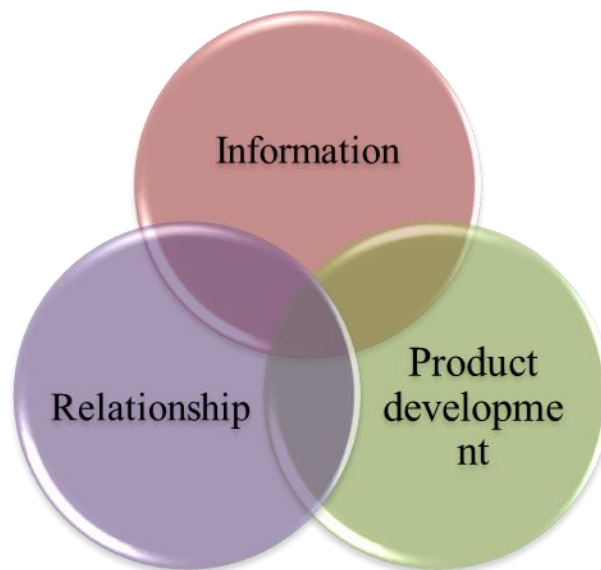


Figure 3.4 Components of Firm Capabilities

Table 3.2
Relationship between Firm capabilities and export performance

Construct	Literatures	Association with export performance
Information capability	(Styles & Ambler, 1994)	(+)
	(Katsikeas, Piercy, & Ioannidis, 1996)	(+)
	(Piercy, Kaleka, & Katsikeas, 1998)	(+)
	(Styles & Ambler, The Impact of Relational Variables on Export Performance: An Empirical Investigation in Australia and the UK, 2000)	(+)
	(Shoham, Evangelista, & Albaum, 2002)	(+)
	(Morgan, Kaleka, & Katsikeas, 2004)	(+)
	(Kropp, Lindsay, & Shoham, 2006)	(+)
	(Nalcacia & Yagcib, 2014)	(+)
	(Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon, 2019)	No effect
Relationship	(Cavusgil & Zou, 1994)	(+)
	(Styles & Ambler, 1994)	(+)
	(Piercy, Kaleka, & Katsikeas, 1998)	(+)
	(Shoham, 1998)	(+)
	(Styles & Ambler, 2000)	(+)
	(Morgan, Kaleka, & Katsikeas, 2004)	(+)
	(Wilkinson & Brouthers, 2006)	(+)
	(Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon, 2019)	(+)
Product development	(Cavusgil & Zou, 1994)	(+)
	(Piercy, Kaleka, & Katsikeas, 1998)	(+)
	(Shoham, Evangelista, & Albaum, 2002)	(-)
	(Morgan, Kaleka, & Katsikeas, 2004)	(+)
	(Ramon-Jeronimo, Florez-Lopez, & Araujo-Pinzon, 2019)	No effect
(+) and (-) indicate positive and negative relation between firm capabilities and export performance respectively.		

Source: Developed for this study

H6a: *The firm's ability to develop capability is positively related with firm's export sales*

H6b: *The firm's ability to develop capability is positively related with firm's export growth*

Export commitment

Firm's commitment towards exporting refers to –“the degree to which organisational and managerial resources are allocated to exporting ventures” (Lages & Montgomery, 2004). In this study, commitment is considered from the behavioural and attitudinal perspective. From the attitudinal perspective, export commitment is the managers' predisposition to dedicate resources to the export activity i.e., “managers' willingness to dedicate financial, managerial and human resources to the export activity” (Donthu & Kim, 1993). From the behavioural perspective, export commitment is explained by the resources the firm dedicates to its operations abroad (Cavusgil and Zou, 1994). International marketing research suggests that the “more committed firms allocate more resources to the exporting activity” (Lages & Montgomery, 2004).

Table 3.3

Relationship between Export Commitment and Export Performance

Literatures	Association with export performance
(Aaby & Slater, 1989)	(+)
(Samiee & Walters, 1990)	(+)
(Cavusgil & Zou, 1994)	(+)
(Styles & Ambler, 1994)	(+)
(Shoham, 1998)	(+)
(Styles & Ambler, 2000)	(+)
(Shamsuddoha, 2004)	(+)
(Wilkinson & Brouthers, 2006)	(+)
(Papadopoulos & Martı'n, 2010)	(+)
(Gilaninia, Ganjinia, & Amini Jelodarloo, 2012)	(+)
(Navarro-García, Ruzo, Losada, & Barreiro, 2007)	(+)
(Singh, 2015)	(+)
(Singh & Chugan, 2015)	(+)
(+) indicates positive relation between export commitment and export performance.	

Source: Developed for this study

H7_a: Export Commitment has positive association with Firm's Export sales

H7_b: Export Commitment has positive association with Firm's Export growth

Export knowledge

Export Knowledge is the know-how possessed by the exporter that shows how a firm market its products or services in foreign country (Seringhaus1993). International activities require both general knowledge and market-specific knowledge. Market-specific knowledge is assumed to be gained mainly through experience in the market, whereas knowledge of the operations can be transferred from one country to another; the latter will thus facilitate lateral growth. (Anderson, 1993). Wang and Oslen 2002 have identified two types of knowledge essential for exporting. The first, knowledge of exporting procedure and second, knowledge about export market. Knowledge of exporting helps the firm to deal with all the procedures involved in export like financing, shipping, forwarding etc. Knowledge about the market consists of knowledge of market pattern, customer behavior and the knowledge of how to effectively deal with the market. In this context, the researcher has included both procedural and market knowledge under the construct export knowledge.

Table 3.4

Relationship between Export Knowledge and Export Performance

Literatures	Association with export performance
(Aaby & Slater, 1989)	(+)
(Anderson, 1993)	*
(Johanson & Vahlne, 2002)	*
(Coff, 1997)	*
(Wang & Oslen, 2002)	*
(Toften & Olsen, 2003)	(+)
(Shamsuddoha, 2004)	(+)
(Beleska-Spasova, 2014)	(+)
(+) indicates positive relation between export knowledge and export performance. *indicates no hypothesis has been tested or framed in connection with the export knowledge and export performance.	

Source: Developed for this study

H8_a: Export Knowledge is positively associated with firm export sales

H8_b: Export Knowledge is positively associated with Firm's export growth

3.2. 2 Perceived benefits of SEZ

Several studies have focused on Export Promotion Programs(EPPs) especially Special Economic Zone and how much it is effective. In addition, loads of studies have conducted on the topic of *the impact of export promotion programs on export performance* whereas *no study has been found on the impact of Special Economic Zone on Export Performance*. Since SEZ is one of the export promotion programs of India, the reviews related to Export promotion programs have been considered.

The table below gives an overall view of the literature reviews related to EPPs and export performance.

Table 3.5
Relationship between Export Promotion Programs (EPPs)
and Export Performance

Literatures	Construct used	Association with export performance
(Kotabe & Czinkote, 1992)	Logistics, legal procedure, servicing export, sales promotion and foreign market intelligence	*
(Genctruk & Kotabe, 2001)	Export assistance program	Not significant
(Francis & Collins, 2004)	Number of export promotion programs used	(+)
(Lages & Montgomery, 2004)	Export assistance	(+)
(Shamsuddoha, 2004)	Market related EPPs	(+)
	Finance related EPPs	No influence
(Wilkinson & Brouthers, 2006)	Trade promotion tools like trade shows, trade missions, foreign offices and objective market information program	(+)

Literatures	Construct used	Association with export performance
(Naik & Reddy, 2010)	use of market development-related, and finance and guarantee-related assistance	No direct effect
(Leonidou, Paliawadana, & Theodosiou, 2011)	Information assistance, education, training and development, trade mobility and financial aid related export promotion programs	*
(Freixanet, 2012)	Use of direct promotion programs, information, assistance in starting exporting and financial aid programs	(+)
(Jalali, 2012)	Use of export promotion programmes	(+)
(Jindal & Gakhar, 2015)	Use of export promotion programmes	(+)
(Munch & Schaur, 2015)	Export promotion activities	(+)
(Singh, 2015)	Clustering and usage of export development programs	(+)
(Broocksa & Biesebroeckb, 2017)	Export promotion assistance	*
(Katsikeas, 2017)	Information assistance, education, training and development, trade mobility and financial aid	*
(Wang, Chen, Wang, & Li, 2017)	Financial aid-related EPPs, Information-related EPPs	*
(+) indicates positive relation assumed between export knowledge and export performance. *indicates no hypothesis has been tested or framed in connection with the EPPs and export performance.		

Source: Developed for this study

From the detailed examination of the table, it can be understood that no study has taken into account Special Economic Zone as an antecedent of firm export performance. Hence the researcher built the model by including the benefits the exporters received by locating their unit at SEZ as an independent and moderator variable. They include the infrastructure, governance, incentives and access to outside facilities.



Figure 3.5 components of benefits of SEZ program

The following hypotheses have been developed with regard to the benefits of SEZ program.

H9_a: The level of Quality of Infrastructure perceived by exporter is positively associated with Firm's Export sales

H9_b: The level of Quality of Infrastructure perceived by exporter is positively associated with Firm's Export growth

H10_a: The level of Quality of Governance perceived by exporter has positive relation with Firm's Export sales

H10_b: The level of Quality of Governance perceived by exporter has positive relation with Firm's Export Growth

H11_a: The Access to outside facility has positive relation with Firm's Export sales

H11_b: The Access to outside facility has positive relation with Firm's Export Growth

H12_a: The Usefulness and Timeliness of Incentives is positively associated with Firm's Export sales

H12_b: The Usefulness and Timeliness of Incentives is positively associated with Firm's Export Growth

H13: The Level of perceived benefits of SEZ moderates the relationship between level of resources & capabilities and export performance. The relationship will be stronger when the satisfaction with SEZ benefits increases.

Table 3.6

Summary of Hypotheses developed for the model

	Hypothesis	Direction
H5 _a	The level of firm Resources is positively related with firm's export sales	+
H5 _b	The level of firm Resources is positively related with firm's export growth	+
H6 _a	The firm's ability to develop capability is positively related with firm's export sales	+
H6 _b	The firm's ability to develop capability is positively related with firm's export growth	+
H7 _a	Export Commitment has positive association with Firm's Export sales	+
H7 _b	Export Commitment has positive association with Firm's Export growth	+
H8 _a	Export Knowledge is positively associated with firm export sales	+
H8 _b	Export Knowledge is positively associated with Firm's export growth	+
H9 _a	The level of Quality of Infrastructure perceived by exporter is positively associated with Firm's Export sales	+
H9 _b	The level of Quality of Infrastructure perceived by exporter is positively associated with Firm's Export growth	+
H10 _a	The level of Quality of Governance perceived by exporter has positive relation with Firm's Export sales	+
H10 _b	The level of Quality of Governance perceived by exporter has positive relation with Firm's Export Growth	+

	Hypothesis	Direction
H11 _a	The Access to outside facility has positive relation with Firm's Export sales	+
H11 _b	The Access to outside facility has positive relation with Firm's Export Growth	+
H12 _a	The Usefulness and Timeliness of Incentives is positively associated with Firm's Export Growth	+
H12 _b	The Usefulness and Timeliness of Incentives is positively associated with Firm's Export Growth	+

Source: Developed for this study

Table 3.7

Summary of hypotheses with Moderators

Hypothesis		Infrastructu re		Governance		Access		Incentives	
		Log Average Export	Growth Export	Log Average Export	Growth Export	Log average Export	Growth Export	Log Average Export	Growth Export
H13 _a	The level of firm Resources is positively related with firm's export performance	✓	✓	✓	✓	✓	✓	✓	✓
H13 _b	The level of firm Resources is positively related with firm's export performance	✓	✓	✓	✓	✓	✓	✓	✓
H13 _c	The firm's ability to develop capability positively influences firm's export performance	✓	✓	✓	✓	✓	✓	✓	✓
H13 _d	The firm's ability to develop capability positively influences firm's	✓	✓	✓	✓	✓	✓	✓	✓

Hypothesis		Infrastructure		Governance		Access		Incentives	
		Log Average Export	Growth Export	Log Average Export	Growth Export	Log average Export	Growth Export	Log Average Export	Growth Export
	export performance								
H13 _e	Export Commitment has positive impact on Firm's Export performance	✓	✓	✓	✓	✓	✓	✓	✓
H13 _f	Export Commitment has positive impact on Firm's Export performance	✓	✓	✓	✓	✓	✓	✓	✓
H13 _g	Export Knowledge positively influence Firm's Export performance	✓	✓	✓	✓	✓	✓	✓	✓
H13 _h	Export Knowledge positively influence Firm's Export performance	✓	✓	✓	✓	✓	✓	✓	✓

Source: Developed for this study

Table 3.8

Summary of Structural path identified

Structural Path	Direction
Perceived Benefits of SEZ -> Access	+
Perceived Benefits of SEZ -> Governance	+
Perceived Benefits of SEZ -> Incentives	+
Perceived Benefits of SEZ -> Infrastructure	+
Perceived Benefits of SEZ -> Export Performance	+
Resource & Capabilities -> Capabilities	+
Resource & Capabilities -> Commitment	+
Resource & Capabilities -> Knowledge	+
Resource & Capabilities -> Resources	+
Resource & Capabilities -> Export Performance	+

Source: Developed for this study

3.3 Conclusion

This chapter has put forward the conceptual model for the study and hypotheses related to the model and constructs. The main purpose of hypothesis development is to (1) identify the key relationship between constructs (2) test the structural relationship (3) predicting the model. The next chapter will give an overall idea about the concept Special Economic Zone Program.

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Chapter 4

**Special Economic Zone Program in India:
Theoretical Framework**

4.1 Introduction

The previous chapter dealt with the research model and the hypothesis derived from the model. This chapter discusses the concept, definition, history and structure of Special Economic Zone in India. In addition to that, the chapter explores the administrative setup, the present status of SEZ in India and a description of Cochin and Madras SEZs, which have been selected as sample clusters for analysis purpose.

4.2 Special Economic Zone

“SEZ is a specifically delineated duty-free enclave and considered as foreign territory for trade, duties & tariffs “ (Foreign Trade Policy(2004-09))

According to foreign trade policy 2004-09, SEZ units can be set up for manufacturing and services. The goods and services importing from territory outside the boundary of SEZ to the zone is considered as export. Similarly, the goods and services exported from zones to the area outside zone considered as an import. (Sudhakara, 2015)

The policy emphasizes that it is the responsibility of units to generate a positive Net Foreign Exchange Earnings within 5 years from the beginning of production. (FAQs on SEZ)

Definition of Special Economic Zone

SEZ is a specially demarcated area of land, owned and operated by a private developer, deemed foreign territory for trade, duties and tariffs with the intent of increasing exports (FAQs relating to Special Economic Zones). Within the SEZ,

production can be carried out by investing companies utilizing a large number of concessions, tax exemptions, guaranteed infrastructure and relaxation of labour and environmental standards.

It is a defined geographic area inside the national boundary but the regulations of the area is distinct from the rules of national terrain (Baissac, Maubrey, & Merwe). “These differential rules principally deal with investment conditions, international trade and customs, taxation and the regulatory environment; whereby the zone is given a business environment that aims to be more free in policy and more efficient in administration than in the national territory” (Farole, 2011)

“SEZs are duty-free economic enclaves where the nation's trade-distorting policies-taxes, tariffs, labour laws etc. are allegedly relaxed to enable companies settled there to compete effectively with low-cost producers worldwide” (Arunachalam, 2008)

The term SEZ covers many specific zones like;

- Free Trade Zones (FTZ)
- Free Zones (FZ)
- Industrial Estates (IE)
- Free Ports
- Urban Enterprise Zones
- Electronic Hardware Technology Parks (EHTPs)
- Agri Export Zone (AEZs)
- Soft Technology Parks (STPs)
- Bio-Technology Parks (BTPs)

“SEZs are duty-free economic enclaves where the nation's trade-distorting policies-taxes, tariffs, labour laws etc. are allegedly relaxed to enable companies settled there to compete effectively with low-cost producers worldwide” (Arunachalam, 2008)

History of Special Economic Zones

The Special economic zones have taken shape after several changes. This idea was not the country's only contribution. It was born after centuries of evolving different ways of being in different parts of the world.

Among these, a few have been successful in encouraging manufacturing activities and export. The first country in the world to launch a fully equipped SEZ was Ireland in 1959. Thereafter the SEZ was begun to spread across every nook and corner of the world, especially in developing countries. Although many countries have experimented with SEZ concept, China was the most successful country in the world experimented with SEZ concept. The number of SEZs has increased from 79 in 1975 to 5383 in 2018 having spread over 147 countries. Almost 507 are in pipeline. Developing economies are having a lion's share in the number of SEZs (4772), among which Asia is the top with 4046 SEZs (UNCTAD, 2019).

In India, SEZs are the modified version of the Export Processing Zone, which was again the combination of Industrial estates and the Free trade zones, which have contributed immensely to the formation of the SEZs in India. The history of SEZs in the Indian context has two phases (Tantri M. L., 2016). The first phase consists of the EPZs regime that again split into an export promotion within import substitution strategy and EPZs expansion. The second phase consists of the SEZs regime.

The first phase- EPZs Regime (1960-90)

The phase can be well defined as promoting export by holding an import substitution strategy.

This phase started with the setting up of the Free trade Zone at Kandla in 1965 which had been substituted for the Karachi Port that India lost when the partition happened. The main aims were promoting 100% export-oriented industries and promoting industrial development. The investors were attracted to Kandla with fiscal and non-fiscal incentives. Following it, Govt. of India set up Santracruz EPZ in 1972 which was concentrating electronic items later opened entry to Gems and

Jewellery. The policies were considered as unbending. Existing incentives and facilities offered could not grab the attention of exporting community. The power of zone authorities was incomplete. Since the facility of single window clearance mechanism was unavailable, exporters had to meet various central and state government departments separately for getting any clearances. The day-to-day operations were difficult due to harsh rules. The measures of customs bonding, getting bank guarantee and the movement of goods were very strict. The policy related with foreign direct investment was also rigid (Aggarwal, 2005). Kaul Committee in 1978, Review Committee on Electronics in 1979 and Tandon Committee in 1981 were major committees appointed by the govt. to study the scope of SEZs in India. The Tandon Committee recommended establishing four or five more zones in different parts of the country. Based on the recommendations of the committee, SEZs were set up at Noida in U.P., Chennai in Tamil Nadu, Cochin in Kerala, Vishakhapatnam in Andhra Pradesh, Falta in West Bengal in 1984. Meanwhile, a committee lead by Abid Hussain was constituted in 1984 and recommended adopting a single-window mechanism, being selective in choosing industries and providing concession in selling 25% of output in DTA.

Although, several committees have been appointed, SEZs were lacking a holistic approach from the policy level.

The status of EPZs during Economic reforms (1990-2000)

The major initiative to make India's SEZs more competitive began during the structural adjustment programme regime. To make it competitive, SEZs have opened to private developers also. The First private sector EPZ was established in 1994 in Gems and Jewellery. In 1992 Agriculture related units began to set up under EPZs.

Trading, reengineering and re-conditioning units got permission to begin their operation in the year 1994 (Burea, 2015). Even major changes happened during post-reform periods. EPZs lacked a centralised and focused law governing all the activities since all the policy changes were fully dependent upon EXIM policies

The second phase – SEZ Regime (2000 onwards)

This phase can be called to be the breakthrough in the history of SEZs. This phase witnessed the formation of a specific policy for EPZs, known as SEZ policy, that happened when the then Minister for Commerce visited China and observed their successful SEZ experience. His observations were incorporated into the EXIM policy 1997-2002, which again led to the introduction of SEZ scheme in India from April 1, 2000, onwards.

Every state government was asked to form state-specific policies as per their requirements.

The major highlights of the policy were;

- Service sectors were permitted to start SEZs along with manufacturing sectors.
- Private, public, joint sectors and state governments were permitted to set up SEZs with a minimum land area not less than 1000 hectares.
- The units operating in SEZs were declared foreign customs territory.
- DC became the apex level authority.
- DC's duties expanded from dealing with day-to-day operations to deciding the nature of enterprises to be permitted and dealing with labour-related issues.
- Academicians were given more roles in approving SEZs.
- The role of State Governments was specified which was invisible in the EPZ structure. Hence, they had to ensure that everything is going in line with SEZ policy.
- The role of the State govt included forwarding the SEZ proposal to the Board of Approval that needed keen care on deciding whether the proposed land comes under reserved or ecologically fragile area.

- State govt. is required to ensure that proper infrastructure facilities are provided. They can decide upon the subsidies to be given, relaxation in state levies etc.
- A single window clearance mechanism was implemented for all the matters relating to central and State to ensure quality in governance.
- Export promotion council for SEZs and 100 % Export Oriented units were set up.

The Kandla, Santa Cruz, Cochin and Surat zones were shifted to SEZ regime in November, 2000 (Aggarwal, 2005). Later in the year 2003, Vishakhapatnam, Madras and Falta zones were also changed to SEZ status. (K B, 2013). During the period from November 1, 2000, to February 9, 2006, the SEZs in India were operating under the provisions of the Foreign Trade Policy of May 2005. The SEZ Act was passed by the Parliament and SEZ Rules came into force on February 10, 2006 (Deepak, 2012).

SEZ Act 2005

The SEZ Act was passed by Parliament in May 2005 and got the president's assent on 23rd June 2005. The aim of the policy was to make zones "Engine for economic growth" which is ensured through providing better infrastructure and attractive fiscal package by the centre and the state levels, with least possible regulation. (Displacement and Rehabilitation of People Due to Developmental Projects)

The main objectives of the SEZ Act are:

- Generation of additional economic activity
- Promotion of exports of goods and services
- Promotion of investment from domestic and foreign sources
- Creation of employment opportunities
- Development of infrastructure facilities

(<https://commerce.gov.in>)

Facilities and Incentives offered

a) To the units in SEZs;

- Facility to procure goods domestically without any duty for the Importing /procuring domestic goods duty-free for the expansion, functioning and preservation of units. (indialiaison)
- Units are not liable to pay income tax on revenue from export under section 10AA of the Income Tax Act for the first 5 years. Then for the next 5 years, they will enjoy income tax exemption at 50%. Then for the next 5 years, 50% tax of ploughed back export profit (Sunset Close for Units will become effective from 01.04.2020). (indialiaison, FAQs relating to Special Economic Zones)
- Exemption of Central Sales Tax on selling and purchasing of goods except for newspaper.
- Exemption from payment of Service tax
- Payment of Research and Development cess on import of technology is exempted.
- Exemption from customs duty
- Procurement of manufactured capital goods and all other inputs are exempted from payment of excise duty.
- FDI is allowed 100%.
- Exempted from a public hearing under Environment Impact Assessment.
- Units are exempted from port restriction under Drugs and Cosmetics Rules.
- As per the IGST Act 2017 , the distribution to SEZs are zero-rated (FAQs on SEZ)
- Single window clearance for Central and State level approvals.

- Units can delegate their production process to units either in the DTA or in EOU/SEZ.
- Interested units are allowed to outsource portion of their production to abroad also. (doingbusinessinmaharashtra)

b) To the SEZ Developers;

- Exemption from Central Sales Tax
- Exemption from Service Tax
- Exemption from payment of Research & Development cess on import of technology.
- Exempted from paying Excise Duty
- Exemption from State levies
- FDI allowed 100%

Objectives of SEZs: State-wise

In addition to the general SEZ objectives, states are allowed to formulate State-specific policy and set objectives. The table below shows the state-specific SEZ objectives.

Table 4.1
State-wise SEZ objective

Sl. No.	State	Objectives
1	Karnataka	To magnetise investment and expand exports from the state
2	Orissa	To develop industrial and economic bases of state by most favourable usage of natural and mineral resources
3	Tamilnadu	To gain extra bonus to the state in the terms of industrial and economic development. generate additional employment in the state
4	Andhra Pradesh	To enhance development of industries and expand the job prospects
5	Rajasthan	Increase the export from the state through value addition by exploring the inborn talents in the state among the sectors like gems and jewellery, handicrafts, woollen carpets etc
6	Kerala	To generate wealth and enhance employment opportunities
7	Maharashtra	By giving simple and clear administration procedures, increase productivity and ease of doing business in the state
8	West Bengal	To create employment opportunities by efficiently exploiting the skill and craftsmanship
9	Uttar Pradesh	To enhance industrial and economic growth in the state

Source: (Tantri M. L., 2013)

Distribution of SEZs state wise

The table below shows the status of SEZs across various states in India.

Table 4.2
State-wise distribution of approved SEZs as on 14.11.2019

State/UTs	Formal approvals	In-principal approval	Notified SEZs	Exporting SEZs
Andhra Pradesh	32	4	27	20
Chandigarh	2	0	2	2
Chhattisgarh	2	1	1	1
Delhi	2	0	0	0
Goa	7	0	3	0
Gujarat	28	4	24	20
Haryana	23	3	20	7
Jharkhand	2	0	2	0
Karnataka	62	0	51	32
Kerala	59	0	55	48
Madhya Pradesh	12	0	6	5
Maharashtra	48	12	42	31
Manipur	1	0	1	0
Nagaland	2	0	2	0
Odisha	7	0	5	5
Puducherry	1	1	0	0
Punjab	5	0	3	3
Rajasthan	5	1	4	3
Tamil Nadu	54	4	50	40
Telangana	68	0	56	30
Uttar Pradesh	23	0	20	13
West Bengal	7	2	5	7
Grant total	417	33	349	238

Source: Annual report 2017-18 ,Department of Commerce

The table 4.2 shows the dispersion of zones across various states. It can be identified that a few states holds major SEZs in the country. Out of 222 SEZs, five states including Tamil Nadu (40) , Telangana (30) , Maharashtra (31) , Karnataka (32) , Andhra Pradesh (20) possess 64.06% of total number of zones. The state, Tamilnadu has more number of operating zones. States /UTs like Pondicherry, Nagaland, Manipur, Jharkhand, Goa and Delhi have zero zones. Among these, Goa has seven zones that got principal approval and 3 notified zones. However, none of the zone in these three has started exporting.

Sector wise distribution

The table below shows the sector wise distribution of SEZs in India as on 31.03.2018

Table 4.3
Sector wise distribution of SEZs in India

Sector	Number	Percentage
IT/ITES/Electronic hardware/semi conductor	129	58%
Engineering	13	6%
Multi product	23	10%
Pharmaceuticals/chemicals	12	6%
Textiles/apparel/wool	7	3%
Free Trade Warehouse Zone	4	2%
Footwear /leather	3	1%
Biotechnology	3	1%
Gems and jewellery	3	1%
Food processing	2	1%
Handicrafts and carpets	2	1%
Non-conventional energy	2	1%
Others	19	9%

Source: Annual report 2017-18, Department of Commerce

From the table 4.3, it can be understood that India's SEZs is more concentrated to IT/ITES, holding 58% share in the total number. IT is followed by multiproduct (10%), others (9%), engineering (6%), pharmaceuticals (6%) etc. the zones dedicated to food processing, handicraft and non-conventional energy are very few in number.

Types of SEZs

The SEZs are categorised into three types. SEZs for the multi-product, Sector-specific SEZ and SEZ in port or airport.

1. Multiproduct: "Special Economic Zone for multi-product" means a Special Economic Zone for more than one sector where Units may be set up for manufacture of goods falling in two or more sectors or the rendering of services falling in two or more sectors or any combination thereof including trading and warehousing
2. Special Economic Zone for the specific sector: means a Special Economic Zone meant exclusively for one or more products in a sector or one or more services in a sector;
3. Special Economic Zone in a port or airport: means a Special Economic Zone in an existing port or airport for the manufacture two or more goods falling under a sector or goods coming under two or more sectors or for trading and warehousing purpose or the providing services(SEZ amendment up to 2010) (slideshare).

The layout of SEZ

The authorities have demarcated the area of SEZ as a processing and non-processing area. Where the processing area is exclusively for setting up of units for manufacturing goods or rendering service or area exclusively for warehousing or trading operations that have to be a minimum of 50% of the total area. The non-processing area is allocated for activities other than those specified in the processing area which supports activities in the processing area.

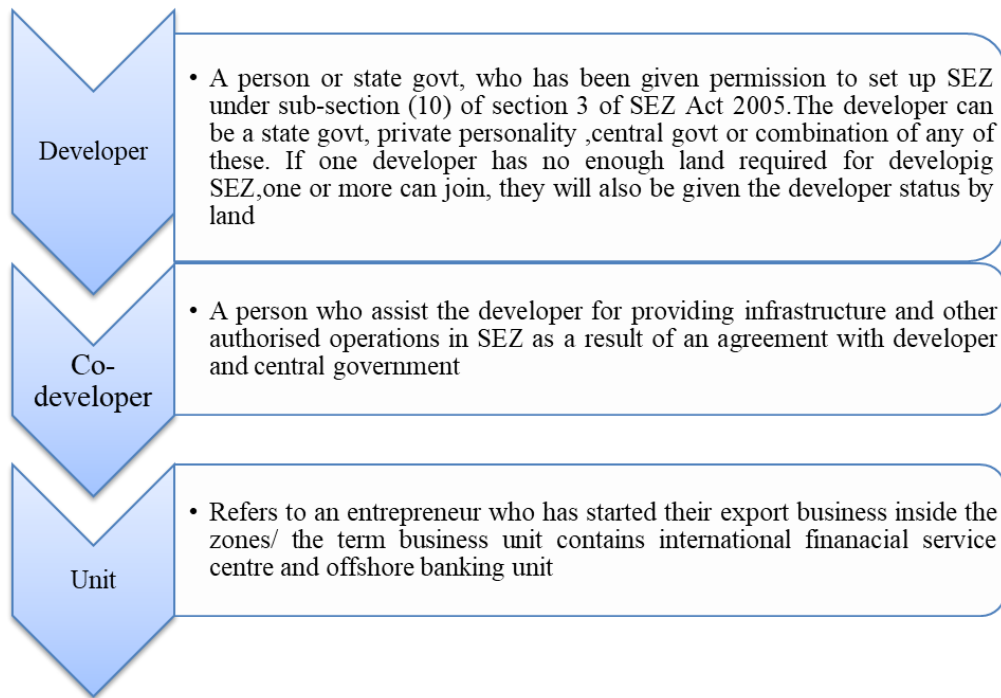
<p style="text-align: center;">Processing area</p> <p style="text-align: center;">Manufacturing & Services Units</p> <p style="text-align: center;">Infrastructure for Units</p> <p style="text-align: center;">50%</p> <p style="text-align: center;">MINIMUM</p> <p style="text-align: center;">Fencing as per BoA guidelines & Restricted Entry</p>	<p style="text-align: center;">Non Processing Area (NPA)</p> <table border="1" style="margin: auto;"> <tr><td style="text-align: center;">Hotel</td></tr> <tr><td style="text-align: center;">Hospital</td></tr> <tr><td style="text-align: center;">Housing</td></tr> <tr><td style="text-align: center;">Shopping</td></tr> <tr><td style="text-align: center;">Entertainment</td></tr> <tr><td style="text-align: center;">School</td></tr> </table> <p style="text-align: center;">Tax concessions and exemptions can be availed for the infrastructure permitted by the Board of Approval.</p> <p style="text-align: center;">If any infrastructure is built in addition to these, they are obliged to pay tax.</p>	Hotel	Hospital	Housing	Shopping	Entertainment	School
Hotel							
Hospital							
Housing							
Shopping							
Entertainment							
School							

Source : (Burea, 2015)

Figure 4.1 Layout of SEZ: Processing vs. Non-Processing

Key persons of SEZ

The chart below shows the important persons related with SEZs in India

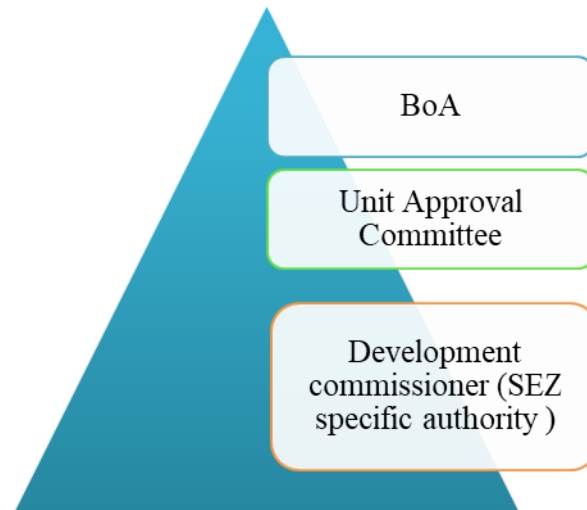


Source: (Burea, 2015)

Figure 4.2 Key persons of SEZ

SEZ management in India

As per the provision of SEZ ACT 2005, Special Economic Zones in India operate through three administrative setup.



Source :Developed for the study

Figure 4.3 Management of SEZ in India

a) Board of Approval (BoA)

BOA, the apex body of SEZ, consisting of 19 members headed by the Secretary of the Department of Commerce constituted as per SEZ Act 2005.

The board has Secretary , Dept. of commerce as the chairman. It also includes members of CBEC, IT,CBDT, A nominee of the State Government concerned , Director General of Foreign Trade or his nominee , Development Commissioner concerned , A professor in the Indian Institute of Management or the Indian Institute of Foreign Trade , Director or Deputy Sectary, Ministry of Commerce and Industry, Department of Commerce and Joint Secretaries of SEZ, Joint Secretary DIPP, Joint Secretary Ministry of Science and Technology, Joint Secretary Ministry of Small Scale Idustries and Agro and Rural Industries, Joint Secretary ministry of home affairs, Joint Secretary ministry of defence, , Ministry of

Overseas Indian Affairs , Ministry of Law and Justice , Ministry of Environment and Forests , Ministry of Urban Development. (indialiaison)

Duties, Powers and Functions of Board

- ❖ Giving permission, modification or rejection to the application submitted for setting up of SEZ in the country
- ❖ Allowing approval for carrying out authorised operation by the developer in the SEZ
- ❖ Admitting the developer or units' application for foreign direct investment for the operation, development and maintenance.
- ❖ Granting approval, suggesting modification or rejecting the proposal of developing infrastructure in SEZ
- ❖ Suspending the letter of approval granted to the developer and appointing an administrator
- ❖ Dispose of the appeal, if any, filed by the developer on the rejection or modification put forward by the board at the time of scrutinising the application.

b) Unit Approval Committee (UAC)

The Powers and functions of Approval Committee are;

- Approval of application submitted by developer for procurement of goods from the domestic area for doing authorised operations
- Approval of service provided by a service provider outside the Domestic Tariff Area for doing authorised operations
- Examine the utilisation of goods, service, trading activities or warehousing in the SEZ

- Take the decision of approval, approval with modification or rejection of the proposal submitted by entrepreneurs to start the unit in SEZ
- Allow foreign collaboration and FDI in connection with setting up of the unit
- Supervising all the compliances and conditions based on which the letter of approval has been approved to the developer or unit
- Perform any other functions delegated by the Central govt

c) Development commissioner (DC)

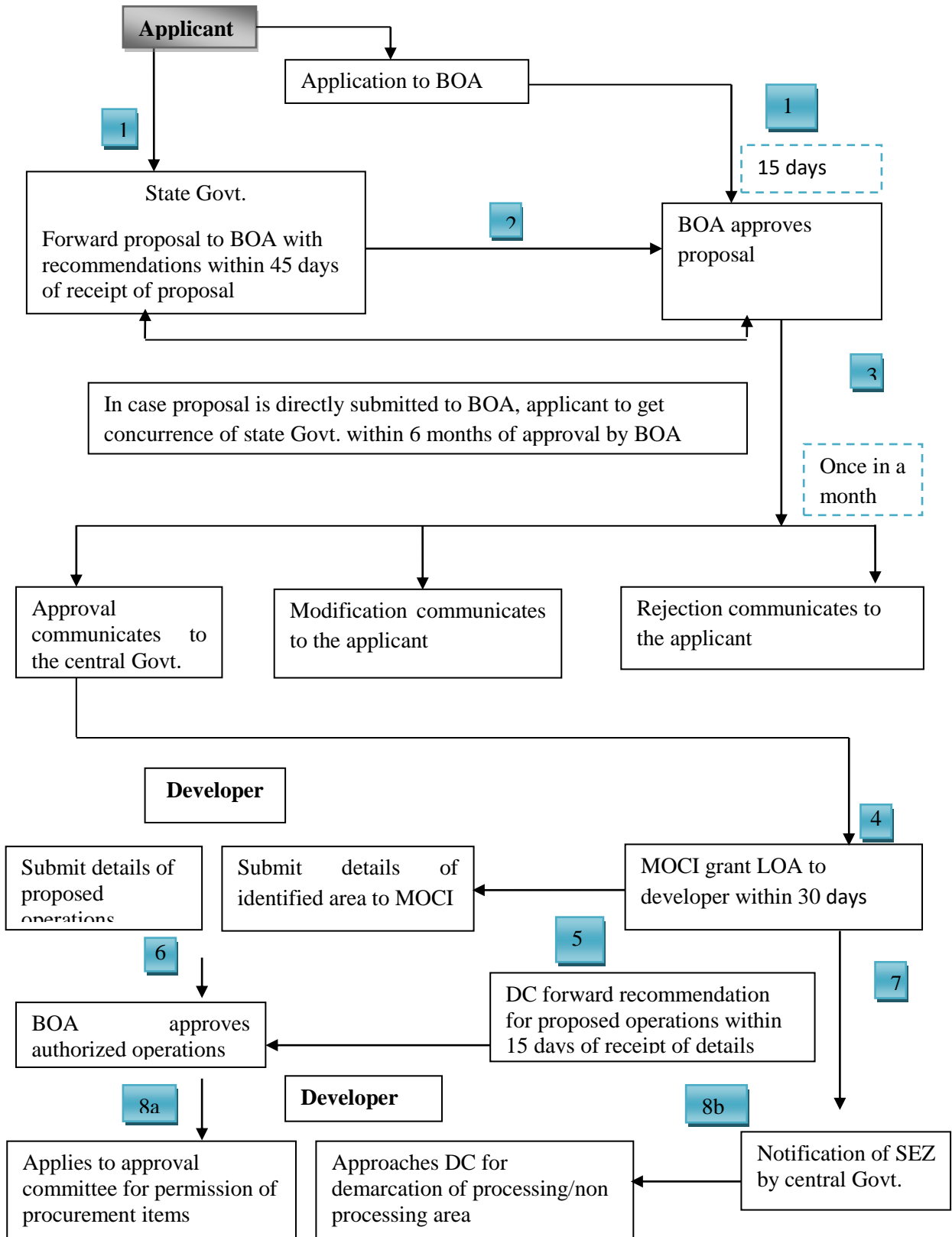
Following are the functions of development commissioner

- Provide proper guidance to the Entrepreneur in setting up the unit
- Take necessary actions to encourage export from the zone
- Ensure proper coordination between central govt or state govt agencies to ensure export promotion from the SEZ
- Monitor the performance of units and developer
- Perform any other functions delegated by the central govt or board of approval.

Procedure to establish SEZ in the country

As per the SEZ Act 2005, SEZs can be set up :

- By central govt alone
- By state govt alone
- By central and state govt jointly
- By private party
- By private ,central and state govt jointly



Source: (Kalyani, 2018)

Figure 4.4 Actual completion of SEZ approval

a) Private party as a developer

A person who wishes to develop SEZ has to go through the following stages.

Step 1- Submitting application

After identifying the area, the person can;

- Either give a proposal regarding the setting up of SEZ to the state govt :

Here the state govt shall submit the proposal to the board for permission with some changes if any required within the period. (indialiaison)

- Or submit the proposal personally to the Board of Approval (indialiaison)

Here the person has to get consent from the state govt after getting approval from the board of approval

In this stage, the state govt has to ensure some requirements before submitting the proposal with recommendations to BoA. They are :

- a) Provide Exemption from electricity duty or water charges
- b) Allow the developer to generate, transmit and distribute power within SEZ
- c) Provide exemption from state levies, taxes or duties
- d) Ensuring infrastructural facilities
- e) Declaring SEZ as a public utility service
- f) Giving all the power to Development Commissioner to deal with Labour disputes
- g) Create a Single Window clearance mechanism within SEZ for units and developer.
- h) Confirm that the area identified for building SEZ is not fragile or ecologically reserved

Stage 2- In principal and formal approval

After getting the proposal the BOA may without prejudice

1. Approve the proposal
2. Approve with modification
3. Reject the proposal

In connection with the provisions like;

Minimum area of land and other terms and conditions.

- i. Since the developers and units lost interest in SEZ due to the introduction of Minimum Alternative Tax/Dividend Distribution Tax, the government issued attractive measures under the framework of "Annual Supplement 2013-14" of Foreign Trade Policy 2009-14. This is aimed at gaining the attention of investors who lost it and increase export (Burea, 2015) .
- ii. Because of the difficulty in getting large acre of un-cultivable land for setting up SEZ, the minimum land area requirement was reduced by 50%. So for multi-product zones from 1000 to 500 hectares and sector-specific zones from 100 to 50 hectares.
- iii. Earlier there were minimum land criteria of 10 hectares for IT/ITES. This criterion was later withdrawn. However, the minimum processing area criteria remain the same.
- iv. Additional units of related areas under the same sector were permitted to set up in sector-specific SEZs.
- v. The norms regarding minimum built-up area have been made cosy. One lakh square meter was made applicable to major seven cities including Kolkata, Chennai, Delhi, Mumbai, Hyderabad, Pune and Bangalore. They fall under A category cities. For B categories cities, it is 50000 square meter and the remaining cities 2500 square meter

Table 4.4
Minimum Land Criteria for SEZ

	Type of SEZ	Minimum area requirement	New limit
Multi product			
1	If zones are involved in the manufacturing of two or more goods under a sector or providing rendering services of two or more services in a sector or good or services falling under two or more sectors. (slideshoware)	1000 hectares and Less than 5000 hectares, minimum 50% for processing area.	500 hectares
2	Exclusively for Services	100 hectares or more	50
3	Zones built in the specified states – Assam, Meghalaya, Nagaland, Arunachal Pradesh, Mizoram, Manipur, Tripura, Himachal Pradesh, Uttaranchal, Sikkim, Jammu and Kashmir, Goa, Union Territory (slideshoware)	200hectares or more	-
Sector specific			
1	Specific sector/port/airport	100 hectares or more and minimum 50 % for processing area.	
2	Electronics and hardware and software including ITES and nonconventional energy	10 hectares or more and built up processing area of one lakh sqr.mtr	
3	Exclusively for bio-technology and non-conventional energy sector	10 hectares or more and built up processing area of forty thousand square meters	
4	Gems and jewellery sector	10 hectares or more and built up processing area of fifty thousand square meters	
5	Built in the states – Assam, Meghalaya, Nagaland, Arunachal Pradesh, Mizoram, Manipur, Tripura, Himachal Pradesh, Uttaranchal, Sikkim, Jammu and Kashmir, Goa, Union Territory and sectors not enclosed under categories 2	50 hectares	

	Type of SEZ	Minimum area requirement	New limit
	and 3 above (Associates, Nishith Desai, 2006)		
Free trade and warehousing			
1	When not set up as a part of a Multiproduct SEZ	40 hectares or more & A built up area of greater than one lakh sq. meters. (Jharkhandindustry)	
2	When set up as a part of Sector Specific SEZ	No minimum area requirement (slideshare)	
3	When set up as part of a Multiproduct SEZ	There is no minimum area limit. Maximum area should be less than 25% of processing area. (slideshare)	

- After scrutinising the application and verifying it with all the norms and condition, if the BOA approves the proposal without modification, it has to communicate it to the central government.
- If the BOA approves with modification, they have to communicate it to the concerned person or state govt and if such modification is being accepted by the Person or State govt., the board has to communicate the approval to the Central govt.
- If the proposal is being rejected by the board, it shall be communicated to the Central govt and they will communicate this to the concerned person or state government.
- This type of approval is known as "In-principal approval" or "formal approval"
- After getting intimation from the BoA the central govt will grant a letter of approval (LoA) within thirty days on such terms and conditions and obligations as approved by the board to the developer or state govt. The LoA is valid for one year but can be extended for a further period of 2 years.

- In this stage, the central govt can approve more than one developer in the zone due to the non-possession of adequate land by the developer based on the approval from the board. They all will be regarded as a developer in respect of land in their possession.
- Any person or state govt can develop infrastructural facilities or do any other authorised operation in the notified area after agreeing with the developer. For this, a proposal must be forwarded to the board and they will communicate it to the Central govt. after getting LOA, they will be regarded as "Co-Developer".
- Finally, The Developer has to acquire approval from concerned Departments of the Central and State Govt. or Government Agencies, as the case may be.

Stage 3-Notification

After getting LoA, Developer has to submit an application to the central govt for notifying the area as SEZ. For that, the developer is required to submit the following details;

- Proof of legal possession and irreversible right in connection with the notified area
- In case the identified area is a leasehold property, the lease shall be for a period not less than twenty years.
- The identified area shall be contiguous and vacant and it should have no public thoroughfare. **
- ** BOA can relax the condition of contiguity on case-to-case basis, on merits, for reasons to be recorded in writing. (Tandel, 2012)
- The central govt issues notification when the developer proves the possession and irreversible right on the land.

Stage 4-Operational

- The BoA permits the developer to work even with one unit, after getting approval from the unit approval committee, hence the SEZ becomes operational and the letter of permission will be valid for 5 years.
- The developer can allocate space to the units as per the agreement between them. They can build the required infrastructure also. The developers or units can avail of various tax incentives /exemptions. The developer/units are obliged to submit an annual performance report to the Development Commissionaire office.
- Unit Approval Committee is responsible for monitoring the performance of developer/units and taking necessary actions following Foreign Trade (Development and Regulation) Act 1992.
- If the Developers, opt for De-notification, it has to be approved by BoA at the Ministry of Commerce &Industry.

State govt as the developer

- In case the state govt wishes to develop SEZ, it can forward the proposal to the board of approval after identifying the area.
- The central govt may consult the state govt.
- Identify the area
- Give assent to start SEZ without referring Board of approval.

Procedure for starting a unit in SEZ

1. Submitting application

The entrepreneur interested to set up a unit in SEZ can submit a consolidated application for starting the unit and getting other clearances to the Development commissioner.

The details to be furnished include;

- Establishing unit in a Special Economic Zone
- Authorisation for sub-contracting
- Allocation of Importer-Exporter Code number
- land/industrial sheds allocation in the Special Economic Zone
- Water connection
- Registration-cum-Membership Certificate
- Small Scale Industries Registration
- Registration with Central Pollution Control Board
- Power connection
- Building approval plan
- Sales tax registration
- Approval from Inspectorate of Factories
- Pollution control clearance, wherever required
- Any other approval as may be required from the State Government. (Jharkhandindustry)

2. *Unit approval committee*

After getting the application, the DC will check it thoroughly and submit the same to the unit approval committee for consideration. The UAC usually meet once in two weeks.

The UAC may either approve the proposal without any changes, approve with some changes or reject the proposal. Whatever be the decision, it must be communicated to the person within 15 days of receipt.

The person must be given chance to be heard the reason for approval with modification or rejection. If the person comes forward with modifications, they can either approve or reject the proposal. If the person is not satisfied, he can go with an appeal to the board.

3. *Granting letter of approval*

The DC can grant a letter of approval to units after getting approval from the board/ UAC. The validity of LOA is fixed for 1 year. Within this, the entrepreneur has to begin production or service. In a special case, the DC can extend the validity, but not beyond 2 years. If the entrepreneur fails to commence production even after the valid or extended valid periods, his LOA will lapse.

If he undertakes the production, within the time, this LOA will be considered as a licence for all authorised operations where the initial validity is five years. DC can give a further extension of five years to the units after the expiry of the license

The export from or import to special economic zone done on self-certification basis. The criteria to be fulfilled by units within 5 years from the beginning of manufacturing is to be a net foreign exchange earner. Every unit has to give a Bond to the govt. concerning imported/procured duty-free goods and achievement of positive NFE. (FAQs on SEZ)

An SEZ unit could opt out of de-bonding of the SEZ scheme after getting the approval of the UAC. They are required to pay customs/excise duties on the goods Imported and local capital goods, raw materials and finished goods in collection (FAQs on SEZ)

Profile of Madras Export processing Zone –SEZ (MEPZ-SEZ)

MEPZ is a multiproduct zone setup as Export Processing Zone at Madras (now Chennai) in 1984. The zones started actual exporting during the period 1985-86 and became operational. MEPZ SEZ is one among the seven multi-product zones set up by the central govt. of India. At present 39 zones, all over Tamilnadu are working under this zone. The Development commissioner has the authority of the

day-to-day affairs of the zone. The zone has been working under the status of Special Economic Zone from 1-1-2003. It is located at Tambaram, Chennai on N.H. with ease of access to seaport, airport, educational institutions etc. The zone is spread across 262 acres (109 hectares). The SEZ authority provides plot as well as built-up factory space for starting an export unit that usually ranges from 1 to 5 acres. Plots and SDF (standard design factory) are allotted for 5 years and this can be renewed after the specific period. The Plots and SDF are allotted based on an E-auction conducted by MSTC. Other infrastructures include;

- Well Laid Concrete Roads with provision for Cable Ducts (Dry Ducts) and Wet Duct for rainwater.
- Street Lighting (LED).
- Common Sewage Treatment Plant 1 MLD Capacity.
- Water supply is arranged through TWAD Board.
- Tamil Nadu Electricity Board has a Substation inside the MEPZ-SEZ and supplies power through their HT / LT network.
- Child Care Centre.
- Common Bus Bays.
- Bank, ATM.
- Post Office.
- Telephone Exchange (BSNL).
- Internet Service Providers (AIRTEL / RELIANCE / TATA).
- Access Control System using RFID technology for entry /exit of men, material and vehicles.

(<https://www.mepz.gov.in>)

MEPZ authority charges 160 per sq. m per annum for plot and 1771 per sq. m per annum for SDF and these are subject to an increase of 10% every year. The units are liable to pay 150 per KL for water and 7.5% of the Lease Rent for private security charges to SEZ authority. TNEB levies electricity charges and units are liable to them. At present 109 total units are working under the sectors Textiles, Leather & Readymade (12), Gems and Jewellery (12), Chemical, Plastic & Pharmaceuticals (21), Engineering (26), Miscellaneous(13), Trading (3), Electronic Hardware (9) and Electronic Software (12). (<https://www.mepz.gov.in>)

Profile of Cochin Special Economic Zone (CSEZ)

CSEZ has formed as Export Processing Zone as per the decision of Govt. of India to set up SEZs all over the country. The zone became operational in 1986 and the first export took place in that year itself. It operates at 103 acres of land in Kakkanad. Out of 103 acres, 70 acres has been allotted solely for building plots and Standard Design Factory. It has been converted into SEZ regime during the 2003-04 period. It has the jurisdiction of Kerala and Karnataka states plus Lakshadweep and Mahe union territories. The zone is located in an area closer to the International Ocean and trade routes. At present, 50 zones are working under the jurisdiction of the Cochin office. At CSEZ, 95 units are working across various manufacturing and service sectors. The remaining areas are allocated for Non-Processing Area. They are spread as Textiles, Leather & Readymade garments (3), Agriculture and Food (10), Gems and Jewellery(4), Plastic & rubber (9), Engineering(12), Electronic hardware(4), Miscellaneous (16) ,Electronic software (IT/ITES) (30) and Trading (7). The zone has accepted public-private participation in infrastructure development for 350000 sq. meter. For Software Park and Techno polis.

CSEZ authority charges 389 per sq. m per annum for plot and 2916 per sq. m per annum for SDF and these are subject to an increase of 15% every year. This is the highest rental charge compared to KSEZ (1500 for the plot, 212 for SDF), VSEZ (1200 for the plot, 150 for SDF), FSEZ (1652 for the plot, 85 for SDF), (MSEZ (1771 for the plot, 160 for SDF). The lease period is for 15 years, further 15 years can be extended.

- It has an integrated water management system that has a capacity of 1.5 million litres per day.
- it has an effluent treatment plant
- The only zone in India that distributes power inside zone is Cochin. It has a 25MVA/110KV electrical substation exclusively for use inside the zone. Hence, the zone is free from power cuts. Both water and electricity are provided at a concessional rate.
- A 1000 line [5ESS](#) telephone exchange has been set up that supports almost all the facilities required for [PSTN](#), [ISDN](#) and [DSL](#) customers.
- Authority has established an optical fibre network that is accessible to all buildings that help them to access the internet.
- Warehouse of 24000 sq. ft. Is available for short term storage requirements of units.
- The zone provides a video conferencing studio, Foreign Post Office, Offshore Banking Unit of SBI, Health Dispensary and Branches of State Bank of India and IndusInd Bank with ATM facilities. (https://en.wikipedia.org/wiki/Cochin_Special_Economic_Zone,<https://csez.com/rti/php/contact.php>), (K B, 2013)

4.3 Conclusion

This chapter has lightened the concept, meaning, definition, history, institutional framework and administrative setup of SEZs in India. Additionally it contains profiles of Cochin and Madras SEZs.

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Chapter 5

**Performance Evaluation of Special
Economic Zones in India**

5.1 Introduction

The SEZ has been continuing its journey for the past 20 years. Almost all the states in the country have been approved to set up SEZs. While evaluating the journey, it is important to see the growth of export from SEZs, the share of SEZ export in total export. This chapter deals with evaluating the performance of special economic zones in India. The study also focuses on finding the important factors influencing the zone export. Multiple regression, one way ANOVA and factorial ANOVA have been used for analysing the data.

This chapter provides answers to the following questions, hence evaluating the overall journey of SEZs in India.

- What is the growth of export from SEZs in India?
- How much does SEZs contribute to the total export of India?
- What is the DC wise contribution to the total SEZ export?
- What is the share of each state, zones and categories of SEZs in the total export from SEZs for the period 2018-19?
- What are the factors influencing the zone level export?
- How is the export performance of Madras and Cochin SEZ?

5.2 Evaluation of Export performance – Aggregate Level

This section deals with an aggregate analysis of the growth of physical export and SEZ export from India from 2000 to 2020.

5.2.1 Total Export from India & SEZs from 2000 to 2020

The journey of SEZ started in India in 2000, which constitutes 20 years of existence in 2019-20. Until 2000, it was working under the title “Export Processing Zone”. The table below shows the export from SEZs in India since it started to know as SEZ.

Table 5.1
Export performance

Year	Total export from India (Cr)	Annual %change	SEZ export(Cr)	Annual % change	Share of SEZ in total export (%)
2000-01	203571	-	8556	-	4.2
2001-02	209018	2.7	9190	7.4	4.4
2002-03	255137	22.1	10056	9.4	3.9
2003-04	293367	15.0	13854	37.8	4.7
2004-05	375340	27.9	18309	32.2	4.9
2005-06	456418	21.6	22840	24.7	5.0
2006-07	571779	25.3	34615	51.6	6.1
2007-08	655864	14.7	66638	92.5	10.2
2008-09	840755	28.2	99689	49.6	11.9
2009-10	845534	0.6	220711	121.4	26.1
2010-11	1142922	35.2	315868	43.1	27.6
2011-12	1465959	28.3	364478	15.4	24.9
2012-13	1634318	11.5	476159	30.6	29.1
2013-14	1905011	16.6	494077	3.8	25.9
2014-15	1896445	-0.4	463770	-6.1	24.5
2015-16	1716384	-9.5	467337	0.8	27.2
2016-17	1849434	7.8	523637	12	28.3
2017-18	1956515	5.8	581033	11	29.7
2018-19	2307726	18	701179	20.7	30.4
2019-20	2218233	-3.9	796669	13.6	35.9

Sources: Computed from secondary data from www.sezindia.nic.in/ and www.dbie.rbi.org.in

The table above shows the trend of export from SEZs in India for the past 20 years. The total export from India is showing a diminishing trend. From 2006-07 to 2013-14, the export is positive and thereafter it is showing a declining trend for two periods. Then it began to have growth. During the period 2019-20, the export is negative. The export from SEZs is showing a positive value except during the period 2014-15. In the same period, the growth rate of the total export from India was negative (-0.4). The contribution of SEZ export in the total export from the country has increased from 5% to 35.9%. This shows the importance of Special economic zones in the export from India. Even the export from India is showing a diminishing trend, the SEZ share in total export from India is showing a growth.

5.2.2 Central govt. owned Zone's Export from 2000 to 2020

The central govt. owned zones' export from 2000-01 to 2019-20 are taken to analyse the zone wise difference in the contribution to the total SEZ export from India. The export performance of seven zones yearly is given. The export values contain export from central govt. owned SEZs only. In the bracket, the contribution of the individual zone in the total central govt. zone export is also given. The green text indicates the best performing zone in the period and red indicates the least contributor.

The table 5.2 shows the export from seven zones in India from the period 2000-01 to 2019-20. It also contains the share or contribution of each zone in the total SEZ export for that period. The Santacruz SEZ has contributed more to the total export from the Central govt. owned zones. Cochin SEZ was the least performer during the period 2000-05. However, during the periods, 2010-13 and 2017-19, Cochin has become the best performer. The export from Cochin began to grow after the enactment of SEZ Act 2005. The Vizag and Falta SEZs are the least performers during most financial years. In the total export from central govt. owned SEZs, Santacruz SEZ has more contribution (total=244208.7, percentage=31) and Falta SEZ has the least contribution (total export =18953.1, percentage=2.4). Overall

contribution is better from Santacruz, Cochin, Noida and Chennai zones compared to Kandla, Vizag and Falta zones.

The highest aggregate export from the seven central govt SEZs was during the period 2018-19 (export = 88757.23, 11.3% of the total export from central govt. owned zones). The lowest export was in the period 2000-01 (8493.99 and 1.1%). The export from the Kandla zone was diminishing from 2000-01 to 2012-13. But from 2013-14, the export is rising. The share of Kandla in the total central govt. owned SEZ's export is highest in the latest period 2019-20 (17.3%). The Santacruz zone has been the leader among the central govt owned SEZs except for a fall during the period, 2007-13 and 2017-19. The zone that has improved in export performance is Cochin SEZ. They were the least performers at the beginning of SEZ regime. However, after 2004-05, they began to survive and became the best performer in almost all the financial year after 2009-10. Falta SEZ has been the low performer in almost all the periods. Their export has been fluctuating. Chennai is the one, which has a steady export share in almost all the years. Its export has been increasing until 2013-14. Thereafter, it has been diminishing and the year 2018-19 saw its least contribution to the total (6.7%). Noida SEZ is found to be the zone with consistent or increasing export all over the study period. The share in total export was always greater than 10% and it was the best performer during the period 2007-10. The Vizag is a problematic zone. Its total export has never touched a 5 digit. The best contribution from the Vizag zone happened in the year 2011-12 (5.2%).

5.2.3 Growth in Zone-Wise export

The table below shows the change in the export in each zone from the previous year. It helps to understand the growth of export from each zone over the years. The physical export contains the export from the central govt. zones only. The green colour shows the zone with the largest export growth and the red colour shows the zone that has low growth in the year.

While analysing the table 5.3 it can be understood that the Cochin SEZ has a high potential for export growth. In most of the periods, the % change in the export from the previous period is either 2 digits or 3 digits except a fall in the periods, 2001-02,2013-14 and 2014-15. The export growth of Kandla SEZ over the years is quite satisfactory compared to Falta, Vizag, Chennai and Noida zones. Falta, Noida and Vizag zones are facing a sudden fall in export growth in most of the years. Cochin, Santacruz,Kandla and Chennai have better prospects for export growth than other.

Table 5.2**Zone-wise export from 2000-01 to 2019-20**

Zones/period	Kandla	Santa Cruz	Cochin	Falta	Chennai	Noida	Vizag	Grand Total
2000-01	527.8	5197.4	304.3	519.97	690.24	1035.2	219.08	8493.99
	(6.0%)	(61.0%)	(4.0%)	(6.0%)	(8.0%)	(12.0%)	(3.0%)	(1.1%)
2001-02	(476.0)	5225.6	258.5	923.6	762.6	980.4	251.0	8877.66
	(5.0%)	(59.0%)	(3.0%)	(10.0%)	(9.0%)	(11.0%)	(3.0%)	(1.1%)
2002-03	729.3	6083.0	270.4	512.4	822.4	1001.2	357.3	9775.91
	(7.5%)	(62.2%)	(2.8%)	(5.2%)	(8.4%)	(10.2%)	(3.7%)	(1.2%)
2003-04	1018.8	7832.8	298.9	825.3	1038.0	1534.2	435.7	12983.68
	(7.8%)	(60.3%)	(2.3%)	(6.4%)	(8.0%)	(11.8%)	(3.4%)	(1.6%)
2004-05	1060.1	8298.6	463.0	569.2	1376.9	4266.0	579.3	16613.05
	(6.4%)	(50.0%)	(2.8%)	(3.4%)	(8.3%)	(25.7%)	(3.5%)	(2.1%)
2005-06	1101.2	9192.2	696.0	525.0	1858.9	5670.8	612.7	19656.68
	(5.6%)	(46.8%)	(3.5%)	(2.7%)	(9.5%)	(28.8%)	(.1%)	(2.5%)
2006-07	1482.7	12047.0	802.7	998.7	2384.0	6893.0	749.7	25357.78
	(6.0%)	(48.0%)	(3.0%)	(4.0%)	(9.0%)	(27.0%)	(3.0%)	(3.2%)
2007-08	1881.9	11264.0	4471.0	1026.3	3046.5	16843.4	741.3	39274.37
	(4.8%)	(28.7%)	(11.4%)	(2.6%)	(7.8%)	(42.9%)	(1.9%)	(5.0%)

Zones/period	Kandla	Santa Cruz	Cochin	Falta	Chennai	Noida	Vizag	Grand Total
2008-09	2578.9	10237.0	11706.7	961.3	4144.3	16295.7	1060.7	46984.41
	(5.0%)	(22.0%)	(25.0%)	(2.0%)	(9.0%)	(35.0%)	(2.0%)	(6.0%)
2009-10	2205.8	7429.0	16775.3	1172.6	5555.8	17820.9	917.9	51877.18
	(4.3%)	(14.3%)	(32.3%)	(2.3%)	(10.7%)	(34.4%)	(1.8%)	(6.6%)
2010-11	2628.5	11582.0	17982.1	1485.2	8826.0	9379.9	1582.8	53466.53
	(4.9%)	(21.7%)	(33.6%)	(2.8%)	(16.5%)	(17.5%)	(3.0%)	(6.8%)
2011-12	2212.2	12607.7	28892.5	1470.1	10688.5	NA	3086.9	58957.91
	(3.8%)	(21.4%)	(49.0%)	(2.5%)	(18.1%)	NA	(5.2%)	(7.5%)
2012-13	2965.7	14398.53	32953.1	1114.7	9970.9	NA	3132.3	64535.13
	(4.6%)	(22.3%)	(51.1%)	(1.7%)	(15.5%)	NA	(4.9%)	(8.2%)
2013-14	3636.1	16989.0	4906.7	NA	6964.2	9991.8	1921.7	44409.45
	(8.2%)	(38.3%)	(11.0%)	NA	(15.7%)	(22.5%)	(4.3%)	(5.6%)
2014-15	3835.7	16272.1	2722.3	1117.8	6037.0	9067.2	1708.0	40760.02
	(9.4%)	(39.9%)	(6.7%)	(2.7%)	(14.8%)	(22.2%)	(4.2%)	(5.2%)
2015-16	4227.1	17941.3	6388.2	961.0	6604.1	11063.2	972.2	48157.00
	(8.8%)	(37.3%)	(13.3%)	(2.0%)	(13.7%)	(23.0%)	(2.0%)	(6.1%)
2016-17	4396.8	18185.3	9210.1	961.0	6556.2	11736.5	1064.0	52109.89
	(8.4%)	(34.9%)	(17.7%)	(1.8%)	(12.6%)	(22.5%)	(2.0%)	(6.6%)

Zones/period	Kandla	Santa Cruz	Cochin	Falta	Chennai	Noida	Vizag	Grand Total
2017-18	4846.8	16547.5	22061.5	1111.0	5531.1	9499.1	1302.9	60899.88
	(8.0%)	(27.2%)	(36.2%)	(1.8%)	(9.1%)	(15.6%)	(2.1%)	(7.7%)
2018-19	7581.0	18081.5	44716.0	1435.0	5930.0	8996.7	2017.0	88757.23
	(8.5%)	(20.4%)	(50.4%)	(1.6%)	6.7%	(10.1%)	(2.3%)	(11.3%)
2019-20	6360.00	18797.2	NA	1263.0	NA	8680.7	1641.7	36742.62
	(17.3%)	(51.2%)	NA	(3.4%)	NA	(23.6%)	(4.5%)	(4.7%)
Grand Total	55752.2	244208.7	205879.3	18953.1	88787.5	150755.7	24353.9	788690.37
	(7.1%)	(31.0%)	(26.1%)	(2.4%)	(11.3%)	(19.1%)	(3.1%)	(100.0%)

Source : Computed from official records of seven DC offices

Table 5.3

Growth in zone wise Export

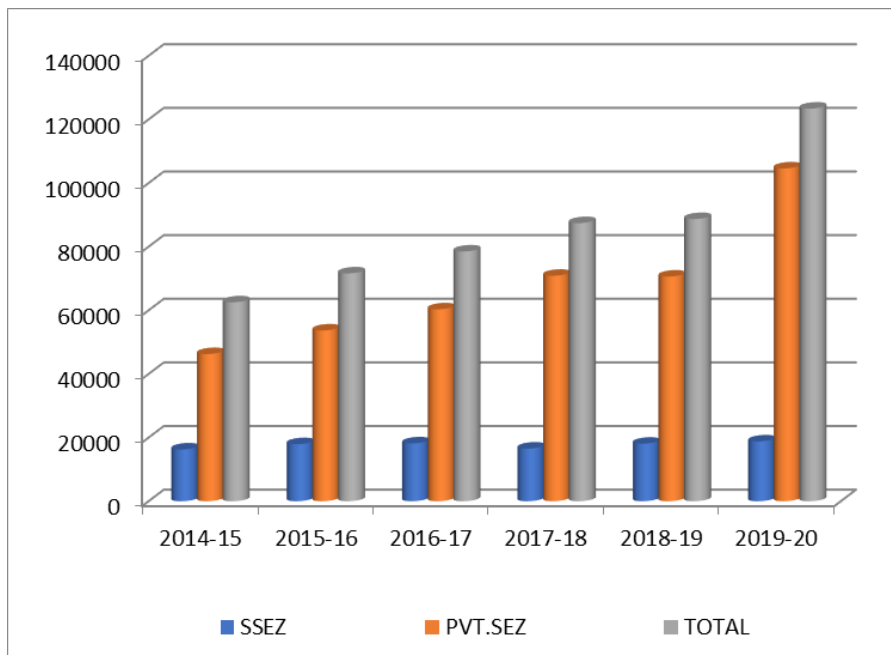
Zones/period	Kandla		Santa Cruz		Cochin		Falta		Chennai		Noida		Vizag	
	Physical export	g (%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)
2000-01	527.8	-	5197.4	-	304.3	-	519.97	-	690.24	-	1035.2	-	219.08	-
2001-02	476	-10	5225.6	1	258.5	-15	923.6	78	762.6	10	980.4	-5	251	15
2002-03	729.3	53	6083	16	270.4	5	512.4	-45	822.4	8	1001.2	2	357.3	42
2003-04	1018.8	40	7832.8	29	298.9	11	825.3	61	1038	26	1534.2	53	435.7	22
2004-05	1060.1	4	8298.6	6	463	55	569.2	-31	1376.9	33	4266	178	579.3	33
2005-06	1101.2	4	9192.2	11	696	50	525	-8	1858.9	35	5670.8	33	612.7	6
2006-07	1482.7	35	12047	31	802.7	15	998.7	90	2384	28	6893	22	749.7	22
2007-08	1881.9	27	11264	-6	4471	457	1026.3	3	3046.5	28	16843.4	144	741.3	-1
2008-09	2578.9	37	10237	-9	11706.7	162	961.3	-6	4144.3	36	16295.7	-3	1060.7	43
2009-10	2205.8	-14	7429	-27	16775.3	43	1172.6	22	5555.8	34	17820.9	9	917.9	-13
2010-11	2628.5	19	11582	56	17982.1	7	1485.2	27	8826	59	9379.9	-47	1582.8	72
2011-12	2212.2	-16	12607.7	9	28892.5	61	1470.1	-1	10688.5	21	NA	NA	3086.9	95
2012-13	2965.7	34	14398.5	14	32953.1	14	1114.7	-24	9970.9	-7	NA	NA	3132.3	1
2013-14	3636.1	23	16989	18	4906.7	-85	NA	NA	6964.2	-30	9991.8	NA	1921.7	-39
2014-15	3835.7	5	16272.1	-4	2722.3	-45	1117.8	NA	6037	-13	9067.2	-9	1708	-11

Zones/period	Kandla		Santa Cruz		Cochin		Falta		Chennai		Noida		Vizag	
	Physical export	g (%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)	Physical export	g(%)
2015-16	4227.1	10	17941.3	10	6388.2	135	961	-14	6604.1	9	11063.2	22	972.2	-43
2016-17	4396.8	4	18185.3	1	9210.1	44	961	0	6556.2	-1	11736.5	6	1064	9
2017-18	4846.8	10	16547.5	-9	22061.5	140	1111	16	5531.1	-16	9499.1	-19	1302.9	22
2018-19	7581	56	18081.5	9	44716	103	1435	29	5930	7	8996.7	-5	2017	55
2019-20	6360	-16	18797.2	4	NA	NA	1263	-12	NA	NA	8680.7	-4	1641.7	-19

Source: Computed from data available from various DC offices

5.2.4 Comparison of Export from Central govt. SEZs and other SEZs (include Pvt.SEZs and zones under state govt.)

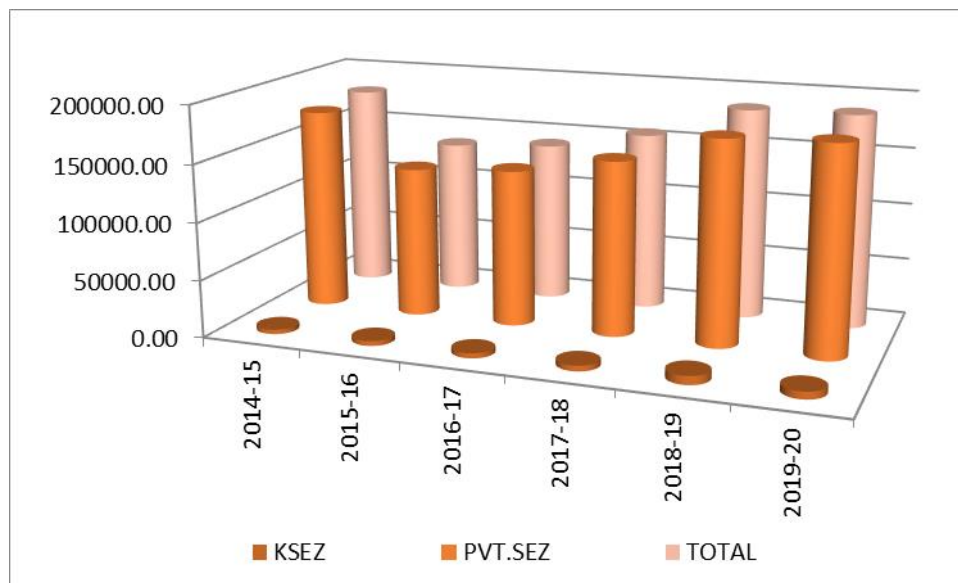
The zones in India is under the jurisdiction of eight DC offices located in eight states. The Kandla DC serves the zones under Gujarat state. The Santacruz zone covers Maharashtra, Goa, Dadra & Nagar Haveli Daman & Diu states and UTs. MEPZ-SEZ has control over zones in Tamil Nadu, A&N islands, Pondicherry, except Mahe & Yanam. Zones at Uttar Pradesh, Madhya Pradesh, Rajasthan, Delhi Punjab, Haryana, Chandigarh, Uttarakhand, H.P., J&K come under the jurisdiction of Noida SEZ. The Cochin DC office has control over zones in Kerala and Karnataka. Falta DC office administers the zones in West Bengal, Orissa, Assam, Jharkhand, Nagaland, Tripura, Manipur, Meghalaya, & Arunachal Pradesh. DC office at Vizag SEZ controls zones at Andhra Pradesh and Chhattisgarh. A zone in Madhyapradesh comes under the Indore DC office (Consolidated guidelines /instructions issued on the staff management of Government and , Private Special Economic Zone (W.e.f.16th August 2010)). However, the number of central govt. owned zones are seven. No central govt. zone works under the Indore DC. therefore, for comparing the export performance of central govt. zones with private zones, data from seven central govt. owned zones for the period 2014-19 is taken.



Source: Computed from official records of SSEZ

Figure 5.1 Export: Santacruz DC

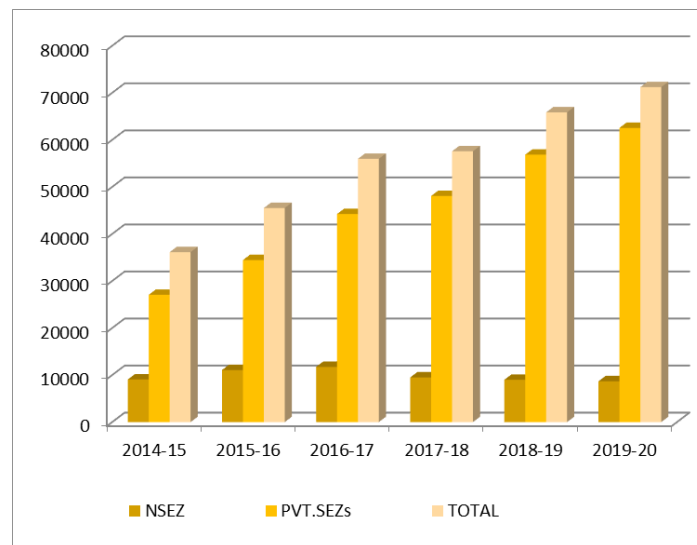
The export from Santacruz SEZ is consistent over the years. It has not faced big fall or rise in the export. However, in the case of zones other than Santacruz under the DC, the export has increased drastically from 46263.76 to 104610.8. The zones faced a decline in export (257.47) in the period 2018-19. In the next year itself, the export grew by 48%. The shares of other zones are always increasing which is around 75% of the total DC export.



Source: Computed from official records of KSEZ

Figure 5.2 Export: Kandla DC

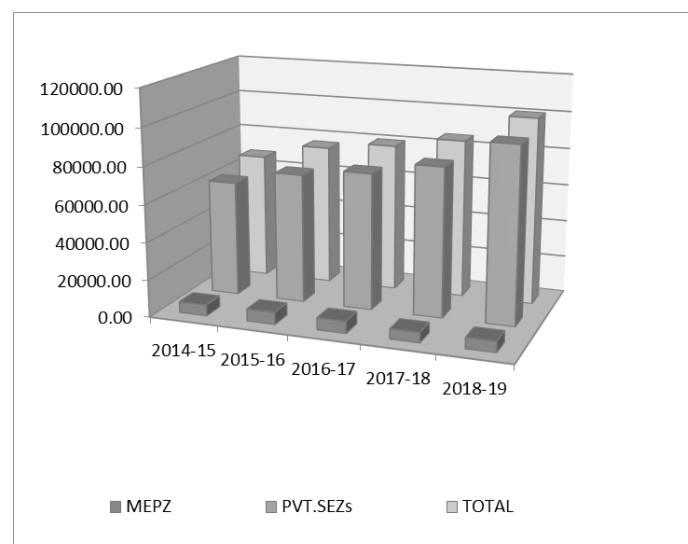
The export from the Kandla multi-product zone is regular over the years. Their export had increased slowly during the period 2014-15 to 2017-18. The period 2018-19 witnessed a sudden increase and the period 2019-20 faced a sudden decrease. The exports from other zones are fluctuating even though they are satisfactory and contribute more to the total export. The contribution of other zones in the total export is always higher than 95% in every year.



Source: Computed from official records of NSEZ

Figure 5.3 Export: Noida DC

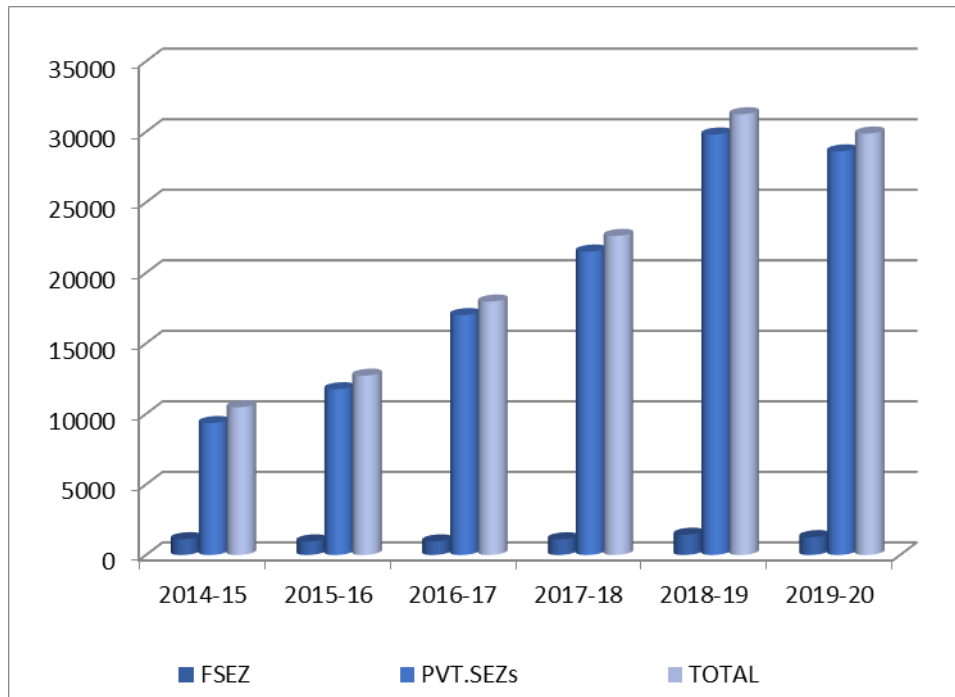
The export from the Noida multi-product zone is decreasing after 2016-17. Nevertheless, the export from the remaining zones is increasing year by year. The highest export from other zones recorded in the period 2019-20. The contribution of other zones in the total export has risen to 88% in the period 2019-20 from 75% in the period 2014-15.



Source: Computed from official records of SMEPZ-SEZ

Figure 5.4 Export: Madras DC

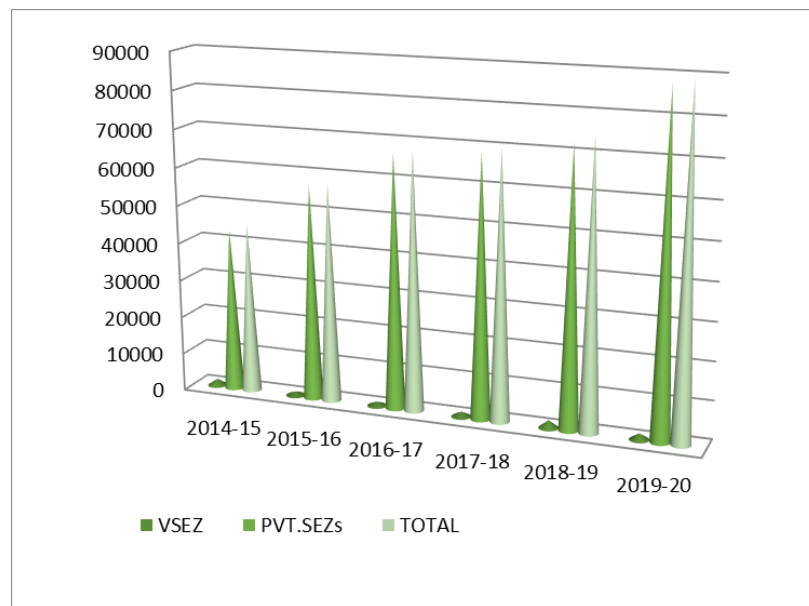
The export from MEPZ was 6037 crores in 2014-15 and during 2018-19, it was 5930 crores, showing a decrease. The performance of other zones are 62066.26 crore during 2014-15 and during 2018-19, it reached 94614 crore showing 52% growth. The shares of other zones have increased from 91% in 2014-15 to 94% in 2018-19.



Source: Computed from official records of FSEZ

Figure 5.5 Export : Falta DC

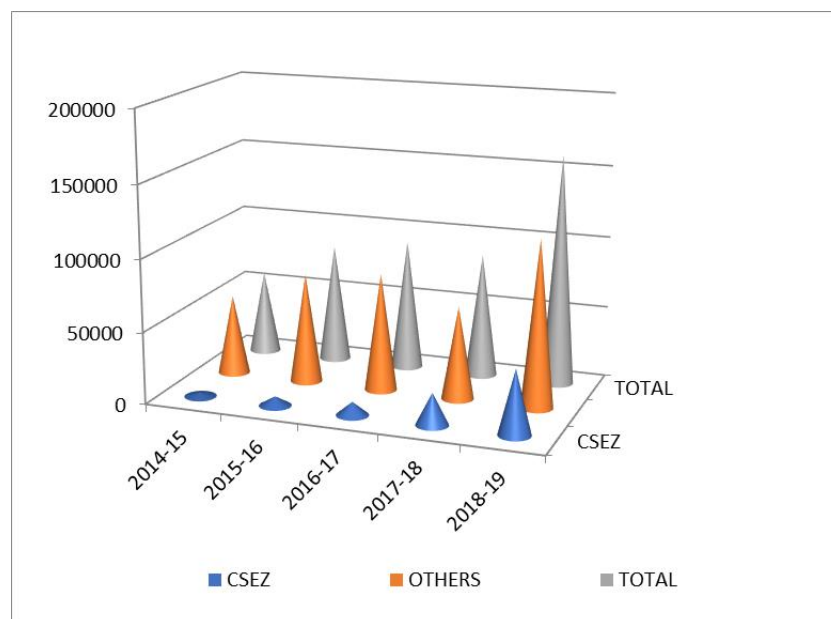
Even though the export from the Falta zone has increased over the years, their share in the total export has decreased to 4% from 11%. This indicates that the contribution of other zones has increased from 89% to 96%.



Source: Computed from official records of VSEZ

Figure 5.6 Export : Vizag DC

The share of Vizag SEZ in the total export from Vizag DC is almost same in all the years except an increase in the period 2018-19. The exports from other zones are increasing at a constant rate. 97% of export in each year is contributed by other zones under Vizag DC.



Source: Computed from official records of CSEZ

Figure 5.7 Export: Cochin DC

Cochin Multi-product zone is the only zone in India that has been contributing more than 34% for the past 2 years to the total export from the DC. The share of CSEZ in 2014-15 was only 5%, but the value rose to 35% in the period 2018-19.

5.3 Performance Evaluation: Disaggregate Analysis

This section deals with the difference in export performance across various zones, sectors and categories of SEZ like Central govt owned SEZs, SEZ notified before and after SEZ Act 2005 based on the export data of zones exported during 2018-19.

5.3.1 Descriptive statistics

The table below provides the frequency and percentage of variables across various zones, sectors and categories of SEZ.

Table 5.4
Descriptive Statistics of variables

Variable	Categories	Frequency	Percentage
Zone	Cochin SEZ	47	22.1
	Santacruz SEZ	25	11.7
	Falta SEZ	12	5.6
	Kandla SEZ	29	13.6
	Madras SEZ	18	8.5
	Noida SEZ	36	16.9
	Vishakhapattanam SEZ	46	21.6
	Total	213	100
Sector	Multiproduct	28	13.1
	IT/ITES	118	55.4
	Engineering and electronics	17	8.0
	Textiles and apparels	7	3.3
	Biotechnology	2	0.9
	Food processing	2	0.9

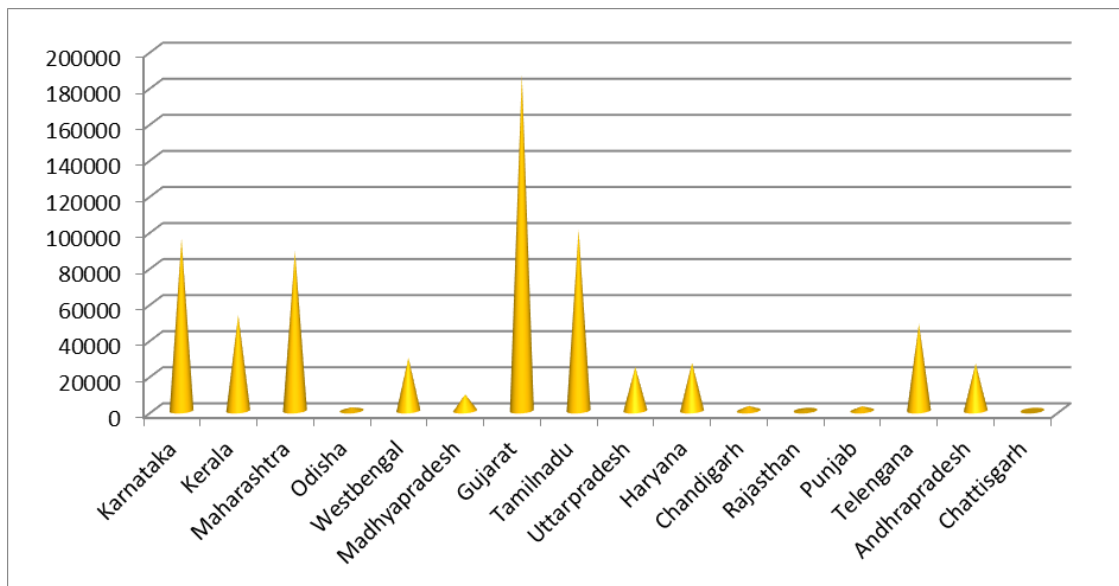
Variable	Categories	Frequency	Percentage
	Footwear	4	1.9
	Pharma	11	5.2
	Gems and jewellery	4	1.9
	Aero space	3	1.4
	Misc.	17	8.0
	Total	213	100
Type of SEZ	Central SEZs prior to Act	6	2.8
	Pvt SEZs prior to Act	12	5.6
	SEZs after Act	195	91.5
	Total	213	100

Source: Developed for the study

While analysing table 5.4 , it can be understood that the Cochin DC has more zones and Falta has the least number of SEZs. India's SEZs are dominated by the IT sector consisting of 55.4%. Food processing & biotechnology (0.9%) and aerospace sectors (1.4%) are very few in numbers. Most of the SEZs (91.5%) are established after the enactment of SEZ Act 2005.

5.3.2 The State-Wise export

The share of each state in total export is different. Hence, the state-wise export for the period 2018-19 is taken to analyse the spread of export. The table below provides the frequency and percentage of variables across various zones, sectors and categories of SEZ.



Source: Calculated from official records of Cochin SEZ

Figure 5.8: Export - State wise for the period 2018-19

Figure 5.8 shows the state-wise total SEZ export for the period 2018-19. Gujarat recorded the highest export during the period and Chhattisgarh the lowest. A few states like Gujarat, Tamilnadu, Karnataka, Maharashtra, Kerala and Telangana has exported above 40000 crores.

Table 5.5

Descriptive statistics of state wise export

State	Mean	N	Std. Deviation	Total export	State's Share in total export (%)	Rank
Gujarat	9332.1	20	33343.8	186642	26.82	1
Tamilnadu	2512.2	40	4087.4	100488	14.44	2
Karnataka	3186.6	30	3508.5	95598	13.73	3
Maharashtra	3058.5	29	4214.6	88696.5	12.74	4
Kerala	2658.4	20	9584.2	53168	7.64	5
Telangana	1661.1	29	2284	48171.9	6.92	6
Westbengal	4196.3	7	4255.4	29374.1	4.22	7
Haryana	4424.1	6	3159.7	26544.6	3.81	8

State	Mean	N	Std. Deviation	Total export	State's Share in total export (%)	Rank
Andhrapradesh	1377	19	1745.6	26163	3.72	9
Uttarpradesh	2020.7	12	2422.6	24248.4	3.48	10
Madhyapradesh	1813.7	5	3830.2	9068.5	1.3	11
Chandigarh	1313.9	2	1025.6	2627.8	0.38	12
Punjab	814.7	3	753.9	2444.1	0.35	13
Odisha	364.9	5	392.6	1824.5	0.26	14
Rajasthan	460.2	2	263.9	920.4	0.13	15
Chattisgarh	30.6	1	-	30.6	0.0044	16

Source: Computed from official records of CSEZ

The graph and table show the average export across the states for the period 2018-19. The highest export has been recorded for the state Gujarat with a total export of 186642 crores holding a share of 26.82% in the total export from India. It is followed by Tamilnadu (Total export = 100488, 14.44%), Karnataka (Total export =95598, 13.73%). The state of Chhattisgarh has the lowest contribution in the total export from India (Total export =30.6 crores, 0.0044%) followed by Rajasthan (Total export=460.2, 0.13%) and Odisha (Total export=814.7, 0.26%).

While analysing the proportion of the export share of SEZ based on the number of SEZs, Gujarat stands first. Twenty Gujarat SEZs together contributed 26.82% to the total export from India. On the other side, the twenty SEZs in Kerala could contribute only 7.64% to the total export. Tamilnadu is the state having more SEZs in India (40). However, their contribution to the total zone export is less compared to Gujarat with twenty SEZs. While comparing the number of SEZs and contribution to total export, states like Odisha, Madhyapradesh, Andhrapradesh, Haryana and Telangana have more SEZs, but their contribution to total export is not highly satisfactory.

Hence, it can be concluded that only a few states including Gujarat, Tamilnadu, Karnataka, Maharashtra etc contribute a major portion to the total SEZ

export from India. Other SEZs are not performing well. Either they lack good policy or they need SEZs that are more efficient.

5.3.3 Sector wise Export performance

According to the classification by the Ministry of Commerce, SEZ division, the SEZs are spread across eleven sectors including multi-product, IT/ITES, engineering, textiles, biotech, food processing, footwear, pharma, gems, aerospace and miscellaneous. One way ANOVA is performed to test the significant difference existing between these sectors in export performance. The Independent variable includes sectors and the dependent variable is log export for the period 2018-19.

H1: There is significant difference across various sectors in export during the period 2018- 19.

Table 5.6

Descriptive Statistics and one-way ANOVA result

	Sector11	Mean	SD	F Statistics	P value
Log_Export	Multi	7.38	2.83	1.71	0.19
	IT	6.59	2.13		
	Engineering	5.66	1.74		
	Textiles	4.72	1.35		
	Biotech	6.72	1.8		
	Foodprocessing	5.81	2.38		
	Footwaer	5.68	2.13		
	Pharma	6.14	1.69		
	Gems	7.33	1.77		
	Aerospace	4.51	1.87		
	Misc	5.27	2.33		

Source: Computed from official records of Cochin SEZ

The table provides the result of one way ANOVA. The p-value is greater than 0.05, which lead to rejecting the alternative hypothesis. Therefore, it can be concluded that the export during the period 2018-19 is statistically equal across

different sectors. As per the mean value, it can be inferred that the zones related to the sectors, multiproduct (mean= 7.38 SD=2.83), gems and jewellery (mean=7.33 SD=1.77), biotechnology (mean=6.72 SD=1.8) are leading sectors in contribution to total SEZ export.

5.3.4 DC- wise Export Performance

The zones in India are controlled and managed by seven Development Commissioner offices which are situated at the various parts of the country. Hence, the difference in the governance in the zone offices may influence the performance of units and thus zones. Therefore the researcher has tried to answer the question of whether any difference exist in the export value across various DCs. One way ANOVA is performed.

H2: There is significant difference in the export value of SEZs across zones under seven DC offices

Table 5.7
DC-wise export

	<i>Zone</i>	<i>N</i>	<i>Mean</i>	<i>Sd</i>	F stat.	P value
	Cochin SEZ	47	6.3	2.3		
	Santacruz SEZ	25	6.92	2.32		
	Falta SEZ	12	6.69	1.99		
Log_export	Noida SEZ	29	6.32	2.3	0.382	0.888
	Kandla SEZ	18	6.46	2.69		
	Madras SEZ	36	6.41	2.15		
	Vizag SEZ	46	6.13	2.1		

Source: Computed from official records of Cochin SEZ

Since the p value is greater than 0.05, it can be concluded that there is no significant difference in the export across seven zones.

5.3.5 Zone-wise and Sector-Wise Export performance

While checking the sector-wise spreading of SEZs in India, the majority of the zones in India are IT related. The IT zones have their presence under seven DCs. Therefore, it was possible to categorise the SEZs into two sectors. The first category includes IT-related zones and the second contains other zones except IT. Hence researcher tried to study the main effect of zones & sector and the interaction effect of zones and sectors on the export from zones. There are two independent variables namely zones, sectors and one dependent variable log export during the period 2018-19. Since the researcher is attempting factorial ANOVA, there are 3 hypotheses which are given below

H3: There is a significant difference in the export value of SEZs across various zones for the year 2018-19

There is a significant difference in the export of IT/ITES sector zones and others for the year 2018-19

There is a significant difference in export during the period 2018-19 in different zones and sectors

Table 5.8
Descriptive statistics- zone and sector wise export

	Zone	Mean	Std. Deviation	N
Cochin	IT/ITES	6.6083	2.21060	35
	Others	5.3826	2.40722	12
	Total	6.2953	2.29989	47
Santacruz	IT/ITES	7.8371	1.09472	16
	Others	5.2779	3.03363	9
	Total	6.9158	2.32132	25
Falta	IT/ITES	7.3563	.99485	7
	Others	5.7544	2.74287	5
	Total	6.6888	1.98897	12
Noida	IT/ITES	6.2142	2.30658	22
	Others	6.6404	2.42661	7
	Total	6.3171	2.29924	29

Zone		Mean	Std. Deviation	N
Kandla	IT/ITES	4.3343	2.54511	6
	Others	7.5205	2.12444	12
	Total	6.4584	2.68591	18
Madras	IT/ITES	7.2439	2.04832	19
	Others	5.4729	1.90205	17
	Total	6.4076	2.14840	36
Vizag	IT/ITES	6.6039	2.11201	21
	Others	5.7235	2.04850	25
	Total	6.1254	2.10169	46
Total	IT/ITES	6.7239	2.13058	126
	Others	5.9048	2.30535	87
	Total	6.3894	2.23502	213

Source: Computed from official records of Cochin SEZ

The graph below shows the marginal means.

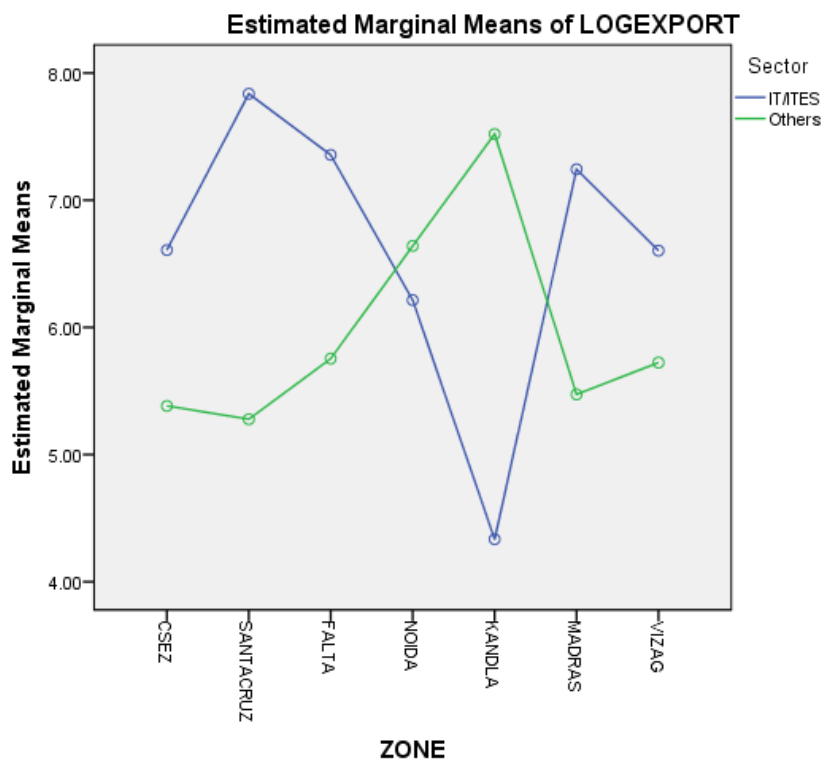


Figure 5.9 Marginal means

From table 5.8 and figure 5.9 , it can be understood that there is a difference in the IT and other sector export performance across various zones. Only the Noida zone has almost the same export performance in IT and other sectors. The other six zones differ sector-wise in export in the first sight.

Table 5.9

Factorial ANOVA result

Dependent Variable:		Log-export				
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
Corrected Model	149.068 ^a	13	11.467	2.508	.003	
Intercept	6113.928	1	6113.928	1337.086	.000	
Zone	8.678	6	1.446	.316	.928	
Sector	15.476	1	15.476	3.385	.067	
Zone * Sector	101.144	6	16.857	3.687	.002	
Error	909.943	199	4.573			
Total	9754.495	213				
Corrected Total	1059.011	212				

a. R Squared = .141 (Adjusted R Squared = .085)

Source: Computed from official records of Cochin SEZ

A Factorial ANOVA test has been conducted on the influence of two independent variables (zones, sectors) on the dependent variable Export value for the period 2018-19. Zones include seven zones working in the country namely Cochin, Madras, Kandla, Falta, Noida, Vizag and Santacruz. Sectors consist of IT/ITES and all other sectors except IT. The test checks two main effects, namely the effect of DC or seven zones on export performance and the effect of two sectors on export performance, and one interaction effect ie, the interaction effect of zones and sectors on the export performance. The main effect for zone yielded an F ratio of 0.316, $p > 0.05$ ($p=.928$) indicating an insignificant difference between zones. The main effect for the sector yielded an F ratio of 3.358, $p > 0.05$ ($p=0.067$), indicating an insignificant difference between IT/ITES and other sectors. However, the interaction effect is significant, $F=3.687$, $p=0.002$. The result briefly says that

there is a difference in export performance when the interaction between zones and sectors occurs.

Table 5.10
Post Hoc Comparisons - zone * sector2

Comparison				Mean difference	Se	Df	T	P _{tukey}
Zone	Sector2	Zone	Sector2					
Santacruz	IT	Kandla	IT	3.5028	1.024	199	3.42184	0.046

Source: Computed from official records of Cochin SEZ

Mean difference was found significant only in the case of the IT sector in Kandla and Santacruz. The mean difference between the IT Export of Santacruz (mean =7.8371) and the IT export of Kandla(mean =4.3343) is 3.5028.

5.3.6 Category wise export performance

Ministry of Commerce has categorised the SEZs as Central Govt. Special Economic zones, State/Pvt. SEZs set up before 2006 and SEZs Notified under the Act. The export from zones under these categories are not equal. Hence one way ANOVA has been performed to check the statistically significant difference existing between these SEZs. Log export during the period 2018-19 is taken as the dependent variable and three categories of SEZs are taken as independent variables.

H4: There is a significant difference in the export performance among central SEZs , Private SEZs before Act and after Act

Table 5.11
One-way ANOVA – Export and categories of SEZs

	Category of SEZ	N	Mean	SD	F	p
Log_export	Central govt	7	8.83	1.29	4.09	0.018
	Prior act	12	6.8	1.61		
	After act	195	6.29	2.25		

Source: Computed from official records of Cochin SEZ

One way ANOVA is performed to see the difference between various categories of SEZs in export for the year 2018-19. The p-value is 0.018 which is less than the significant value of 0.05; hence, the null hypothesis has been failed to accept. It has been concluded that there is a significant difference among various types of SEZs regarding export. A post hoc test is performed to know the mean difference.

Table 5.12
Post hoc test-Categories of SEZs

(I) SEZ_category		Mean Difference (I-J)	Std. Error	Sig.
CG	Prior to SEZ	2.02902	1.10157	.159
	After Act 2005	2.54017*	.91316	.016
Prior to SEZ	CG	-2.02902	1.10157	.159
	After Act 2005	.51115	.65527	.716
After Act 2005	CG	-2.54017*	.91316	.016
	Prior to SEZ	-.51115	.65527	.716

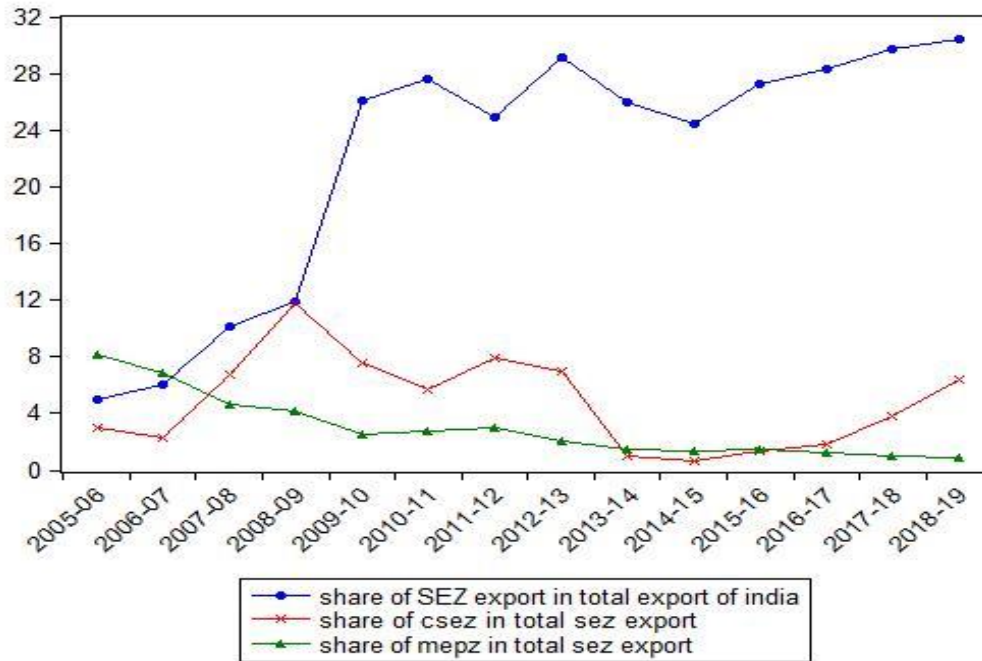
Source: Computed from official records of Cochin SEZ

From the post hoc test, a significant mean difference is found between Central govt owned SEZs and SEZs set up after the enactment of SEZ Act 2005. The mean export from central govt. owned SEZs is 8.83 whereas the mean export from state SEZs set up after the 2005 act is 6.29. Therefore, it can be concluded that central govt. owned SEZs are performing well compared to others and significant difference exist between the two.

5.4 Export Performance of Cochin and Madras SEZs –A Comparison

Since Cochin and Madras are selected as the sample clusters for the primary data purpose, it is important to check the export performance of both zones over the years. In this section, the Export performance of Cochin Special Economic Zone and Madras Special Economic Zone are analysed. It also analyses the contribution of each zone in the total zone export. Both zones were EPZs first and later turned to SEZ category.

5.4.1 Contribution of CSEZ and MEPZ-SEZ in total SEZ export



Source: Computed from official records of Cochin SEZ, Madras SEZ and data available from www.sezindia.nic.in/

Figure 5.10 Share of CSEZ and MEPZ in Total SEZ export

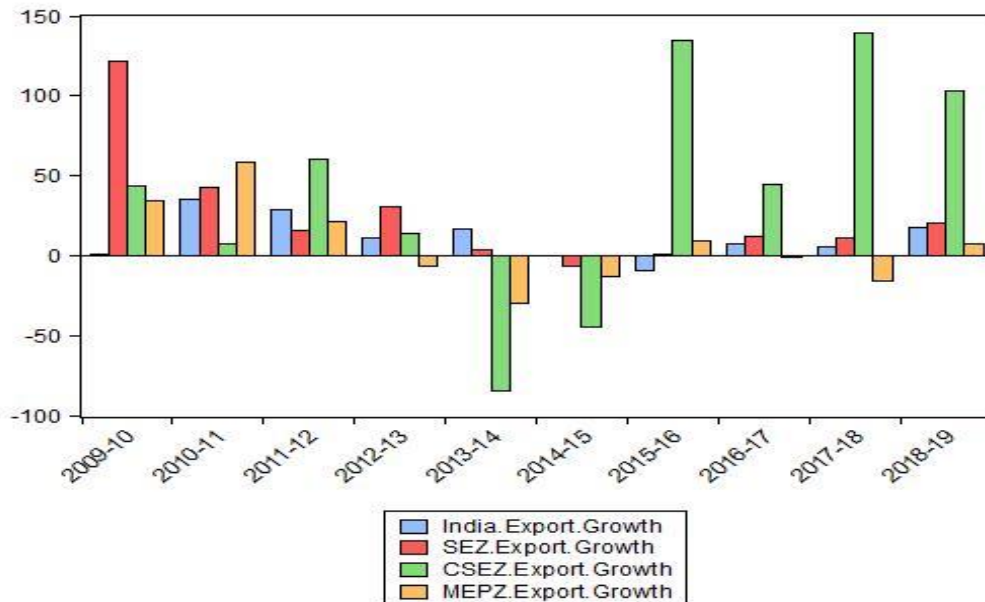
The share of SEZ export in the total export of India is showing an increasing trend. The contribution was very less at the beginning (5% during 2005-06), later it faced a sudden jump in the period 2009-10. Thereafter the export is showing steady growth. During the period 2018-19, the contribution of SEZ in total export from India is 30.4%. The export growth from the Cochin zone shows a cyclical trend. The growth during 2005-06 was 3.05%, and then it reduced to 2.32% then rose to 11.76% during the period 2008-09. Then it began to fall and reached the lowest point (5.69%) during 2010-11. Then it rose, then again fell. The year 2014-15 recorded the lowest contribution of export from Cochin. After that, it is reviving. During 2018-19, the share is 6.38%.

The glory of Madras was during the periods just after the enactment of SEZ Act 2005. The contribution in 2005-06 was 6.8%. However, it had never increased

after this period. 2018-19 recorded the lowest contribution from the part of madras SEZ. While comparing the contribution of Cochin with Madras in the total SEZ export of India, the Cochin zone's performance is far better than Madras SEZ.

5.4.2 Growth of export

The growth in the total export of India, SEZ, CSEZ and MSEZ are analysed by taking the annual percentage change. The result is explained with the help of a graph



Source: Computed from official records of Cochin SEZ, Madras SEZ and data available from www.sezindia.nic.in and www.dbie.rbi.org.in

Figure 5.11 Growth of Export from India, SEZ, CSEZ and MEPZ

The figure above shows the annual % change in export from India, SEZ, CSEZ and MSEZ from 2009-10 to 2018-19. While the period 2009-10 recorded the lowest export growth in India (.06), the SEZ export showed the highest growth (121.4). After that period, the growth in total export of India began to improve and was higher than the growth rate of cochin in 2010-11. In 2011-12 , it was higher than Madras and Total SEZ export . In 2013-14 the growth rate of total export from India's SEZs was higher than all the three.. However, the growth in total export

from India is reducing and recorded no growth during the periods 2014-15 and 2015-16.

The growth of SEZ export was the highest during the period 2009-10(121.4) but started to decline after. SEZ recorded no growth in the period 2014-15. During the period 2018-19, the growth from SEZ was 20.7.

The growth from Madras is diminishing whereas cochin is improving except for a negative growth rate in the period 2013-14 and 2014-15. These periods witnessed a fall in export at the national and SEZ level in aggregate. In the case of Madras highest export growth recorded during the period 2010-11(58.86).

5.4.3 Sector-wise Export performance: MEPZ-SEZ

Many sectors are working under Madras zones since it is a multi-product zone. The sector-wise contribution is analysed to know the best and least contributors in the zone export for the past 9 years.

From table 5.13, it can be inferred that the major contributors to the zone export are the Gems and Jewellery sector, engineering sector and software sector. From 2010-13, gems and jewellery sector contributed more. In 2013-14, engineering contribution was higher than others. In the next year itself, software sector came into the field. However it did not last long, from 2014 to 2017, engineering sector was the leader. However, recent 3 years consecutively, software sector has come into forefront. Handicrafts, packaging, IT and stationery sectors have little share in total zone export. Hence, it can be said that Madras zones are dominated by gems and jewellery sector in the early stage, then engineering and finally software sector in terms of total contribution to zone export. .

Table 5.13

Sector-wise Export performance of SEZs in India

Year	chemical	Energy	Engineering/hard ware	Food	Gems & jewellery	handicrafts	IT/ITES	Leather and fashion	Mineral and metals	Packaging	Perfumes	Pharmacy	Plastic and rubber	Stationery	Textiles	software
2010-11	13	0	575	5	2040	1	Nil	84	50	Nil	52	74	24	1	227	Nil
	0.4	0.0	18.3	0.2	64.8	0.0	Nil	2.7	1.6	Nil	1.7	2.4	0.8	0.0	7.2	Nil
2011-12	18	2	1166	6	5802	1	Nil	170	73	Nil	119	166	54	5	436	Nil
	0.2	0.0	14.5	0.1	72.4	0.0	Nil	2.1	0.9	Nil	1.5	2.1	0.7	0.1	5.4	Nil
2012-13	41	5	1247	4	5105	Nil	1	152	78	Nil	136	177	57	7	473	Nil
	0.5	0.1	16.7	0.1%	68.2	Nil	0.0%	2.0	1.0	Nil	1.8	2.4	0.8	0.1	6.3	Nil
2013-14	59	Nil	1366	Nil	902	1	6	151	83	Nil	161	224	62	10	551	249
	1.5	Nil	35.7	Nil	23.6	0.0%	0.2	3.9	2.2	Nil	4.2	5.9	1.6	0.3	14.4	6.5
2014-15	65	Nil	1476	Nil	160	Nil	4	147	112	Nil	151	202	70	13	560	3011
	1.1	Nil	24.7	Nil	2.7	Nil	0.1	2.5	1.9	Nil	2.5	3.4	1.2	0.2	9.4	50.4
2015-16	59	Nil	1633	1	294	Nil	4	180	108	Nil	210	235	70	10	636	782
	1.4	Nil	38.7	0.0	7.0	Nil	0.1	4.3	2.6	Nil	5.0	5.6%	1.7%	0.2%	15.1%	18.5%

Year	chemical	Energy	Engineering/hard ware	Food	Gems & jewellery	handicrafts	IT/ITES	Leather and fashion	Mineral and metals	Packaging	Perfumes	Pharmacy	Plastic and rubber	Stationery	Textiles	software
2016-17	52	Nil	1642	1	187	Nil	2	180	123	Nil	166	264	72	10	482	482
	1.4%	Nil	44.8%	0.0%	5.1%	Nil	0.1%	4.9%	3.4%	Nil	4.5%	7.2%	2.0%	0.3%	13.2%	13.2%
2017-18	56	Nil	1681	1	55	Nil	5	179	93	4	141	270	79	18	434	2571
	1.0%	Nil	30.1%	0.0%	1.0%	Nil	0.1%	3.2%	1.7%	0.1%	2.5%	4.8%	1.4%	0.3%	7.8%	46.0%
2018-19	59	Nil	1847	Nil	35	Nil	4	194	86	2	192	265	82	17	494	2747
	1.0%	Nil	30.7%	Nil	0.6%	Nil	0.1%	3.2%	1.4%	0.0%	3.2%	4.4%	1.4%	0.3%	8.2%	45.6%
2019-20	56	Nil	1640	Nil	14	Nil	6	203	107	15	186	268	82	9	448	2708
	1.0%	Nil	28.6%	Nil	0.2%	Nil	0.1%	3.5%	1.9%	0.3%	3.2%	4.7%	1.4%	0.2%	7.8%	47.2%

Source: Computed from official records of MEPZ SEZ

5.4.4 Sector-wise Export Performance: CSEZ

The table below provides the sector-wise contribution in export of CSEZ from 2010-11 to 2018-19

Table 5.14
Sector wise Export: CSEZ

Year	Agro & food	electronics	Engineering	Gems & jewellery	IT/ITES	Miscellaneous	Plastic & rubber	service	textiles	Trading
2010-11	118.7	249.7	95.3	17644.5	253.4	95.3	52.9	6.1	169.4	137.0
(%)	0.6	1.3	0.5	93.7	1.3	0.5	0.3	0.0	0.9	0.7
2011-12	161.1	484.4	110.1	27215.1	388.4	113.4	73.4	7.7	131.5	207.4
(%)	0.6	1.7	0.4	94.2	1.3	0.4	0.3	0.0	0.5	0.7
2012-13	193.0	579.7	112.0	30984.1	494.3	108.8	81.5	8.4	84.5	306.9
(%)	0.6	1.8	0.3	94.0	1.5	0.3	0.2	0.0	0.3	0.9
2013-14	202.7	553.3	123.8	2729.0	526.0	184.1	79.4	7.6	139.0	359.9
(%)	4.1	11.3	2.5	55.6	10.7	3.8	1.6	0.2	2.8	7.3
2014-15	190.0	644.6	155.6	221.8	491.9	356.6	86.6	Nil	157.4	418.0
(%)	7.0	23.7	5.7	8.1	18.1	13.1	3.2	Nil	5.8	15.4
2015-16	324.1	699.5	146.7	3979.2	487.4	140.4	72.5	Nil	190.0	348.4
(%)	5.1	10.9	2.3	62.3	7.6	2.2	1.1	Nil	3.0	5.5
2016-17	468.7	771.4	163.5	6501.8	539.6	183.0	76.2	Nil	158.3	347.6
(%)	5.1	8.4	1.8	70.6	5.9	2.0	0.8	Nil	1.7	3.8
2017-18	525.1	865.2	224.6	19149.7	509.5	218.5	80.6	Nil	174.9	313.4
(%)	2.4	3.9	1.0	86.8	2.3	1.0	0.4	Nil	0.8	1.4
2018-19	517.1	914.2	218.9	41661.8	498.0	343.7	76.1	Nil	204.7	281.5
(%)	1.2	2.0	0.5	93.2	1.1	0.8	0.2	Nil	0.5	0.6

Source: Computed from Official records of CSEZ

The major contributor to the zone export is the Gems and Jewellery sector. Most of the times, the contribution was above 50% except during the period 2014-15(8.1%). In that period the export growth was negative (-44.5) and the share of

CSEZ in the total SEZ export was the lowest (0.59). Another significant contributor to the zone export is the electronics sectors. Their contribution (23.7%) helped Cochin zone to achieve a total export of 2722.3 crores, the lowest export from CSEZ after 2006-07, where the export from gems and jewellery was the lowest. Plastic & rubber and Service sectors contribute very little to the total zone export compared to all other sectors.

5.5 Factors Influencing Zone Level Export

The Govt. has been promoting export from zones by providing better infrastructure, better governance, incentives etc. An attempt has been made to understand the factors influencing the export from zones. The predictors here include investment in the zones (investment include investment by units, developers and foreign direct investment) and import (import of raw material, import of capital goods) The export from zones are taken as the dependent variable. Since the data was not-normal, it has been transformed into natural log. The log values of each variable are taken for analysis purpose.

The model can be represented as:

$$Y_i = b_0 + b_1 X_{i1} + b_2 X_{i2} + \varepsilon_i$$

$$\text{Export} = b_0 + b_1 \text{import} + b_2 \text{investment} + \varepsilon_i$$

H5: There is significant relation between SEZ wise import and Investment on the individual export performance of each zone.

Before entering into the final regression, the researcher checked assumptions like multi-collinearity and heterogeneity. Multicollinearity occurs when any single independent variable is highly correlated with a set of other independent variables. An extreme case of collinearity or Multicollinearity is a singularity, in which an independent variable is perfectly predicted (i.e., correlation of 1.0) by another independent variable, (Hair Jr., Black, Babin, & Anderson) Multicollinearity can be checked with the help of correlation matrix and Variance Inflation Factor (VIF) values.

The guidelines for VIF are given below:

- There arises an issue when the largest VIF is more than 10 (Bowerman & O'Connell, 1990; Mayers, 1990)
- If the tolerance is below 0.1, then there is a severe problem
- If tolerance is below 0.2, then there is a potential issue (Field, 2009)

VIF and correlation matrix are given below.

Table 5.15
Correlation between Import and Investment

	Import	investment
Investment	0.573**	1

** Significant at 1% level.

Source: Developed for the study

Since the correlation is not above .8, it can be interpreted that no multicollinearity is present among independent variables.

Table 5.16
Collinearity Statistics

	VIF	Tolerance
Import	1.67	0.599
Investment	1.81	0.554

Source: Developed for the study

All the VIF values are less than 10 and tolerance values are greater than 0.2. VIF and tolerance also say the data has no Multicollinearity.

However, heterogeneity was found in the data. It has been detected and re-estimated, using White heteroskedasticity-consistent standard errors. The result of regression is given in the table below.

Table 5.17
Regression analysis of Import and Investment on Export

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IMP	0.358127	0.082745	4.328094	0.0000
INV	0.500800	0.112481	4.452316	0.0000
C	1.734323	0.534849	3.242642	0.0014
R-squared	0.414640	Mean dependent var		6.147029
Adjusted R-squared	0.408574	S.D. dependent var		2.272547
S.E. of regression	1.747684	Akaike info criterion		3.969648
Sum squared resid	589.4994	Schwarz criterion		4.019824
Log likelihood	-386.0255	Hannan-Quinn criter.		3.989962
F-statistic	68.35582	Durbin-Watson stat		0.889751
Prob(F-statistic)	0.000000	Wald F-statistic		71.78950
Prob(Wald F-statistic)	0.000000			

** Statistically significant at 1% significant level

Source: Computed for the study

From table 5.17, it can be seen that the coefficient of the independent variables, import and investment, are significant at 1% significance level. Hence the individual contribution of the model is highly significant. All the co-efficient are positive which indicates that export increases by the increase in import of goods and investment made and vice-versa. The coefficient is higher for investment compared to import. The beta .50 shows that if the investment is increased by 1 unit, the export will increase by .50 unit. Similarly, if the import is increased by 1 unit, the export will be improved by .35 unit.

The overall significance can be analysed with the help of F statistics and the p-value. F statistics is 68.35 and the p-value is less than 0.01 (0.0000). It means that the independent variables are better in explaining the dependent variable, Export. 41% of the variance in export is explained by import and investment. Hence, import done and investment by developer, unit, foreign entities have a significant impact on export from the zone. The major factor influencing export is investment.

The H5 is accepted since the p value is less than .05. SEZ import and investment have significant positive impact on zone export.

5.6 Conclusion

This chapter provides a detailed view of the performance of Special Economic Zones in India since 2000. The contribution of SEZ in total export from India has been increasing. The zones working under various DC offices have contributed 35.4% of total export during the period 2019-20. Even the performance of zones varies over the years; their contribution to the total export from India is increasing.

Among the seven central govt. SEZ, Santacruz SEZ is the best performer in terms of contribution to total SEZ export and Falta the low performers in the category. The Santacruz (31%), Cochin(26.1%), Noida(19.1%) and Chennai (11.3%) zones are the biggest contributors to the overall export from the central govt. owned zones. in terms of export growth, cochin is the best followed by Santacruz, Kandla and Chennai. Cochin is the only central govt. zone in India that has improved its contribution to the total export from the DC compared to other zones under the DC. Cochin zone's contribution is more than 30% for the last 2 years. Whereas the share of most central govt. owned zones were less than 10%.

While considering the state's contribution in the total SEZ export during the period 2018-19, Gujarat, Tamilnadu, Karnataka, Maharashtra and Kerala are the best performers and Chattisgarh had poor performance. The contribution of each sector in the total export during the period was similar. DC wise export was also equal. However, there existed a significant difference in the export between the central govt. zones and zones established after SEZ Act 2005. The export from central govt. zone during that period was higher than other private zones. The interaction effect of zones and sectors worked well. All the zones except Noida and Kandla have more IT export than manufacturing export. There was a small difference in the export of IT export and manufacturing export of Noida. However, the difference was high in the case of Kandla. Santacruz zone's export is dominated by the IT sector. There existed a significant mean difference in the IT export of Santacruz and Kandla zone.

The sector-wise contributions in Cochin and madras zones are also analysed. At the madras zone, software, engineering and gems & jewellery sectors are dominators. Gems and jewellery sectors dominate the Cochin zone.

Finally, the major factors influencing the zone export is analysed. Investment is the important factor affecting zone performance followed by import made. When investment and import increase, export from the zones also increase.

Hence, this chapter gives an overall view about export performance of zones in India in general and Cochin and madras zones in specific.

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Chapter 6

Perceived benefits of Special Economic Zone and Level of Firm Resources and Capabilities

6.1 Introduction

The Theoretical chapter discussed the concepts like Special Economic Zone, Resource-Based View of Export Performance and determinants of Export Performance. The previous chapter focused on the performance evaluation of SEZs in India in general, Cochin and Madras SEZ in specific and the factors influencing the Zone level Export performance. This chapter is devoted to fulfilling the two research objectives ie, (1) To find out the factors which attracted the Exporters to SEZs in India (2) To measure the satisfaction of Exporters who started export business at SEZ (3) To measure the level of Resources, Capabilities, Export knowledge, Export Commitment and Export Performance . Hence, this chapter is purely based on the primary data collected from 103 exporters who had started their unit of export business in two Central Govt owned zones of India namely Cochin and Madras SEZs. Here the main constructs include the Factors attracted to SEZ, the level of Quality of Infrastructure perceived by the Exporters, the level of Quality of Governance perceived by Exporters, the Ease of Access to outside facilities in SEZs and the Usefulness and Timeliness of Incentives and the level of Resources, Capabilities, Export Knowledge and Export Commitment. This chapter also analyses the export performance of firms.

Analysing the perception of exporters regarding the factor attracted will help the policymakers to know the centre of attraction to Special Economic Zone. Further, this analysis will help to validate the main criticism raised by the outside community that the units are concentrating their business only to avail incentives. The chapter also looks into the in-depth study of the strength and weakness of SEZ program by evaluating the satisfaction of the program from the side of beneficiaries.

For any program to be successful, the policymakers have to satisfy the ultimate consumers or beneficiaries.

In this chapter, the researcher has used six main categorical variables. They include SEZ category (Cochin or Madras), Firm Size (large, medium and small scale), Number of years the company is exporting to, Number of countries the company is exporting to, the sector of operation and the experience of the key person in the field of export. The main tools used for analysis are the independent sample t-test, one-way ANOVA, Mann-Whitney U test, Kruskal Wallis H test and Post hoc test. For the categorical variable having two levels like the category of SEZ, independent sample t-test or Mann-Whitney U test has been used. For the categorical variables having more than two levels, one way ANOVA or Kruskal Wallis H test has been used.

The second section deals with the demographic profile of 103 respondents. The third section deals with the detailed analysis of primary data and the final section deals with the conclusion to this chapter.

Section I

6.2 Descriptive Statistics of Sample Units

This section shows the profile and descriptive statistics of the sample units in SEZ.

Table 6.1
Frequency Distribution _ Firm's Profile

Categorical variable	Category levels	Count	Percentage
Type of SEZ	CSEZ	53	51.46
	MSEZ	50	48.54
	Total	103	100.00
Firm size	Large	18	17.48
	Medium	52	50.49
	Small	33	32.04
	Total	103	100.00

Categorical variable	Category levels	Count	Percentage
Export experience of key person	11 - 20 yrs	45	43.69
	Above 20 yrs	26	25.24
	Below 10 yrs	32	31.07
	Total	103	100.00
Years of export	11 - 20 yrs	56	54.37
	Above 20 yrs	23	22.33
	Below 10 yrs	24	23.30
	Total	103	100.00
sector	Agro& Food	9	8.74
	Electronics	12	11.65
	Engineering	26	25.24
	Gems & Jewellery	5	4.85
	Miscellaneous	19	18.45
	Plastic& Rubber	22	21.36
	Textiles& Garments	10	9.71
Total	103	100.00	
No of exporting countries	Exp 1 to 3 countries	36	34.95
	Exp 4 to 6 countries	33	32.04
	Exp 7 to 9 countries	25	24.27
	Exp above 10 countries	9	8.74
	Total	103	100.00

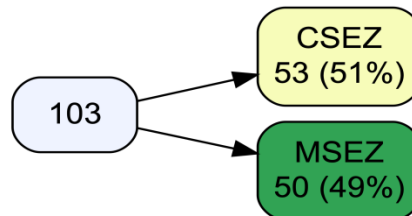
Source: Field Survey

The table gives an overall view of the frequency distribution of the sample units. The categorical data include SEZs, Scale of operation, Sectors, Export experience of units and the Number of countries they are exporting to.

The detailed description of each categorical variable is explained below with the help of graphs

6.2.1 SEZ-wise classification of units

The sample SEZ clusters are Cochin and Madras SEZs. The classification of respondents under each zone is given below.



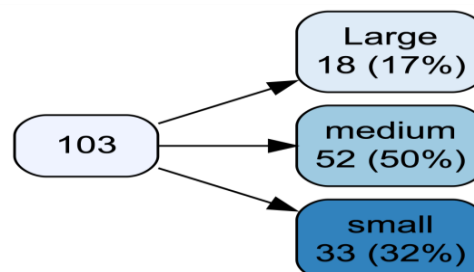
Source: Field Survey

Figure 6.1 SEZ-wise classification of units

The graph shows the dispersion of sample respondents across both zones. 51 % of the sample respondents are from CSEZ and the remaining from MEPZ-SEZ. Even though the numbers of units working in MEPZ-SEZ are more compared to CSEZ, here the more sample respondents belong to Cochin SEZ.

6.2.2 Firm Size

The size of the firm is determined based on the number of employees working in the units. Based on this, the units are classified as small, medium and large-scale units. Number of employees below 100 is considered as small scale units, 101 to 500 employees as medium scale units and finally, units having employees above 500 is considered as large scale



Source: Field Survey

Figure 6.2 Classification of units based on Firm size

The graph shows the categorisation of units under three categories on the basis of scale of operation of firms. From the graph, it can be understood that 50% of units in the SEZ are medium-scaled followed by small-scale units (32%) and large-scale units (17%).

Table 6.2
Classification of units: Firm Size wise and SEZ wise

Size	CSEZ		MEPZ-SEZ	
	Frequency	Percentage	Frequency	Percentage
Small	8	15.09	10	20
Medium	28	52.83	24	48
Large	17	32.08	16	32
Total	53	100	50	100

Source: Field Survey

The graph shows the categorisation of units under three categories based on the scale of operation of firms. From the graph, it can be understood that 50% of units in the SEZ are medium-scaled followed by small-scale units (32%) and large-scale units (17%).

6.2.3 Export Experience of Respondents

The experience of the respondent in the field of export is an important demographic variable. The table below shows the categorisation of respondents based on the number of years they have been engaged in the export business.

Table 6.3
Export Experience of Sample Respondents

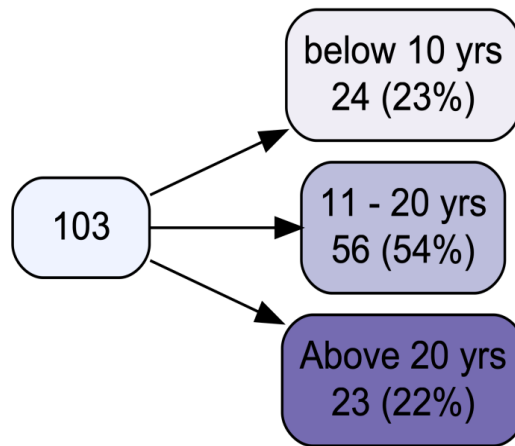
Years of experience	Frequency	Percent
below 5	8	7.8
6-10	24	23.3
11-20	45	43.7
21-30	23	22.3
Above 30	3	2.9
Total	103	100.0

Source: Field Survey

From the table, it can be asserted that the majority of the respondents fall under the range of 6 to 30 years of export experience (89.3%). Out of this, 43.7% has 11-20 years of export experience. Only a few are having an experience above 30 years (2.9%).

6.2.4 Export Experience of Firm

In SEZs, some units have started their operation at the time SEZ was set up. Some others are newly started units. Hence, it is essential to check the number of years the company/unit has been engaged in the export business in SEZ.



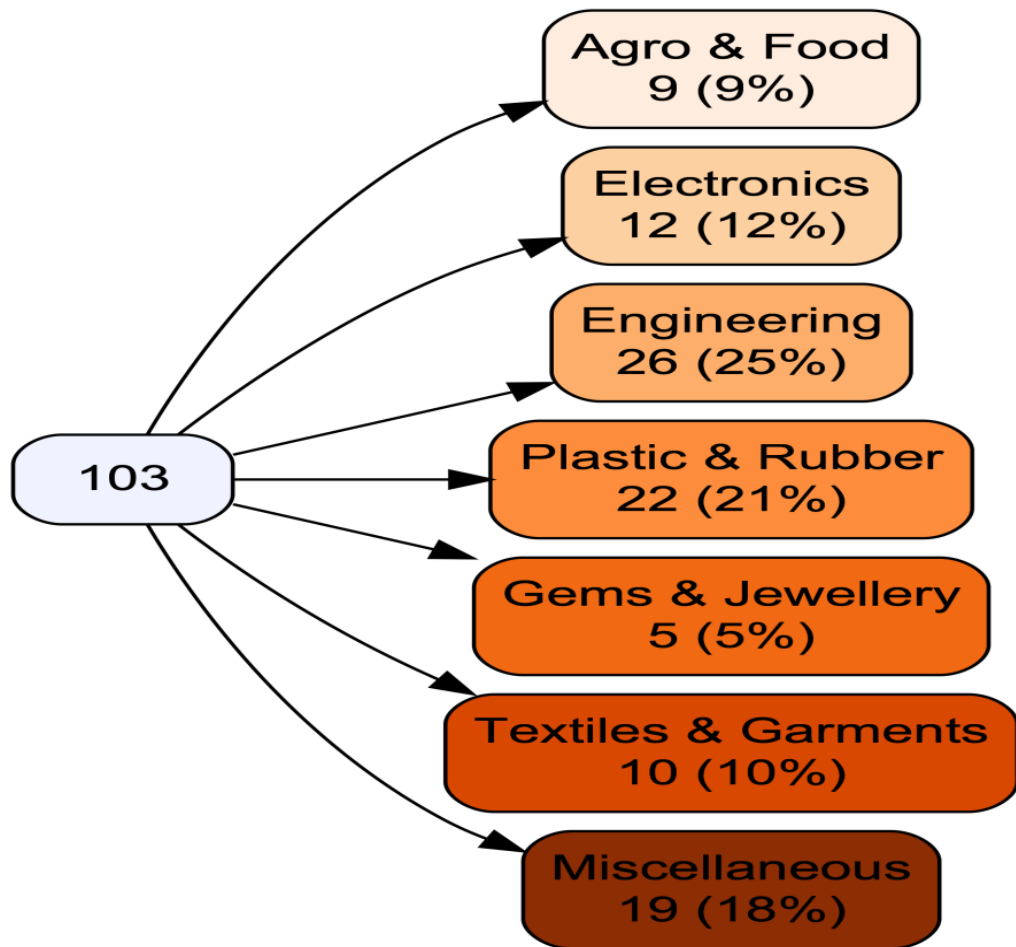
Source: Field Survey

Figure 6.3 Export experiences of sample units

The Graph provides the export experience of units working in the zones. Most of the units have experience of 11-20 years (54.4%) and 76.7% of the units have experienced above 10 years. This shows that they have not switched over their export business into the domestic tariff area. SEZ has the power to sustain units.

6.2.5 Sector wise distribution of sample units

The units in both SEZs are spread across various sectors. The chart gives the sector-wise classification of 103 units and the table shows the classification of units based on zone and sectors. It gives the sector-wise classification of units between cochin and madras zones and gives general sorting of total unit.



Source: Field Survey

Figure 6.4 Sector -wise sample units

The 103 sample units can be grouped into seven sectors. The majority is confined to the Engineering sectors (n=26 percentage 25). Then comes the Plastic & Rubber and Chemical sector (n=22, =21). The number of units in Gems and jewellery (n=5, percentage =5) is very less compared to all the other sectors.

Table 6.4
SEZ and Sector wise distribution of Sample units

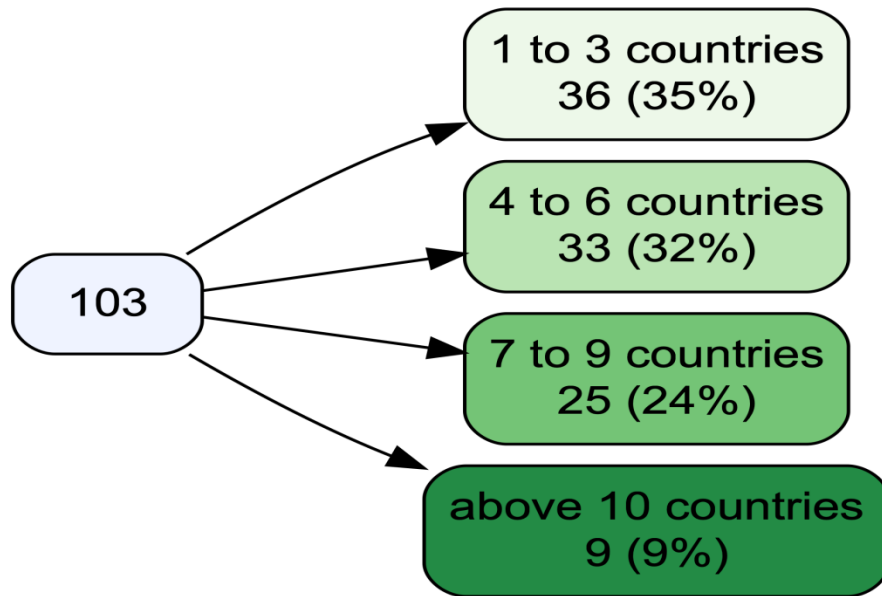
Sector	SEZ				Total	Percentage
	CSEZ	Percentage	MEPZ	Percentage		
Agro and Food	9	17	0	0	9	8.7
Electronics	4	8	8	16	12	11.7
Engineering	11	21	15	30	26	25.2
Plastic and Rubber/Chemicals	8	15	14	28	22	21.4
Gems and Jewellery	4	8	1	2	5	4.9
Textiles and Garments	3	6	7	14	10	9.7
Miscellaneous	14	26	5	10	19	18.4
Total	53	100	50	100	103	100.0

Source: Field Survey

The sample respondents are spread across various sectors. The majority of the sample units in CSEZ come under the miscellaneous sector (26%) followed by engineering (21%), agro & food (17%), plastic & rubber (15%) etc. At MEPZ, the majority of units are from the engineering sector (26%) followed by plastic & rubber (22%), miscellaneous (19%), electronics (12%) etc. In total, the majority of the sample falls under the sector engineering (25.2%), followed by plastic & rubber/chemicals (21.4%), miscellaneous (18.4%) etc.

6.2.6 Number of countries units exporting to

Units in zones export to different countries. The number of countries they are exporting to proves their ability to reach distant and heterogeneous markets. This figure shows the categorisation of units based on the number of countries they are exporting to.



Source: Field Survey

Figure 6.5 Number of countries units exporting to

91 % of units in SEZs do export to less than nine countries. Only 9% of the sample units export to 10 or more than 10 countries. The majority of units (n=36, percentage=35) have 1 to 3 countries as their export destination.

Section II

6.3 Factors Attracted to SEZ

The main purpose of SEZ scheme is to promote export from the country by giving incentives, good governance and high-quality infrastructure. This section will help to find out the important factors that attracted the exporters to zones in India. Factors have been finalised by a discussion with some of the units operating at zone and reading literature. To find out the key factor that attracted the units, a five-point scale Likert scale has been developed ranging from not at all influenced (1) to highly influenced (5).

The mean value of the statements is given below with their standard deviation.

Table 6.5

Descriptive statistics: Factors attracted

Factors	Mean	Std. Deviation
Physical infrastructure within SEZ	3.5825	.91313
Export business is easy in SEZ	3.9903	1.00484
Availability of Incentives and concession	3.6214	1.12124
Social infrastructure	3.2718	.97210
Port accessibility	3.2718	1.31503
Better governance & support from SEZ authorities	3.6408	1.16193
Favourable Business environment	3.5534	1.10016
single window clearance mechanism	3.1068	1.32778

Source: Field Survey

From table 6.5, it can be noticed that the factor “Export business is easy in SEZ” has the highest mean value (3.9903). The factor “Better governance & support from SEZ authorities” took the second position with a mean value of 3.6408. The least attractive factor is the “single window clearance mechanism” (mean= 3.1068). At the beginning of the scheme, the main criticism raised was that units are attracted to SEZ by incentives only. However, here it stands third behind easiness of export and better governance and support from SEZ authorities. Hence, it can be concluded that the units are not mainly attracted by physical resources. They are attracted to the assumption that export business will be trouble-free in SEZs compared to Domestic Tariff Areas.

Relationship between firm specific variables and factors attracted

This section tests the relation between firm-specific variables like the category of SEZ, the scale of operation, number of years the company is exporting to, number of countries the company is exporting to and the sector of operation with the factors attracted. This will help to understand the difference existing between these variables and factors attracted if any.

6.3.1 SEZ –wise comparison of factors attracted

The factors that influenced the exporters into SEZ may be different across zones. In this section, the researcher finds out the differences between two zones with regard to factors attracted. To find out the statistical difference in the mean score, Mann- Whitney U test has been used.

H_{0a}: There is significant difference between Cochin SEZ and Madras SEZ units with respect to Factors Attracted to SEZ.

Table 6.6
SEZ –wise comparison of Factors attracted

Factor attracted	Zone	Mean	SD	Statistics	P value	Remarks
Physical infrastructure within SEZ	CSEZ	3.92	0.83	791	0.000**	Significant
	MEPZ	3.22	0.86			
Export business is easy in SEZ	CSEZ	4.26	0.74	971	0.014*	Significant
	MEPZ	3.70	1.16			
Availability of incentives and concession	CSEZ	3.62	1.04	1314	0.940	Insignificant
	MEPZ	3.62	1.21			
Social infrastructure	CSEZ	3.17	0.91	1106	0.119	Insignificant
	MEPZ	3.38	1.03			
Port accessibility	CSEZ	3.30	1.31	1294	0.831	Insignificant
	MEPZ	3.24	1.33			
Better governance & support from SEZ authorities	CSEZ	3.53	1.20	1167	0.282	Insignificant
	MEPZ	3.76	1.12			
Favourable business environment	CSEZ	3.72	0.99	1127	0.175	Insignificant
	MEPZ	3.38	1.19			
Single window clearance mechanism(SWCM)	CSEZ	2.64	1.33	832	0.001**	Significant
	MEPZ	3.60	1.14			

Source: Field Survey

*, ** statistically significant at the 5%, and 1% significant level

The above table reveals the differences existing between two zones regarding the factors that attracted them to SEZ. It can be observed that the mean score of all factors except Single window clearance mechanism (SWCM) for Cochin (mean= 2.64 SD 1.33) is greater than three. The mean score of Cochin for Physical infrastructure within SEZ of Cochin is higher (mean=3.92 ,SD 0.83) and the madras is lower (mean=3.22 SD=0.86). Since the p value is less than 0.05, the mean difference between zones is significant with regard to infrastructure. Hence, it can be concluded that Cochin units are more attracted by physical infrastructure than madras units are.

For the factor “Export business is Easy in SEZ”, the mean score of Cochin is superior (mean= 4.26, SD 0.74) to madras (mean= 3.70, SD 1.16). The null hypothesis has been rejected as the p value is less than .05 and reached at the conclusion that the perception of export business is easy in cochin SEZ than that of MEPZ .

The mean difference between zones for the variable “Presence of SWCM” proved to be significant since the p value is less than .05. Madras zone (mean=3.60, SD 1.33) could attract more units with SWCM than Cochin (mean= 2.64, SD 1.14).

In case of all other factors like Availability of incentives and concession, Social infrastructure, Port accessibility, Better governance & support from SEZ authorities and Favourable business environment, the mean difference between two zones is found to be insignificant given that the p value for them are greater than .05. Hence, the null hypotheses are accepted

6.3.2 Scale of operation and factors attracted

The reason the large scale chose to start their unit at SEZs may not be the same for small and medium scale units. Hence, a detailed analysis on the significant difference between scale and factors attracted is needed. Kruskal Wallis test is applied to check the significant difference.

The table below shows the result of Kruskal Wallis

H_{6b}: There is a significant difference between Small, Medium and Large Scale units for Factors Attracted to SEZ

Table 6.7

Scale of operation: factors attracted

Factor attracted	Scale of operation	Mean	Std. Deviation	Chi.sqr value	P value	Remarks
Physical infrastructure within SEZ	Large Scale	3.44	1.04	2.407	0.300	Insignificant
	Medium scale	3.71	0.82			
	Small scale	3.45	0.97			
	Total	3.58	0.91			
Export business is easy in SEZ	Large Scale	3.67	1.24	3.922	0.141	Insignificant
	Medium scale	4.21	0.80			
	Small scale	3.82	1.10			
	Total	3.99	1.00			
Availability of Incentives and concession	Large Scale	3.00	1.19	9.080	0.011*	significant
	Medium scale	3.94	0.89			
	Small scale	3.45	1.25			
	Total	3.62	1.12			
Social infrastructure	Large Scale	3.11	1.02	0.752	0.687	Insignificant
	Medium scale	3.31	0.83			
	Small scale	3.30	1.16			
	Total	3.27	0.97			

Factor attracted	Scale of operation	Mean	Std. Deviation	Chi.sqr value	P value	Remarks
Port accessibility	Large Scale	2.78	1.31	3.913	0.141	Insignificant
	Medium scale	3.50	1.21			
	Small scale	3.18	1.42			
	Total	3.27	1.32			
Better governance & support from SEZ authorities	Large Scale	3.39	1.33	3.280	0.194	Insignificant
	Medium scale	3.88	0.98			
	Small scale	3.39	1.27			
	Total	3.64	1.16			
Favourable Business environment	Large Scale	3.22	1.35	2.967	0.227	Insignificant
	Medium scale	3.75	1.03			
	Small scale	3.42	1.03			
	Total	3.55	1.10			
single window clearance mechanism	Large Scale	2.89	1.37	1.145	0.564	Insignificant
	Medium scale	3.23	1.34			
	Small scale	3.03	1.31			
	Total	3.11	1.33			

Source: Field Survey

* Statistically significant at the 5% significant level

All the factors except “Availability of Incentives and concession” show the insignificant difference among firms of various size. To find out, in between which scales exist the difference, pair wise comparison is made.

Table 6.8

**DSCF pair wise comparison: Scale of operation &
Availability of incentives and concessions**

		W	P
Large	Medium	4.19	0.009**
Large	Small	1.86	0.386
Medium	Small	-2.36	0.217

Source: Field Survey

** Statistically significant at the 1% significant level

The result of the DSCF post hoc test shown in the table 6.8 clearly indicates that the mean score for availability of incentives of large scale units (mean=3.00,S.D=1.19) differs with medium scale units (mean=3.94,S.D=0.89). There is no difference in the mean score of availability of incentives between the large (mean=3.00,S.D=1.19) & small scale (mean=3.45,S.D=1.25 and small (mean=3.45,S.D=1.25) & medium scale (mean=3.94,S.D=0.89).

6.3.3 Years of operation and factors attracted

The number of years the unit has been operating in the zone is an important variable, which helps to know whether existing units and new units differ in their perception regarding the factors attracted. The units are classified into three categories like units having experience of 10 years below, 11-20 years and above 20 years. Units having experience below 10 years are considered as new units. Since the variable has three levels, the Kruskal Wallis test has been performed.

H_{6c}: There is a significant difference between years of operation and Factors Attracted to SEZ

Table 6.9

Years of operation and Factors attracted

Factors attracted	Category of years of operation	Mean	Std. Deviation	χ^2	P value	Remarks
Physical infrastructure within SEZ	Below 10 years	3.67	0.92	1.420	0.498	Insignificant
	11-20 years	3.63	0.93			
	Above 20 years	3.39	0.89			
	Total	3.58	0.91			
Export business is easy in SEZ	Below 10 years	4.13	0.99	0.719	0.698	insignificant
	11-20 years	3.93	1.04			
	Above 20 years	4.00	0.95			
	Total	3.99	1.00			
Availability of Incentives and concession	Below 10 years	3.67	1.13	1.288	0.525	insignificant
	11-20 years	3.50	1.16			
	Above 20 years	3.87	1.01			
	Total	3.62	1.12			
Social infrastructure	Below 10 years	3.00	1.02	2.299	0.317	insignificant
	11-20 years	3.32	1.01			
	Above 20 years	3.43	0.79			
	Total	3.27	0.97			
Port accessibility	Below 10 years	3.33	1.27	1.045	0.593	insignificant
	11-20 years	3.36	1.31			
	Above 20 years	3.00	1.38			
	Total	3.27	1.32			

Factors attracted	Category of years of operation	Mean	Std. Deviation	χ^2	P value	Remarks
Better governance & support from SEZ authorities	Below 10 years	3.79	0.98	0.454	0.797	insignificant
	11-20 years	3.55	1.25			
	Above 20 years	3.70	1.15			
	Total	3.64	1.16			
Favourable Business environment	Below 10 years	3.75	1.22	1.558	0.459	insignificant
	11-20 years	3.45	1.14			
	Above 20 years	3.61	0.84			
	Total	3.55	1.10			
single window clearance mechanism	Below 10 years	2.92	1.41	4.333	0.115	insignificant
	11-20 years	3.32	1.35			
	Above 20 years	2.78	1.13			
	Total	3.11	1.33			

Source: Field Survey

The p-values for all the items are greater than .05. Therefore, it can be concluded that there does not exist any significant difference in the mean score of firms below 10 years, 11-20 years and above 20 years concerning the factors attracted to SEZ. The perceptions of exporters regarding factors attracted are the same across all categories of years of export.

6.3.4 Number of Exporting countries and factors attracted

The number of countries the units exports to will help the researcher to know the global reach of the units. It is important to check the relation between the number of exporting countries and the factors attracted.

H_{6d}: There is a significant difference between categories of countries of operation and Factors Attracted to SEZ

Table 6.10
Number of operating countries and Factors attracted

Factors	Categories	Mean	Std. Deviation	Chi.sqr value	Sig.	Remarks
Physical infrastructure within SEZ	1 to 3 countries	3.50	1.03	3.069	0.546	Insignificant
	4 to 6 countries	3.67	0.78			
	7 to 9 countries	3.44	0.96			
	10 or above 10 countries	4.00	0.71			
	Total	3.58	0.91			
Export business is easy in SEZ	1 to 3 countries	3.86	1.22	1.548	0.818	Insignificant
	4 to 6 countries	4.09	0.98			
	7 to 9 countries	3.96	0.73			
	10 or above 10 countries	4.22	0.83			
	Total	3.99	1.00			
Availability of Incentives and concession	1 to 3 countries	3.64	1.17	0.573	0.966	Insignificant
	4 to 6 countries	3.61	1.00			
	7 to 9 countries	3.60	1.12			
	10 or above 10 countries	3.67	1.50			
	Total	3.62	1.12			

Factors	Categories	Mean	Std. Deviation	Chi.sqr value	Sig.	Remarks
Social infrastructure	1 to 3 countries	3.22	1.15	2.165	0.705	Insignificant
	4 to 6 countries	3.27	0.98			
	7 to 9 countries	3.28	0.84			
	10 or above 10 countries	3.44	0.53			
	Total	3.27	0.97			
Port accessibility	1 to 3 countries	3.47	1.32	2.484	0.647	Insignificant
	4 to 6 countries	3.12	1.32			
	7 to 9 countries	3.08	1.32			
	10 or above 10 countries	3.56	1.33			
	Total	3.27	1.32			
Better governance & support from SEZ authorities	1 to 3 countries	3.42	1.25	4.173	0.383	Insignificant
	4 to 6 countries	3.79	1.14			
	7 to 9 countries	3.60	1.08			
	10 or above 10 countries	4.11	1.05			
	Total	3.64	1.16			
Favourable Business environment	1 to 3 countries	3.42	1.18	1.303	0.861	Insignificant
	4 to 6 countries	3.67	1.08			
	7 to 9 countries	3.52	1.05			
	10 or above 10 countries	3.78	1.09			
	Total	3.55	1.10			

Factors	Categories	Mean	Std. Deviation	Chi.sqr value	Sig.	Remarks
single window clearance mechanism	1 to 3 countries	2.92	1.32	2.684	0.612	Insignificant
	4 to 6 countries	3.36	1.27			
	7 to 9 countries	3.04	1.43			
	10 or above	3.11	1.36			
	10 countries	3.11	1.33			
	Total	3.11	1.33			

Source: Field Survey

For all the factors attracted, the null hypothesis is accepted, as the p-value is greater than .05. Hence, it is concluded that the mean scores of factors attracted are equal among all categories of no of countries exporting to.

6.3.5 Sector and factors attracted

SEZ is a place for heterogeneous units. The perception of units under one sector may be different from the units in other sectors. Hence, it is essential to know the sector-wise difference in the perception of exporters with the factors attracted.

The table below provides the result of Kruskal-Wallis showing the significant difference between various sectors and factors attracted.

H_{0e}: There is a significant difference across various sectors about the Factors Attracted to SEZ

Table 6.11
Sector wise difference in Factors attracted – Kruskal-Wallis

Factors	Sectors	Mean	S.D.	Chi.sqr value	Sig.	remarks
Physical infrastructure within SEZ	Agro and Food	3.44	0.53	18.38	0.005**	Significant
	Electronics	3.25	1.14			
	Engineering	3.23	0.65			
	Plastic and Rubber	3.55	1.01			
	Gems and Jewellery	4.20	0.45			
	Textiles and Garments	3.50	0.71			
	Miscellaneous	4.26	0.93			
	Total	3.58	0.91			
Export business is easy in SEZ	Agro and Food	4.22	0.83	4.49	0.610	insignificant
	Electronics	3.42	1.88			
	Engineering	3.88	0.77			
	Plastic and Rubber	4.00	0.87			
	Gems and Jewellery	4.60	0.89			
	Textiles and Garments	4.10	0.99			
	Miscellaneous	4.16	0.69			
	Total	3.99	1.00			
Availability of Incentives and concession	Agro and Food	3.78	0.67	5.18	0.521	Insignificant
	Electronics	2.83	1.59			
	Engineering	3.58	0.90			
	Plastic and Rubber	3.73	1.20			
	Gems and Jewellery	3.60	1.34			
	Textiles and Garments	3.80	0.79			
	Miscellaneous	3.89	1.15			

Factors	Sectors	Mean	S.D.	Chi.sqr value	Sig.	remarks
	Total	3.62	1.12			
Social infrastructure	Agro and Food	3.00	0.87	3.63	0.726	insignificant
	Electronics	2.75	1.42			
	Engineering	3.35	0.80			
	Plastic and Rubber	3.36	0.95			
	Gems and Jewellery	3.20	0.45			
	Textiles and Garments	3.50	0.53			
	Miscellaneous	3.42	1.17			
	Total	3.27	0.97			
Port accessibility	Agro and Food	3.44	1.51	8.25	0.220	insignificant
	Electronics	2.83	1.80			
	Engineering	2.96	1.28			
	Plastic and Rubber	3.64	1.09			
	Gems and Jewellery	2.60	1.52			
	Textiles and Garments	4.00	0.67			
	Miscellaneous	3.26	1.24			
	Total	3.27	1.32			
Better governance & support from SEZ authorities	Agro and Food	4.22	0.83	11.74	0.068	insignificant
	Electronics	3.42	1.88			
	Engineering	3.77	0.82			
	Plastic and Rubber	3.50	1.06			
	Gems and Jewellery	4.80	0.45			
	Textiles and Garments	3.70	0.95			
	Miscellaneous	3.16	1.26			
	Total	3.64	1.16			

Factors	Sectors	Mean	S.D.	Chi.sqr value	Sig.	remarks
Favourable Business environment	Agro and Food	4.22	0.83	8.71	0.190	insignificant
	Electronics	3.17	1.80			
	Engineering	3.46	0.81			
	Plastic and Rubber	3.41	1.10			
	Gems and Jewellery	4.40	0.55			
	Textiles and Garments	3.30	1.16			
	Miscellaneous	3.68	0.95			
	Total	3.55	1.10			
Single window clearance mechanism	Agro and Food	3.89	0.33	10.84	0.094	insignificant
	Electronics	3.00	1.81			
	Engineering	3.27	1.19			
	Plastic and Rubber	3.05	1.21			
	Gems and Jewellery	2.40	1.34			
	Textiles and Garments	3.70	1.06			
	Miscellaneous	2.53	1.50			
	Total	3.11	1.33			

Source: Field Survey

** Statistically significant at 1% significant level

The variable “physical infrastructure within the zone” showed a significant difference in mean scores across various sectors ($p=0.00$). All others showed statistical difference insignificant as the p values were greater than 0.05.

Table 6.12

Post hoc_ Significant difference in Physical infrastructure by Sector

		W	p
Agro and Food	Electronics	-0.794	0.998
	Engineering	-1.142	0.984

		W	p
	Plastic and Rubber	0.23	1
	Gems and Jewellery	3.113	0.295
	Textiles and Garments	0	1
	Miscellaneous	3.448	0.183
	Engineering	0.166	1
Electronics	Plastic and Rubber	1.112	0.986
	Gems and Jewellery	2.345	0.644
	Textiles and Garments	0.931	0.995
	Miscellaneous	3.419	0.191
	Engineering	1.449	0.949
Engineering	Gems and Jewellery	3.909	0.083
	Textiles and Garments	1.151	0.984
	Miscellaneous	5.193	0.005**
	Gems and Jewellery	2.077	0.764
Plastic and Rubber	Textiles and Garments	-0.123	1
	Miscellaneous	3.196	0.264
	Textiles and Garments	-2.747	0.452
Gems and Jewellery	Miscellaneous	0.818	0.997
	Textiles and Garments	3.188	0.267

Source: Field Survey

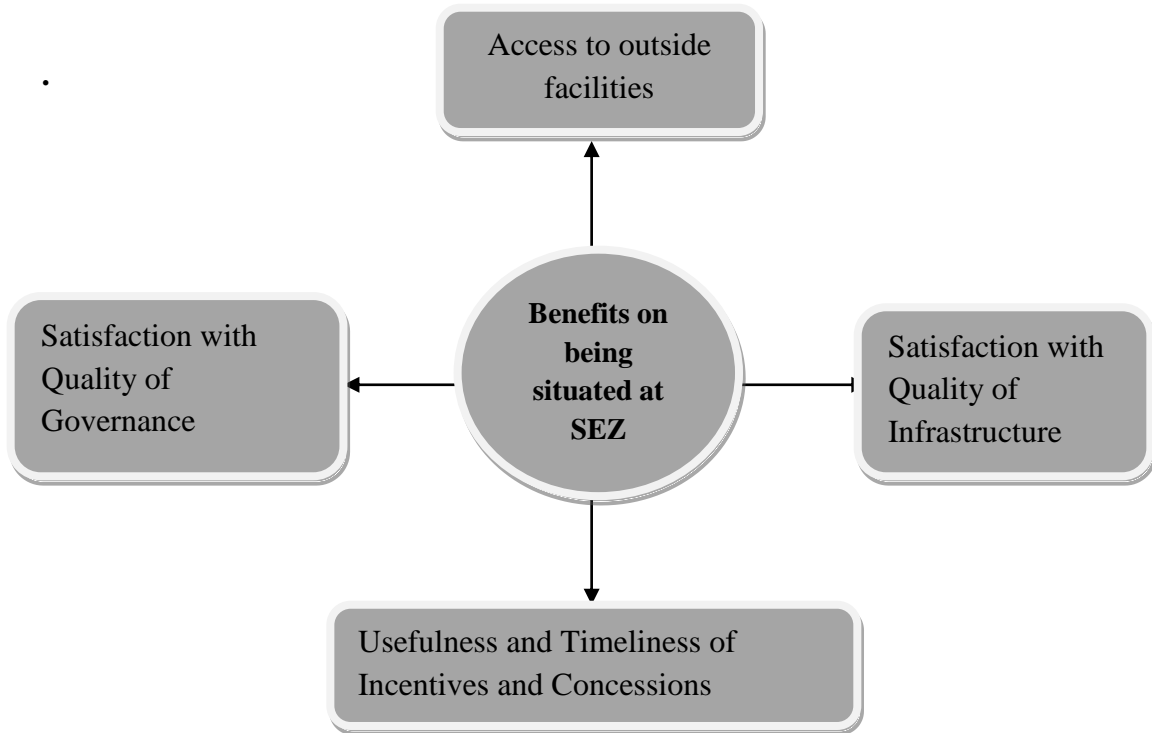
** Statistically significant at the 1% significant level

The post hoc result shows that statistically, a significant difference exists between miscellaneous & engineering sectors (mean= 4.26 and 3.25, p= .005).

6.4 Analysis of Benefits of SEZ and its dimensions

The SEZ Act 2005 provides many benefits to exporters who start their unit at SEZ including better infrastructure, access to outside facilities, better governance and better incentives and concessions. These are the core attractions of SEZ policy. The success of any program depends upon the satisfaction of beneficiaries with that program. Hence analysing the satisfaction of exporters with regard to SEZ facilities is an important objective of the research.

The satisfaction of the exporters with the benefits of the program is valued with the help of the following main constructs.



Source: Developed for the study

Figure 6.6 Benefits of SEZ policy

Here four key benefits of SEZ policy are used as constructs. The effectiveness of the program is measured as the satisfaction of exporters concerning these constructs. Each construct consists of various items. The first variable (1) Access to outside facilities, helps the researcher to know the accessibility of units in SEZs to the outside facilities. The second variable (2) Quality of infrastructure, gives an idea to the researcher about the quality of infrastructure as perceived by the exporters. It includes all the facilities provided by the developer within SEZ premises. The third variable (3) Quality of governance, tells the quality of governance perceived by the exporters. SEZs work through a system that is governed by the Development Commissioner. SEZ act ensures better governance by minimising red tapism and providing a single-window clearance mechanism. The

last construct is (4) the usefulness and timeliness of incentives and concessions. After the introduction of GST several taxes like customs duty, import duty and export duty are subsumed under it. Hence, their satisfaction on GST was sufficient to ask for their satisfaction with all the previously stated benefits.

This section will tell about the level of satisfaction of exporters in SEZs about the facilities provided.

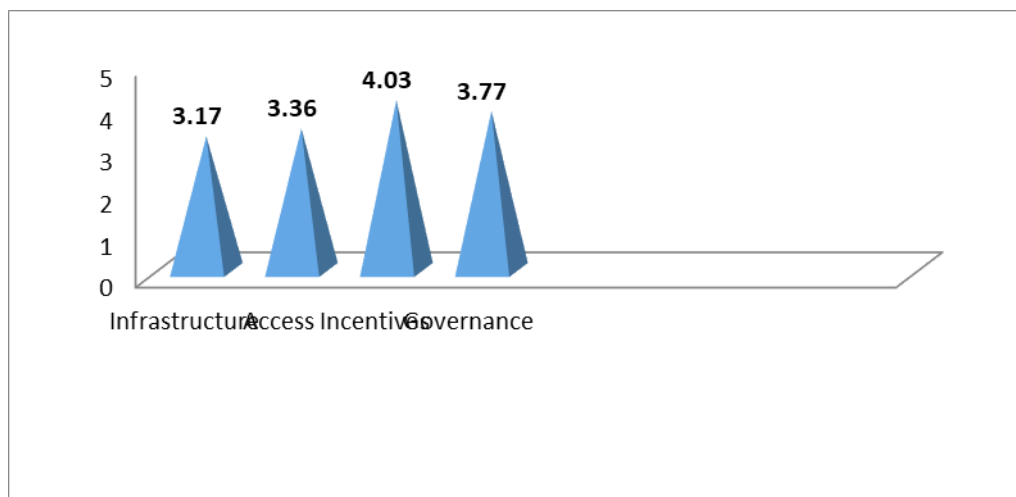
6.4.1 Reliability and Descriptive statistics of Dimensions of SEZ benefit

The table and chart below shows the Cronbach alpha, SD, minimum and maximum values of each dimensions of SEZ benefits.

Table 6.13
Reliability test and descriptive statistics of SEZ benefits

Constructs	Cronbach Alpha	Std	No of items	min	max
Infrastructure	0.77	0.552	15	1.73	4.47
Access	0.66	0.639	4	1.50	5.00
Incentives	0.62	0.453	5	2.20	4.80
Governance	0.90	0.639	10	2.30	4.90

Source: Field Survey



Source: Field Survey

Figure 6.7 Mean values of SEZ benefits

Alpha is a coefficient of reliability. It is commonly used as a measure of the internal consistency or reliability of a psychometric test score. An analysis of the above table shows that Cronbach alpha for most of the constructs are close to or more than 0.7, which is good. The test result ensured the consistency of the instrument and data is reliable. On the analysis of the graph, usefulness and timeliness of incentives achieved the highest mean score of 4.03, then comes governance with a mean score of 3.77 followed by access and infrastructure, 3.36 and 3.17 respectively.

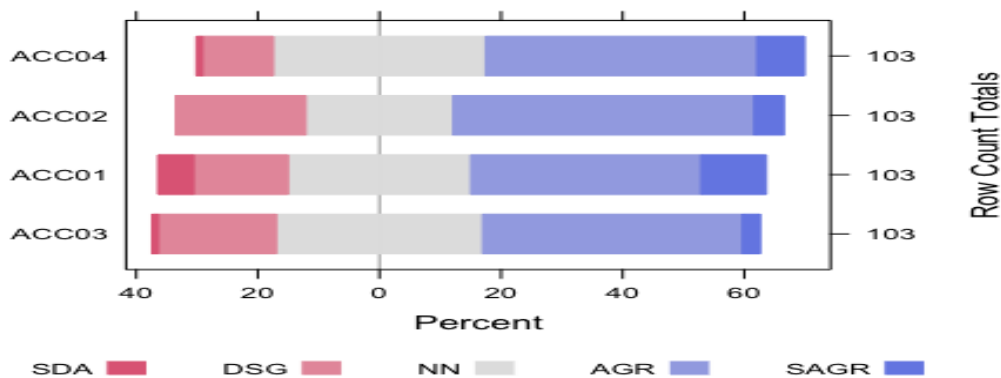
A. Access to outside facilities

Here the accessibility of exporters to the outside facility is studied mainly with the help of four variables. These variables are measured with the help of 5 points Likert scale starting from very poor (1) to very high (5).

Table 6.14
Descriptive statistics – Access

		Mean	SD	SE
ACC01	Access to Shopping mall outside	3.32	1.05	0.10
ACC02	Access to clinic and medical facilities	3.38	0.88	0.09
ACC03	Access to educational institutions	3.27	0.84	0.08
ACC04	Access to residential complex	3.47	0.84	0.08

Source: Field Survey



Source: Field Survey

Figure 6.8 Rating distribution -Access

On the analysis of the above table regarding Access, Access to residential complex achieved the highest mean score of 3.47, ACC02 achieved the mean score of 3.38, ACC01 achieved the mean score of 3.32 while ACC03 achieved the lowest mean score of 3.27. For all the above variables standard deviation varied from 0.84 to 1.05

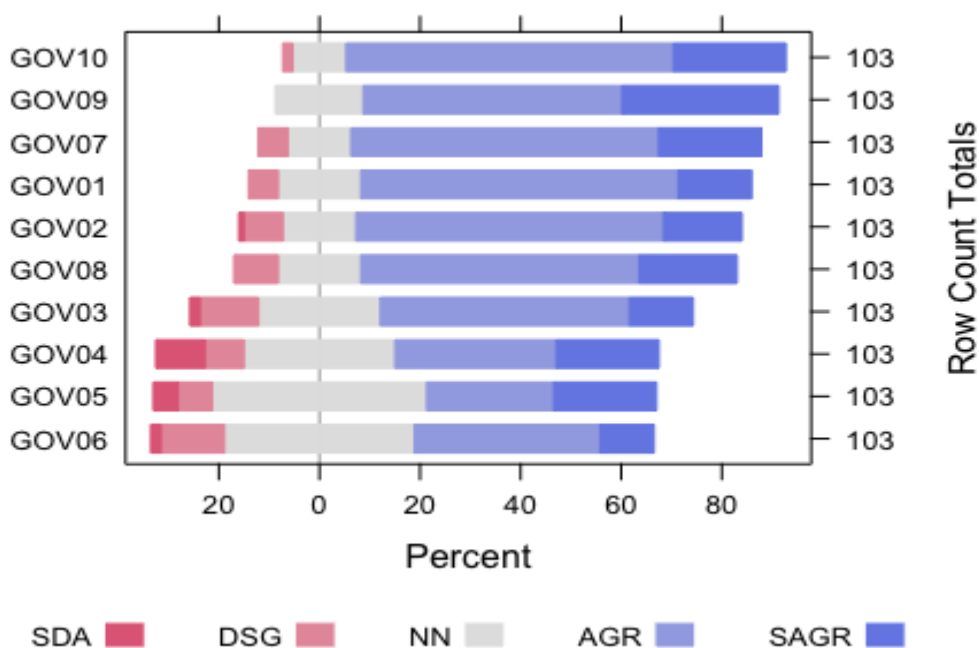
B. Quality of Governance

In this section, the perception or satisfaction of sample respondents with regard to quality of governance is analysed.

Table 6.15
Descriptive statistics -Quality of Governance

		Mean	SD	SE
GOV01	Satisfaction with rules of SEZ	3.86	0.73	0.07
GOV02	New rules are informed earlier	3.83	0.82	0.08
GOV03	Transparency kept by authority	3.59	0.92	0.09
GOV04	Help in Customs related services	3.46	1.19	0.12
GOV05	Satisfaction with DC office in dealing labor problem	3.50	1.05	0.10
GOV06	I am satisfied with the DC office in dealing with labour problems	3.42	0.91	0.09
GOV07	Time allotted for submission of APR	3.96	0.75	0.07
GOV08	Format of APR	3.85	0.83	0.08
GOV09	Digitization of APR	4.14	0.69	0.07
GOV10	Attitude of SEZ officials in dealing APR related	4.08	0.64	0.06

Source: Field Survey



Source: Field Survey

Figure 6.9 Rating distribution -Governance

On the analysis of the above table with referring to Governance, GOV09 achieved the highest mean score of 4.14, GOV10 achieved the mean score of 4.08, GOV08 achieved the mean score of 3.85, GOV07 achieved the mean score of 3.96, GOV05 achieved the mean score of 3.50, GOV04 achieved the mean score of 3.46, GOV03 achieved the mean score of 3.59, GOV02 achieved the mean score of 3.83, GOV01 achieved the mean score of 3.86 while GOV06 achieved the lowest mean score of 3.42. For all the above constructs std dev varied from 0.64 to 1.19.

C. Timeliness and Usefulness of incentives

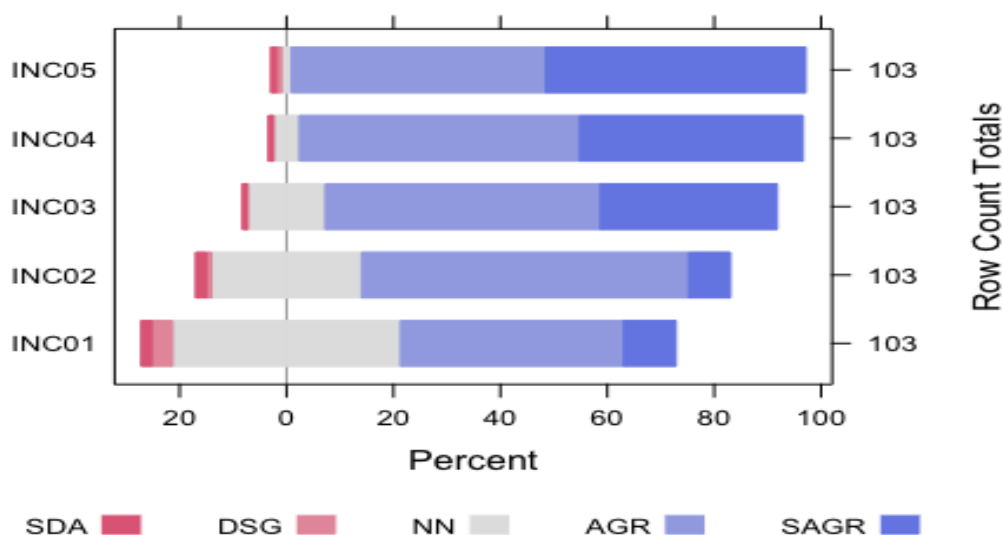
This dimension describes two features of incentives and concessions. The first 3 items represent the tax exemption available to the units in SEZs and the remaining two items represent the timeliness of incentives and concessions. The usefulness of incentives are measured with 5 point

Likert scale starting from not at all useful (1) to highly useful (5).

Table 6.16
Descriptive statistics - Incentives

		Mean	SD	SE
INC01	Income Tax exemption	3.53	0.80	0.08
INC02	Exemption from service tax	3.72	0.71	0.07
INC03	Exemption from GST	4.16	0.74	0.07
INC04	Incentives are received timely	4.34	0.66	0.07
INC05	Concessions are received timely	4.42	0.68	0.07

Source: Field Survey



Source: Field Survey

Figure 6.10 Rating distribution -Incentives

On the analysis of the above table regarding the use of incentives, INC05 achieved the highest mean score of 4.42, INC04 achieved the mean score of 4.34, INC03 achieved the mean score of 4.16, INC02 achieved the mean score of 3.72 while INC01 achieved the lowest mean score of 3.53. For all the above constructs stand deviation varied from 0.66 to 0.80.

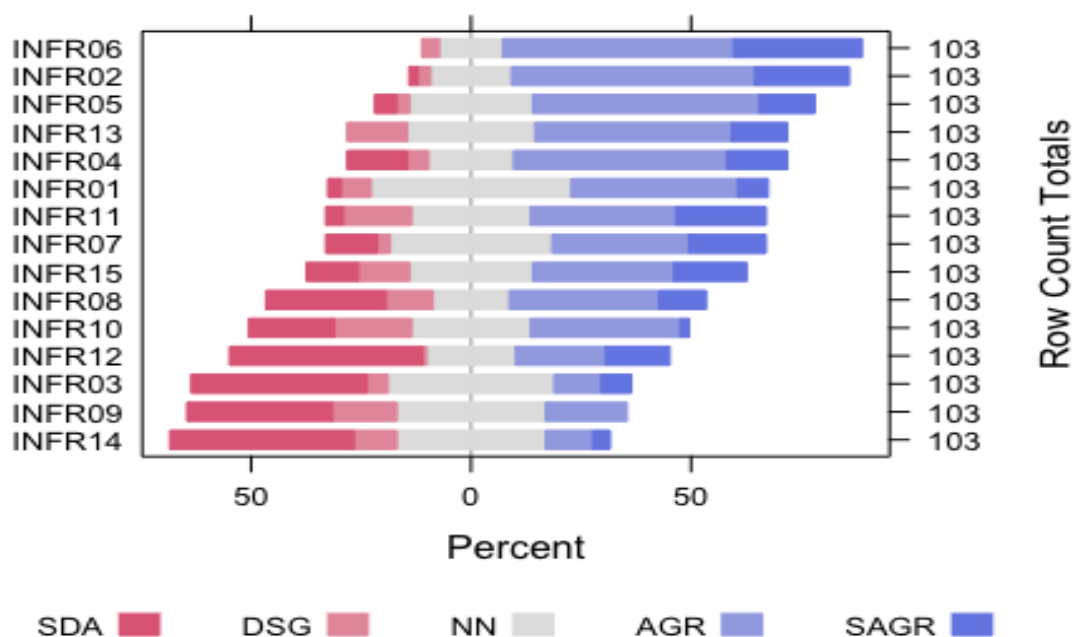
D. Quality of infrastructure

The quality of infrastructure is measure with 15 facilities available in the zones. The exporters were asked to rate the infrastructure available on a scale starting from very low (1) to very high (5)

Table 6.17
Descriptive statistics - Infrastructure

		Mean	SD	SE
INFR01	Quality of Road	3.39	0.83	0.08
INFR02	Quality of Security arrangements	3.91	0.83	0.08
INFR03	Quality of Car parking	2.40	1.29	0.13
INFR04	Quality of Water supply	3.44	1.20	0.12
INFR05	Quality of Sewage	3.64	0.92	0.09
INFR06	Quality of continuity of power supply	4.07	0.77	0.08
INFR07	Quality of Telecom and internet	3.40	1.17	0.11
INFR08	Quality of Power backup	2.90	1.40	0.14
INFR09	Quality of Basic medical facilities	2.38	1.13	0.11
INFR10	Quality of Fire protection system	2.82	1.16	0.11
INFR11	Quality of space provided for conducting business	3.50	1.10	0.11
INFR12	Quality of warehouse	2.61	1.55	0.15
INFR13	Quality of Banking service	3.56	0.88	0.09
INFR14	Quality of Canteens	2.25	1.22	0.12
INFR15	Quality of Creche	3.30	1.22	0.12

Source: Field Survey



Source: Field Survey

Figure 6.11 Rating distribution -Infrastructure

On the analysis of the above table with referring to Infrastructure, INFR06 achieved the highest mean score of 4.07, INFR01, INFR02, INFR04, INFR05, INFR07, INFR08 and INFR09 achieved the mean score of 3.39, 3.91, 3.44, 3.64, 3.40, 2.90 and 2.38 respectively. INFR10, INFR11, INFR12, INFR13 and INFR15 achieved the mean score of 2.82, 3.50, 2.61, 3.56 and 3.30 respectively while INFR14 achieved the lowest mean score of 2.25. For all the above constructs standard deviation varied from 0.77 to 1.55

6.4.2 Relationship between demographic variables and dimensions of SEZ benefits

This section deals with the detailed analysis that helps to determine the relationship between demographic variables and dimensions of SEZ. Independent sample t-test and one way ANOVA or Kruskal Wallis test has been used.

a) **SEZ wise difference in dimensions of benefits of SEZ**

The geographical difference is a matter of concern for SEZ program. Cochin and Madras SEZs are situated in two states. The quality of infrastructure provided, access to outside facilities, quality of governance inside the zone and usefulness of incentives perceived by exporters will be different. Hence, an analysis is done to check the significant difference in the satisfaction of exporters about various benefits of SEZ at Cochin and Madras zones. An Independent sample t-test has been performed.

H₇: There is significant difference between Cochin and Madras SEZ with regard to the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness and timeliness of incentives and quality of governance .

Table 6.18

Benefits SEZ –Wise

	CSEZ		MSEZ		T value	P value
	Mean	SE	Mean	SE		
Infrastructure	2.892	0.14	2.72	0.11	0.922	0.359
Access	3.264	0.11	3.38	0.078	-0.904	0.369
Incentives	3.632	0.08	3.62	0.109	0.086	0.931
Governance	3.713	0.09	3.74	0.097	-0.223	0.824

Source: Field Survey

The table 6.18 provides the p values and t values for all the constructs zone wise. From the p values, it can be understood that the benefits of being situated at SEZs perceived by exporters in Cochin and Madras SEZ are equal. All the p values are greater than 0.05, so the alternative hypothesis is failed to accept.

b) Firm size and benefits of SEZs

This section checks the difference in the perception of units towards the benefit of being situated at SEZs based on the size. Both the Kruskal Wallis test and one way ANOVA have been used to check the difference.

H₈: There is a significant difference across various levels of firm size about the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and Quality of governance

Table 6.19
Firm size and Benefits of SEZs

	Large		Medium		Small		KW Test		ANOVA	
	Mean	se	Mean	se	Mean	Se	Chisqr	P value	F value	P value
Infrastructure	3.13	0.21	2.69	0.13	2.83	0.16	2.45	0.29	1.49	0.23
Access	3.43	0.13	3.21	0.10	3.46	0.12	2.94	0.23	1.56	0.22
Incentives	3.69	0.21	3.60	0.10	3.64	0.10	0.32	0.85	0.13	0.88
Governance	3.75	0.15	3.71	0.10	3.74	0.10	0.27	0.87	0.04	0.96

Source: Field Survey

From the analysis regarding table, it can be concluded that there is no significant difference in the perception of units of different size about infrastructure within zones, usefulness of incentives, and quality of governance and ease of access to outside facilities. Since all the p values are greater than 0.05 in case of both tests, null hypothesis has been retained.

c) Sector wise difference in benefits of SEZ

The access to facilities or benefits perceived by units under various sector can be different. This section helps to know the differences in perception of respondents regarding the access to outside facilities, quality of infrastructure within zones, usefulness of incentives, and quality of governance across various sectors. Since there are more than 2 levels of categorical variable, one way ANOVA and KW tests are used.

H₉: The perception of units about the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and quality of governance across various sectors are not equal.

Table 6.20
Sector wise difference in benefits of SEZ

	KW test		ANOVA		Remarks
	Chisqr	P value	F value	P value	Remarks
Infrastructure	10.663	0.099	1.704	0.128	Non-sig
Access	5.374	0.497	0.917	0.486	Non-sig
Incentives	4.225	0.646	0.340	0.914	Non-sig
Governance	4.016	0.674	0.492	0.813	Non-sig

Source: Field Survey

The perception of units about benefits of SEZs doesn't differ across various sectors as the p values are greater than 0.05 in all the cases. The results of KW tests and one way ANOVA, direct into the rejection of alternative hypothesis.

d) Years of export and benefits of SEZ

Here, the difference in the perception of units across various levels of years of experience is checked with the help of KW test and one way ANOVA.

H₁₀: The perception of units about the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and quality of governance does not differ across various levels of years of operation/export.

Table 6.21
Years of export and Benefits of SEZs

Constructs	Below 10 yrs		11 to 20 yrs		More than 20 yrs		ANOVA		
	Mean	SE	Mean	SE	Mean	SE	F value	P value	Remarks
Infrastructure	2.98	0.17	2.74	0.13	2.82	0.2	0.58	0.56	Non-sig
Access	3.18	0.16	3.3	0.1	3.52	0.11	1.48	0.23	Non-sig
Incentives	3.54	0.16	3.65	0.08	3.65	0.17	0.22	0.8	Non-sig
Governance	3.66	0.15	3.8	0.09	3.61	0.13	0.84	0.43	Non-sig

Source: Field Survey

From the KW test and One-Way ANOVA result, It can be noticed that both leads to accepting the null hypothesis. The p values of both tests for all the constructs are more than .05.

e) Number of exporting countries and the benefits of SEZ

This section deals with checking of satisfaction of exporter regarding the benefits of SEZ policy who are categorised based on the number of countries they are exporting to. Since there are more than two levels of categories, one way ANOVA and KW test has been performed.

H₁₁: The perception of units about the quality of infrastructure within SEZ, Ease of Access to Facilities outside zones, Usefulness of incentives and quality of governance differ across various levels of countries of operations

Table 6.22
Number of exporting countries and Benefits of SEZ

	Below 10 yrs		11 to 20 yrs		More than 20 yrs		KW test		ANOVA	
	Mean	SE	Mean	SE	Mean	SE	chisqr	P value	F value	P value
Infrastructure	2.98	0.17	2.74	0.13	2.82	0.20	1.36	0.51	0.58	0.56
Access	3.18	0.16	3.30	0.10	3.52	0.11	2.20	0.33	1.48	0.23
Incentives	3.54	0.16	3.65	0.08	3.65	0.17	0.69	0.71	0.22	0.80
Governance	3.66	0.15	3.80	0.09	3.61	0.13	1.44	0.49	0.84	0.43

Source: Field Survey

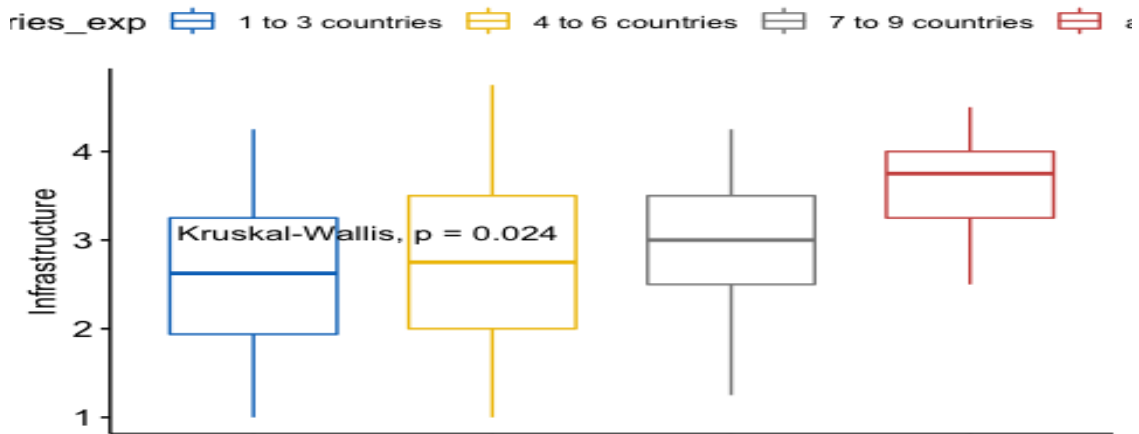
* Statistically significant at the 5% significant level

The table 6.22 gives the results of one way ANOVA and KW test. The p values for all the constructs except one are greater than 0.05. Hence null hypothesis related to these is accepted. The construct “infrastructure” has a p-value less than 0.05 in both tests. Hence, the null hypothesis related to this construct is rejected. A post hoc test has been performed to find the difference.

Table 6.23
Post hoc test -Infrastructure by No of exporting country

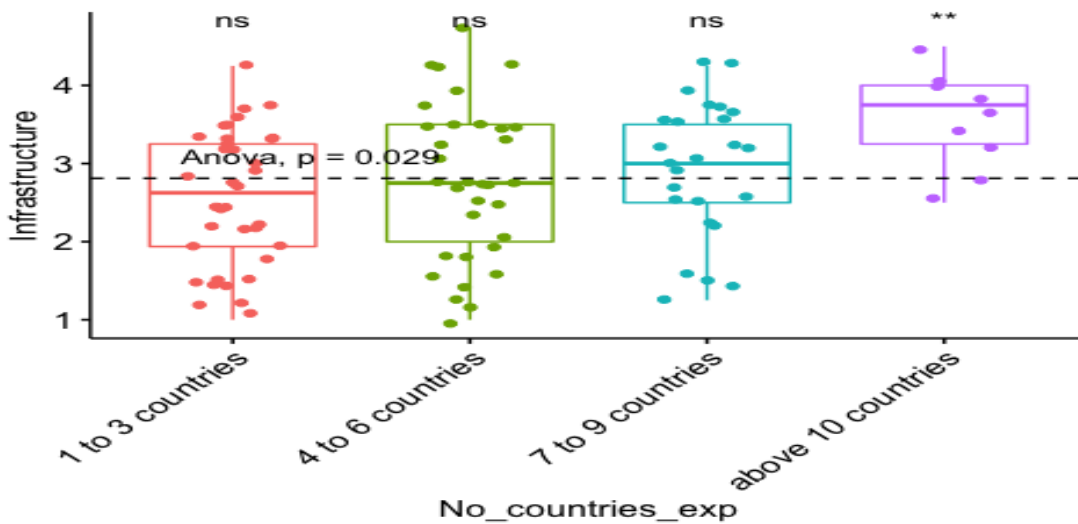
	diff	lwr	upr	p adj
4 to 6 countries-1 to 3 countries	0.203	-0.361	0.767	0.782
7 to 9 countries-1 to 3 countries	0.371	-0.239	0.980	0.389
above 10 countries-1 to 3 countries	0.986	0.114	1.858	0.020
7 to 9 countries-4 to 6 countries	0.167	-0.453	0.788	0.895
above 10 countries-4 to 6 countries	0.783	-0.097	1.663	0.099
above 10 countries-7 to 9 countries	0.616	-0.294	1.525	0.295

Source: Field Survey



Source: Field Survey

Figure 6.12 Post Hoc KW test



Source: Field Survey

Table 6.13 Post hoc test one way ANOVA

While analysing the graphs and table, it can be interpreted that the significant difference in perception with regards to infrastructure exists only between units that export 1 to 3 countries and units that export to more than 10 countries. The p values for the KW test and one-way ANOVA (p=0.024, 0.029) are less than 0.05 in the case of these categories.

6.5 The Determinants of Export performance

The level of resources, capabilities, export knowledge and export commitment are the most discussed topics under the export performance perspective. Here the construct “Resources” are measured with the help of 9 Likert scale type statements ranging from strongly disagree (1) to strongly agree (5). The construct capabilities are measured with the help of 9 statements in a 5 point Likert scale starting from strongly disagree (1) to strongly agree (5). Export Commitment is measured with 9 items of 2 different type of Likert scale. Statements from 1 to 6 are measured with the 5 points Likert scale starting from (1) strongly disagree to (5) strongly agree. The remaining 3 statements are measured with the 5 points Likert scale ranging from (1) very low to (5) very high.

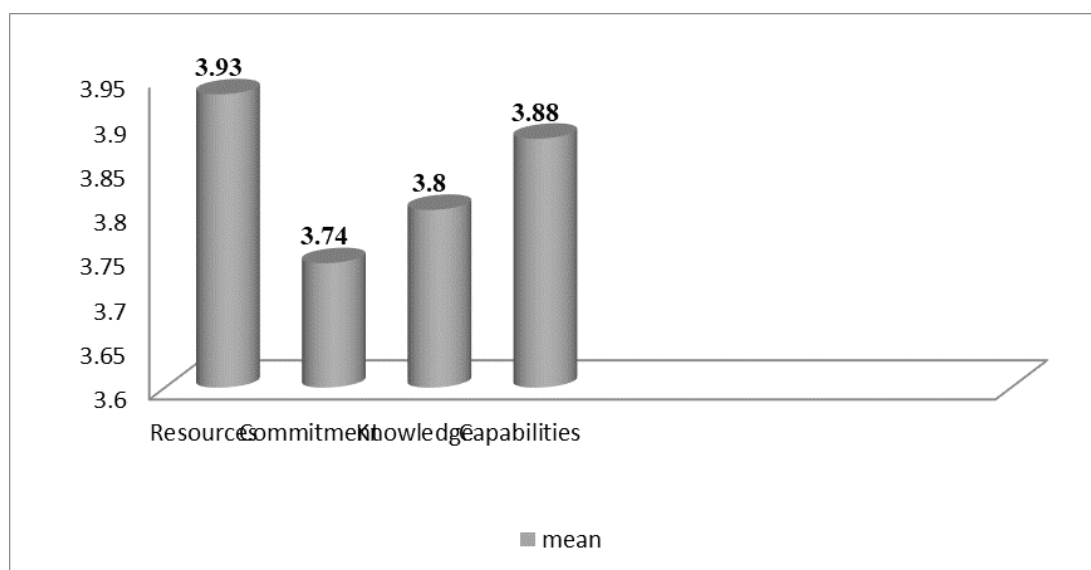
6.5.1 Reliability and descriptive statistics of Determinants of Export performance

Table 6.24

Reliability and Descriptive Statistics of Export Determinants

Constructs	Cronbach Alpha	Mean	Std	No of items	min	max
Resources	0.87	3.93	0.524	9	2.67	5.00
Commitment	0.89	3.74	0.608	9	2.33	4.89
Knowledge	0.89	3.80	0.583	5	2.00	5.00
Capabilities	0.90	3.88	0.674	9	2.56	5.00

Source: Field Survey



Source: Field Survey

Figure 6.14 Mean values of Determinants of Export Performance

Cronbach alpha is used to measure the internal consistency or reliability of a psychometric test score. An analysis of the above table brings out that Cronbach alpha for most of the constructs are greater than 0.8, which is good. The test result ensured the consistency of the instrument and therefore the data is reliable. From the analysis of the graph, it is found that, among the constructs of export determinants, resources (3.93) has the highest mean score followed by capabilities (3.88), knowledge (3.8) and commitment (3.74).

6.5.2 Descriptive statistics of items under constructs

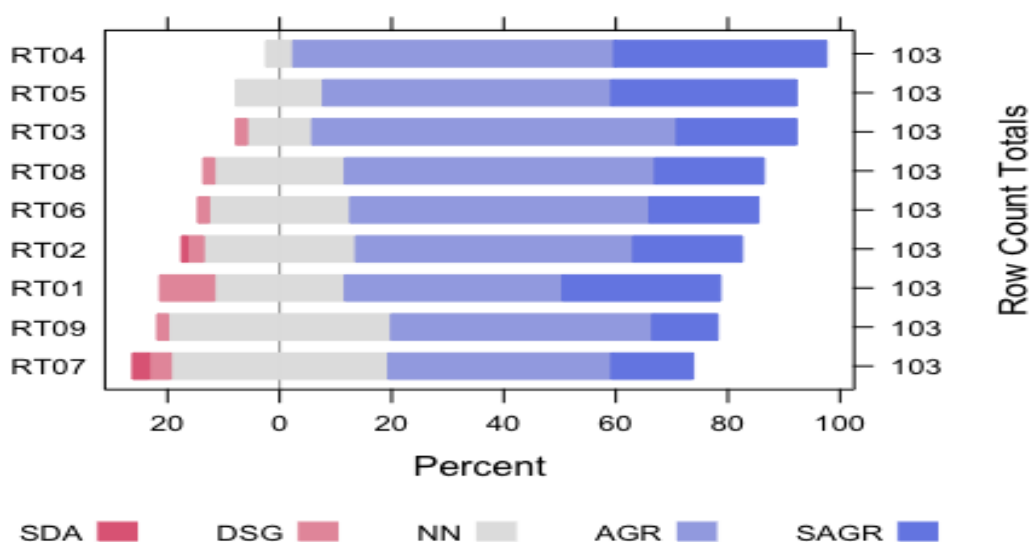
Before going into in-depth analysis, it is essential to understand the frequency distribution and basic statistics of each item in the constructs. Hence, this part deals with the frequency distribution of the scale of each statement under the constructs and descriptive statistics like mean, std. Deviation and standard error.

I. Resources

Table 6.25
Descriptive statistics_ Resources

		Mean	SD	SE
RT01	Use of latest technology	3.85	0.94	0.09
RT02	Products identified for superior technology	3.83	0.81	0.08
RT03	Enough capacity to meet order	4.06	0.64	0.06
RT04	Mgt aware of exporting country	4.33	0.57	0.06
RT05	Experienced people	4.17	0.68	0.07
RT06	Deal with domestic and overseas supplier	3.90	0.72	0.07
RT07	Financial stability	3.59	0.89	0.09
RT08	Observe and study before export	3.92	0.71	0.07
RT09	Find opportunities in advance	3.68	0.70	0.07

Source: Field Survey



Source: Field Survey

Figure 6.15 Rating distribution _Resources

On the analysis of the above table about Rating Distribution and table, RT04 achieved the highest mean score of 4.33, RT05 achieved the mean score of 4.17,

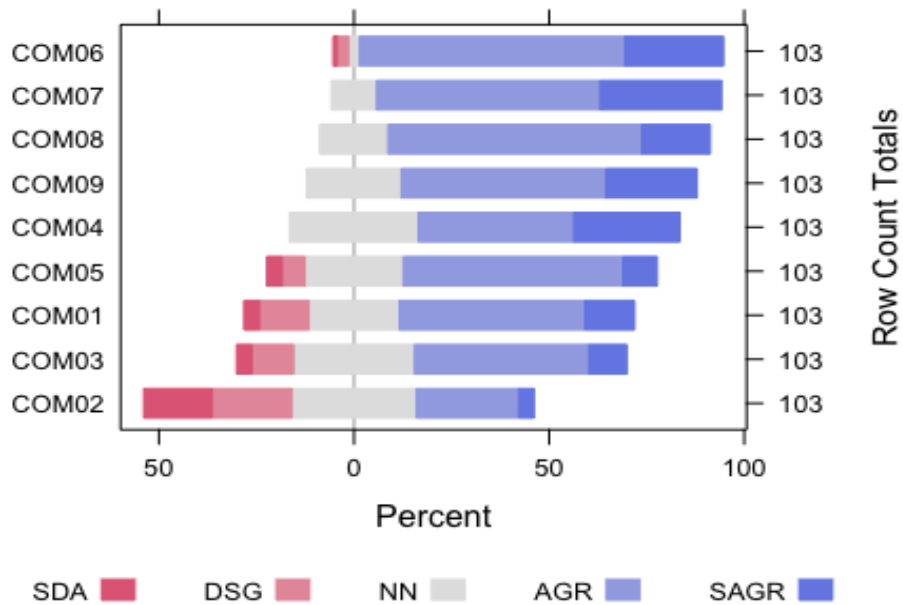
RT01 achieved the mean score of 3.85, RT02 achieved the mean score of 3.83, RT03 achieved the mean score of 4.06, RT06 achieved the mean score of 3.90, RT08 achieved the mean score of 3.92, RT09 achieved the mean score of 3.68 while RT07 achieved the lowest mean score of 3.59. For all the above constructs standard deviation varied from 0.57 to 0.94.

II. *Export commitment*

Table 6.26
Descriptive statistics - Commitment

		mean	sd	se
COM01	Executives conduct frequent travel to export market	3.52	1.00	0.10
COM02	In-house export market research facilities	2.79	1.13	0.11
COM03	High priority to Learning about exporting procedures and documentation	3.46	0.95	0.09
COM04	Appropriate organizational structure to deal with export	3.94	0.78	0.08
COM05	Pursue opportunities rather than responding	3.60	0.88	0.09
COM06	Exporting is a high priority activity in the firm	4.14	0.69	0.07
COM07	Effort and time the management commits to export	4.19	0.63	0.06
COM08	Financial resources allocated to export activity	4.00	0.59	0.06
COM09	Level of human resources committed to export activity	3.99	0.69	0.07

Source: Field Survey



Source: Field Survey

Figure 6.16 Rating distribution _ Commitment

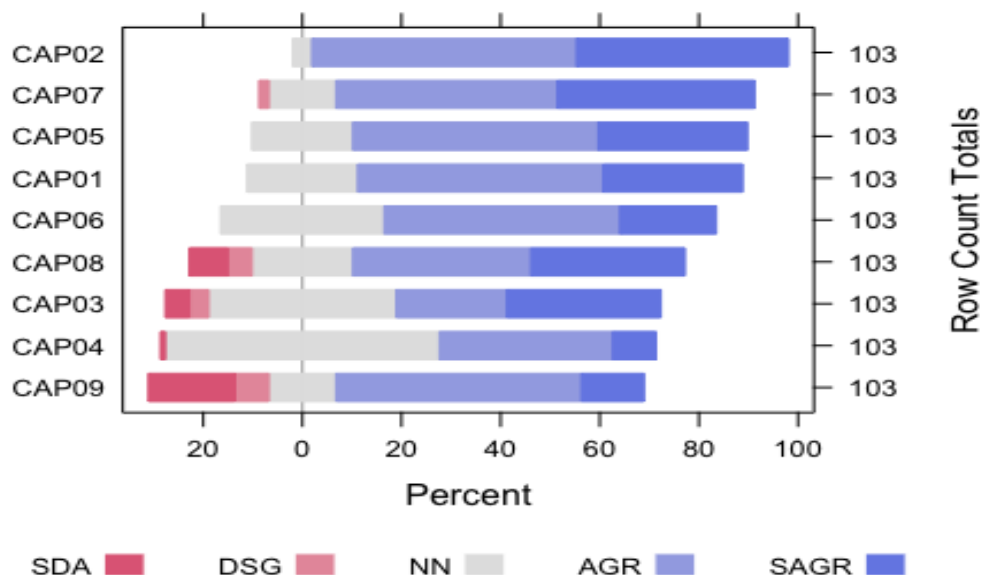
On the analysis of the above table with about Commitment, COM07 achieved the highest mean score of 4.19, COM06 achieved the mean score of 4.14, COM08 achieved the mean score of 4.00, COM09 achieved the mean score of 3.99, COM05 achieved the mean score of 3.60, COM04 achieved the mean score of 3.94, COM03 achieved the mean score of 3.46, COM01 achieved the mean score of 3.52 while COM02 achieved the lowest mean score of 2.79. For all the above constructs standard deviation varied from 0.59 to 1.13.

III. Capabilities

Table 6.27
Descriptive statistics - Capabilities

		Mean	SD	SE
CAP01	Up to date information	4.06	0.71	0.07
CAP02	keep in touch with foreign customers and understand their preferences	4.39	0.56	0.06
CAP03	establish and maintain close relationship with supplier	3.71	1.10	0.11
CAP04	establish and maintain close relationship with distributor	3.50	0.70	0.07
CAP05	closely monitoring competitors	4.10	0.71	0.07
CAP06	consult the customers while making changes to the product	3.86	0.71	0.07
CAP07	bring innovations in manufacturing when needed	4.22	0.75	0.07
CAP08	strongly emphasize on R&D, technology	3.78	1.17	0.12
CAP09	frequently monitor performance with competitors	3.33	1.29	0.13

Source: Field Survey



Source: Field Survey

Figure 6.17 Rating distribution _Capabilities

On the analysis of the above table regarding Capabilities, CAP02 achieved the highest mean score of 4.39, CAP01 achieved the mean score of 4.06, CAP03

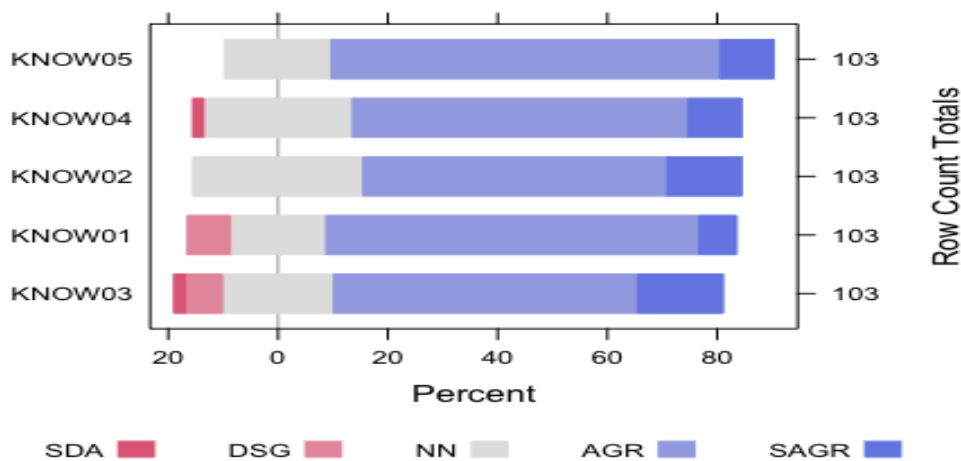
achieved the mean score of 3.71, CAP04 achieved the mean score of 3.50, CAP05 achieved the mean score of 4.10, CAP06 achieved the mean score of 3.86, CAP07 achieved the mean score of 4.22, CAP08 achieved the mean score of 3.78 while CAP09 achieved the lowest mean score of 3.33. For all the above constructs std dev varied from 0.56 to 1.29.

IV. Export knowledge

Table 6.28
Descriptive statistics-Knowledge

		Mean	sd	se
KNOW01	easy to prepare and manage export documents	3.74	0.70	0.07
KNOW02	Salesman knowledge about export market	3.83	0.65	0.06
KNOW03	Know foreign govt. regulations	3.76	0.87	0.09
KNOW04	Aware of economic condition in the export market	3.77	0.70	0.07
KNOW05	Sufficient knowledge about foreign market	3.90	0.53	0.05

Source: Field Survey



Source: Field Survey

Figure 6.18 Rating distribution _Export knowledge

On the analysis of the above table about Knowledge, KNOW05 achieved the highest mean score of 3.90, KNOW04 achieved the mean score of 3.77, KNOW03 achieved the mean score of 3.76, KNOW02 achieved the mean score of 3.83 while

KNOW01 achieved the lowest mean score of 3.74. For all the above constructs standard dev varied from 0.53 to 0.87.

6.5.3 Relationship between demographic variables and Determinants of Firm Export performance

a) *Determinants of Export Performance -SEZ wise*

This section deals with the SEZ wise analysis of determinants of Export performance. An Independent sample t-test has been used to find the difference between Cochin and Madras SEZ units in the level of resources, commitment, knowledge and capabilities they possess.

H₁₂: There is a significant difference between Cochin and Madras SEZ about the level of Resources, Commitment, Knowledge and Capabilities they possess.

Table 6.29
Resources, Commitment, Knowledge and Capabilities _SEZ wise

	CSEZ		MSEZ		T value	P value
	mean	se	Mean	Se		
Resources	3.692	0.08	4.19	0.064	-4.872	0.00**
Commitment	3.358	0.089	4.02	0.055	-6.319	0.00**
Knowledge	3.509	0.09	4.12	0.054	-5.966	0.00**
Capabilities	3.514	0.092	4.23	0.076	-5.996	0.00**

Source: Field Survey

** Statistically significant at 1% significant level

The table shows the t-test results. From the p values, it can be concluded that there is a significant difference in the level of Resources, Commitment, knowledge and capabilities between units in Cochin and Madras SEZs. To know the difference, mean values can be checked. In the case of the construct “Resources”, units in Madras SEZ (mean=4.19) possess a high level of resources compared to units in Cochin zones (mean=3.692). In the case of commitment (CSEZ=3.358, MSEZ=4.02), knowledge (CSEZ=3.509, MSEZ=4.135) and capabilities (CSEZ=3.514, MSEZ=4.23) also the units in Madras SEZ stand first.

b) Determinants of Export Performance -Firm size wise

The Resources, Commitment, knowledge and capabilities depend upon the size of the firm. Hence, an analysis is needed to find out the difference in firms of various sizes in the resources and capabilities they own. Both one way ANOVA and KW test have been performed.

H₁₃: There is a significant difference between Small, Medium and Large about the level of Resources, Commitment, Knowledge and Capabilities they possess.

Table 6.30

Resources, Commitment, knowledge and capabilities _ Firm size wise

	Large		Medium		Small		KW Test		ANOVA	
	Mean	SE	Mean	SE	Mean	SE	chisqr	P value	F value	P value
Resources	4.35	0.14	3.97	0.08	3.65	0.06	19.55	0.00	10.61	0.00**
Commitment	3.90	0.15	3.68	0.1	3.55	0.08	4.25	0.12	1.82	0.17
Knowledge	4.04	0.12	3.83	0.09	3.67	0.11	3.60	0.17	2.19	0.12
Capabilities	4.26	0.11	4.02	0.1	3.40	0.1	22.39	0.00	14.19	0.00**

Source: Field Survey

** Statistically significant at the 1% significant level

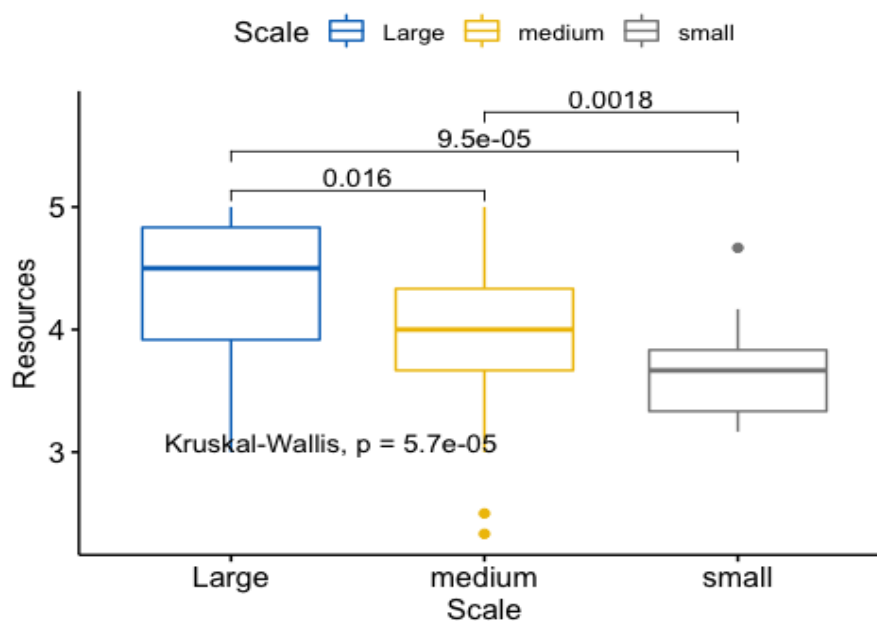
Regarding the test results, it can be concluded that the resources and capabilities of the firm depend upon its size. Because the p-value for resources (p=.000) and capabilities (p=0.05) are less than .05 hence it is significant. Whereas the level of knowledge and commitment does not differ across various zones about the size of the firm. The p values for them are greater than 0.05. Since the p-value of two constructs namely Resources and Capabilities are less than 0.05, a post hoc test has been performed to check the significant difference.

Table 6.31
Post hoc test-Resources by firm size

	Diff	Lwr	upr	p adj
Medium-Large	-0.381	-0.725	-0.036	0.027*
Small-Large	-0.705	-1.074	-0.336	0.000**
Small-medium	-0.325	-0.605	-0.044	0.019*

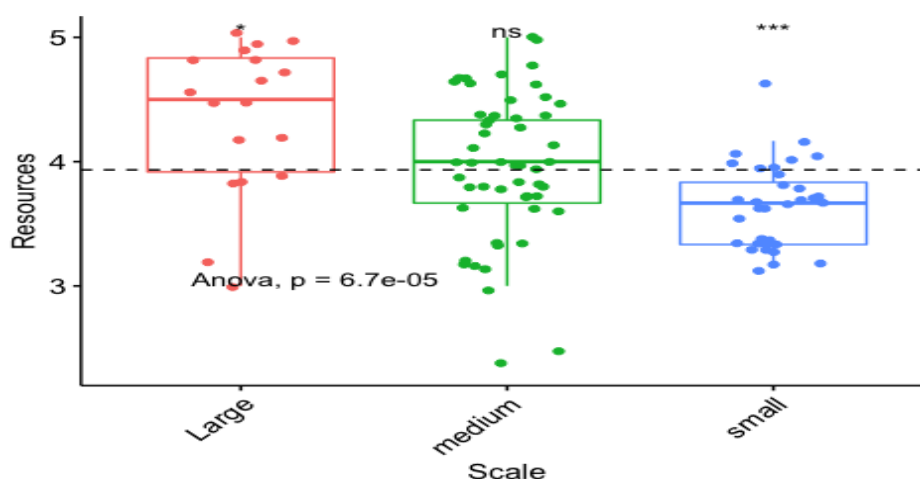
Source: Field Survey

*, ** statistically significant at the 5%, and 1% significant level



Source: Field Survey

Figure 6.19 Post hoc test – KW: Resources by firm size



Source: Field Survey

Figure 6.20 Post hoc test – ANOVA :Resources by firm size

The post hoc test shows that there is a significant difference between firms of various sizes in the case of the level of resources. The p-value for significant difference between all the firms, like small and medium firms ($p=0.019$), medium and large firms ($p=0.027$), small and large firms ($p=0.00$) are less than 0.05. It indicates the level of firm resource is different among firms of various size. While analysing the graphs, it can be understood that large firms have a high level of resources, followed by medium and small firms.

Post hoc -Capabilities by firm size

The capabilities showed a significant difference in mean value across various firm sizes. Therefore post hoc test has been performed. The table and graphs show the post hoc result of KW and one way ANOVA.

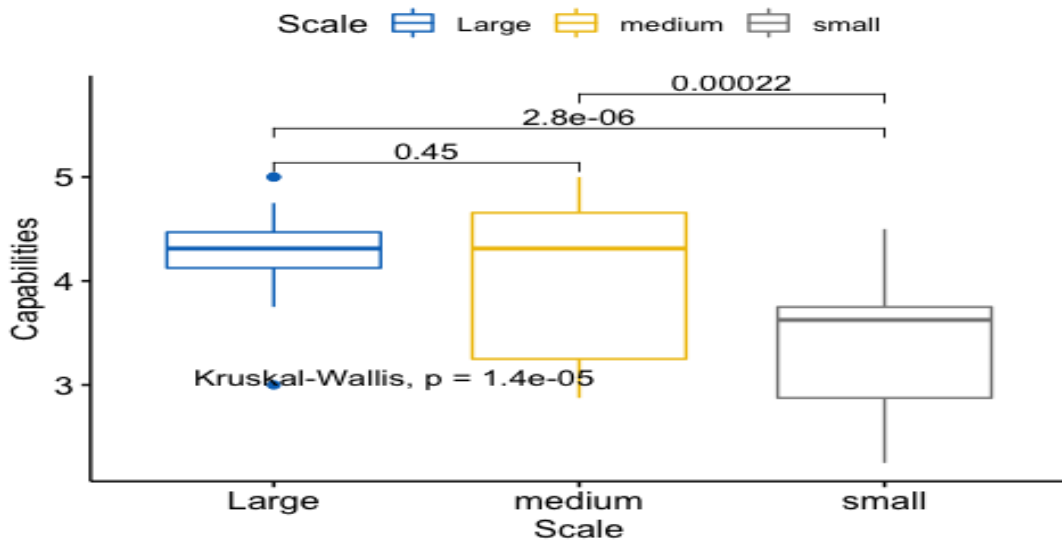
Table 6.32

Post hoc _Capabilities by Firm Size

	diff	lwr	Upr	p adj
medium-Large	-0.238	-0.647	0.171	0.353
small-Large	-0.859	-1.297	-0.421	0.000**
small-medium	-0.622	-0.954	-0.289	0.000**

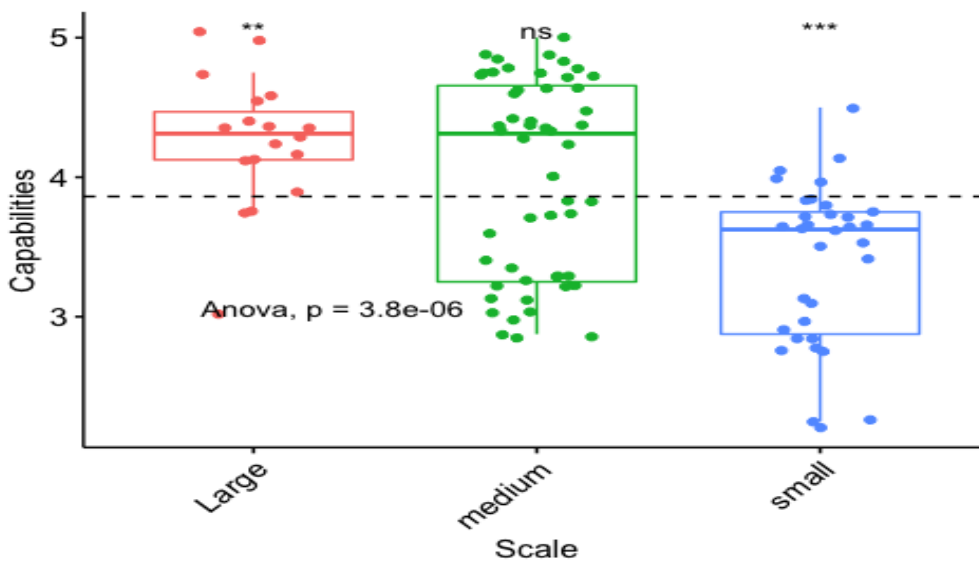
Source: Field Survey

** statistically significant at the 1% significant level



Source: Field Survey

Figure 6.21 Post hoc – KW test: Capabilities by Firm Size



Source: Field Survey

Graph 6.22 Post hoc ANOVA: Capabilities by Firm Size

The post hoc results of KW and one way ANOVA and graphical representations show that significant difference is existing between small and large

firms ($p=0.00$) and small and medium firms($p=0.00$). No difference exists between large and medium-sized firms in the level of capabilities.

c) ***Determinants of Export Performance _Sector wise***

The determinants of export performance may differ across various sectors. Hence both one way ANOVA and KW tests are performed.

H₁₄: There is a significant difference between units across various sectors and the level of Resources, Commitment, Knowledge and Capabilities they possess

Table 6.33

Resources, Commitment, Knowledge and Capabilities - Sector wise

Constructs	Sectors	Mean	SD	Chisqr	kw_pvalue	F.value	P.value
Resources	Engineering	3.96	0.64	5.16	0.397	0.87	0.507
	Miscellaneous	3.86	0.60				
	Electronics	4.03	0.52				
	Others	3.69	0.56				
	Textiles & Garments	3.95	0.51				
	Plastic & Rubber	4.07	0.55				
Commitment	Engineering	3.65	0.73	14.79	0.011	3.2	0.01**
	Miscellaneous	3.47	0.60				
	Electronics	3.88	0.44				
	Others	3.28	0.55				
	Textiles & Garments	4.04	0.49				
	Plastic & Rubber	3.88	0.56				
Knowledge	Engineering	3.80	0.71	4.49	0.482	1.07	0.383
	Miscellaneous	3.63	0.61				
	Electronics	3.98	0.54				
	Others	3.64	0.57				

Constructs	Sectors	Mean	SD	Chisqr	kw_pvalue	F.value	P.value
	Textiles & Garments	3.85	0.81				
	Plastic & Rubber	3.99	0.48				
Capabilities	Engineering	3.76	0.74	14.87	0.011	3.32	0.008**
	Miscellaneous	3.65	0.58				
	Electronics	4.10	0.73				
	Others	3.43	0.74				
	Textiles & Garments	4.23	0.60				
	Plastic & Rubber	4.14	0.59				

Source: Field Survey

** Statistically significant at the 1% significant level

The test results show that there is a difference among various sectors about the level of export commitment ($p=0.01$) and capabilities ($p=0.008$). Both the KW test and one-way ANOVA results direct to the same conclusion. For the constructs Resources and Knowledge, the mean values do not differ. A post hoc test has been applied.

Table 6.34

Tukey post hoc- Commitment and Export Performance by Sector

	diff	Lwr	Upr	p adj
Engineering-Electronics	-0.226	-0.834	0.382	0.888
Miscellaneous-Electronics	-0.401	-1.043	0.241	0.46
Others-Electronics	-0.598	-1.283	0.087	0.123
Plastic & Rubber-Electronics	0.006	-0.619	0.631	1
Textiles & Garments-Electronics	0.162	-0.583	0.908	0.988
Miscellaneous-Engineering	-0.175	-0.701	0.35	0.926
Others-Engineering	-0.372	-0.949	0.205	0.424
Plastic & Rubber-Engineering	0.232	-0.273	0.736	0.765
Textiles & Garments-Engineering	0.388	-0.259	1.036	0.507

	diff	Lwr	Upr	p adj
Others-Miscellaneous	-0.197	-0.81	0.416	0.937
Plastic & Rubber-Miscellaneous	0.407	-0.138	0.952	0.261
Textiles & Garments-Miscellaneous	0.564	-0.116	1.244	0.163
Plastic & Rubber-Others	0.604	0.009	1.199	0.045*
Textiles & Garments-Others	0.761	0.04	1.482	0.032*
Textiles & Garments-Plastic & Rubber	0.157	-0.507	0.821	0.983

Source: Field Survey

*statistically significant at the 5% significant level

The p-value is significant in two cases. The mean difference is significant between plastic & rubber and others (p=0.045) and textiles & garments and others (p=0.032). The post hoc reveals that the mean difference is significant only between these sectors. For all others, the mean difference is not significant.

Table 6.35
Tukey post hoc -Capabilities and Export Performance by Sector

	diff	Lwr	upr	p adj
Engineering-Electronics	-0.34	-1.018	0.338	0.692
Miscellaneous-Electronics	-0.453	-1.169	0.263	0.446
Others-Electronics	-0.676	-1.44	0.088	0.115
Plastic & Rubber-Electronics	0.032	-0.665	0.729	1
Textiles & Garments-Electronics	0.121	-0.711	0.952	0.998
Miscellaneous-Engineering	-0.113	-0.699	0.473	0.993
Others-Engineering	-0.336	-0.98	0.308	0.654
Plastic & Rubber-Engineering	0.372	-0.191	0.935	0.395
Textiles & Garments-Engineering	0.461	-0.262	1.183	0.437
Others-Miscellaneous	-0.223	-0.907	0.461	0.933
Plastic & Rubber-Miscellaneous	0.485	-0.123	1.093	0.197
Textiles & Garments-Miscellaneous	0.574	-0.185	1.332	0.248
Plastic & Rubber-Others	0.708	0.044	1.372	0.03*
Textiles & Garments-Others	0.796	-0.008	1.601	0.054
Textiles & Garments-Plastic & Rubber	0.089	-0.652	0.829	0.999

Source: Field Survey

*statistically significant at the 5% significant level

From the Tukey post hoc test, it can be understood that a significant mean difference exists only between plastic & rubber and others ($p=0.03$). No significant difference exists in the case of other sectors.

d) Determinants of Export Performance -Years of Export

The number of years the units are exporting is an important categorical variable. Hence, the difference among units of various years of export about the determinants of export performance is analysed.

H₁₅: There is a significant difference between units of different years of export and the level of Resources, Commitment, Knowledge and Capabilities they possess

Table 6.36
Determinants of Export Performance by Year

	Below 10 yrs		11 to 20 yrs		More than 20 yrs		KW test		ANOVA	
	Mean	SE	Mean	SE	Mean	SE	Chi Sqr	P value	F value	P value
Resources	3.90	0.12	3.94	0.07	3.95	0.14	0.20	0.90	0.05	0.96
Commitment	3.50	0.13	3.71	0.08	3.79	0.14	3.12	0.21	1.47	0.24
Knowledge	3.58	0.13	3.91	0.07	3.83	0.15	4.03	0.13	2.33	0.10
Capabilities	3.83	0.15	3.88	0.10	3.84	0.14	0.15	0.93	0.06	0.94

Source: Field Survey

The table shows that there is no significant difference in the determinants of export between units of different years of export experience. The p values for all the constructs are greater than 0.05 in the case of the KW test and one-way ANOVA

e) Determinants of Export Performance and Number of countries exporting

Units have been categorized into four levels based on the number of countries they are exporting to like countries exporting to 1 to 3 countries, 4 to 6 countries, 7 to 9 countries and more than 10 countries. The analysis is done to understand the difference between these categories in the level of resources, commitment, knowledge and capabilities.

H₁₆: There is a significant difference between units of various countries of operation and the level of Resources, Commitment, Knowledge and Capabilities they possess

Table 6.37

Determinants of Export Performance by Number of countries exporting to

	1 to 3 countries		4 to 6 countries		7 to 9 countries		More than 10 countries		KW Test		ANOVA	
	mean	se	mean	se	mean	se	mean	Se	chisqr	P value	F value	P value
Resources	3.93	0.09	3.76	0.10	4.02	0.11	4.33	0.17	8.03	0.05	2.72	0.05*
Commitment	3.64	0.09	3.58	0.13	3.77	0.12	3.97	0.16	2.80	0.42	1.13	0.34
Knowledge	3.78	0.10	3.72	0.12	3.89	0.13	4.08	0.14	2.44	0.49	0.98	0.41
Capabilities	3.86	0.11	3.67	0.14	3.99	0.14	4.22	0.08	4.98	0.17	1.90	0.14

Source: Field Survey

*statistically significant at the 5% significant level

It can be understood from the analysis that there is a significant difference between units of various countries of operation and determinants of export performance. The difference exists in the case of resources. For all the other constructs, there is no significant difference. A post hoc test has been performed to know the difference.

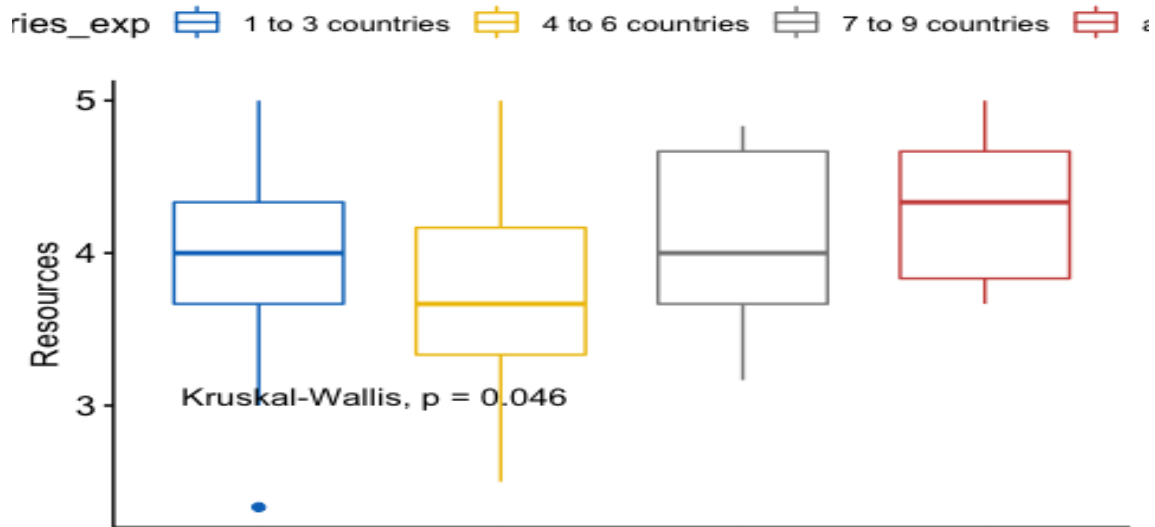
Table 6.38

Post-hoc test: Resources by No of countries exporting to

	diff	lwr	upr	p adj
4 to 6 countries-1 to 3 countries	-0.17	-0.52	0.19	0.60
7 to 9 countries-1 to 3 countries	0.09	-0.29	0.47	0.93
above 10 countries-1 to 3 countries	0.40	-0.15	0.95	0.23
7 to 9 countries-4 to 6 countries	0.26	-0.13	0.65	0.32
above 10 countries-4 to 6 countries	0.57	0.02	1.12	0.04*
above 10 countries-7 to 9 countries	0.31	-0.26	0.89	0.48

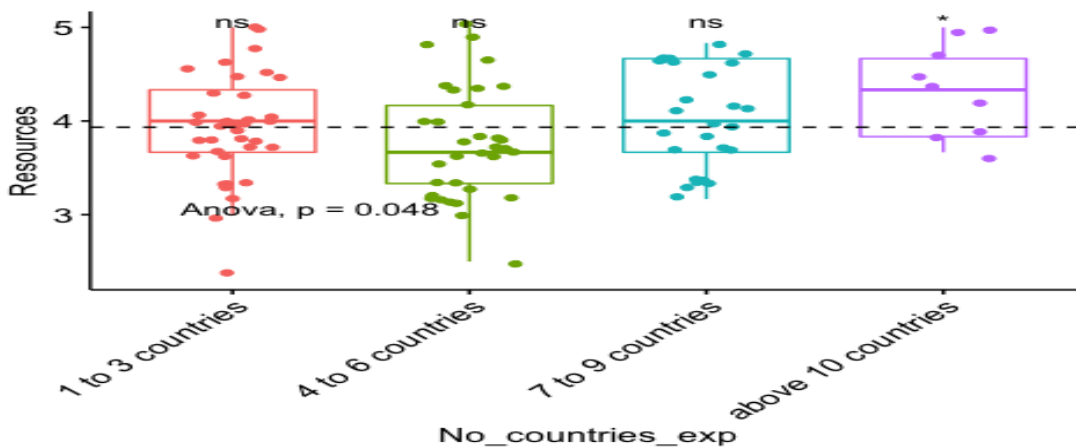
Source: Field Survey

*statistically significant at the 5% significant level



Source: Field Survey

Figure 6.23 Post-hoc KW test: Resources by No of countries exporting to



Source: Field Survey

Figure 6.24 Post-hoc ANOVA test: Resources by No of countries exporting to

A significant mean difference exists between units exporting to 4 to 6 countries and above 10 countries as in both the tests the p-value is less than 0.05 in the case of this pair.

6.6 Analysis of Firm Export Performance and Firm demographic variable

This section measures the significant differences existing between firm export performance and various firm demographic variables. Here it is checked that

whether any difference exists between the export sales volume & export growth and firm demographic variables like zone, sector, size, export experience and the number of countries exporting to. For computing sales volume, the average sales of units for the last 3 years have been used. The data was not normal; hence, the log of the variable is taken. Another measure of export performance is export growth. The growth is calculated by taking the annual % change in the export from the previous period. To ensure normality, the min-max of the export growth is estimated and used for analysis purpose.

H₁₇: There is a significant difference between firm export performance and various firm demographic variables

Table 6.39
Export performance by Zones

	CSEZ		MSEZ		T value	P value
	Mean	SE	Mean	SE		
Average sale	18.405	0.315	19.020	0.276	-1.471	0.144
Export growth	0.162	0.023	0.119	0.012	1.625	0.108

Source: Field Survey

Table 6.40
Export performance by firm size

	Large		Medium		Small		KW Test		ANOVA	
	Mean	SE	Mean	SE	Mean	SE	chisq r	P valu e	F valu e	P valu e
Average sale	18.5	0.6	18.8	0.2	18.6	0.3	0.23	0.89	0.2	0.82
Export growth	0.13	0.0	0.15	0.0	0.14	0.0	0.05	0.98	0.08	0.93

Source: Field Survey

Table 6.41
Export performance by sector

	KW test		ANOVA	
	chisqr	P value	F value	P value
log_Avg_Export	12.578	0.05	1.214	0.306
Growth_MinMax	5.776	0.449	1.317	0.257

Source: Field Survey

Table 6.42
Export performance by firm export experience

	Below 10 yrs		11 to 20 yrs		More than 20 yrs		KW test		ANOVA	
	Mean	SE	Mean	SE	Mean	SE	chisqr	P value	F value	P value
Average sale	19.07	0.52	18.43	0.29	18.99	0.32	1.2	0.55	1.02	0.36
Export growth	0.16	0.03	0.14	0.02	0.13	0.02	0.75	0.69	0.17	0.84

Source: Field Survey

Table 6.43
Export performance by number of countries exporting to

	1 to 3 countries		4 to 6 countries		7 to 9 countries		More than 10 countries		KW Test		ANOVA	
	Mean	SE	Mean	SE	Mean	SE	Mean	se	chisqr	P value	F value	P value
Average sale	18.85	0.4	18.72	0.34	18.77	0.31	17.86	1.07	0.47	0.93	0.52	0.67
Export growth	0.16	0.03	0.14	0.03	0.14	0.02	0.1	0.02	3.38	0.34	0.5	0.68

Source: Field Survey

The five tables above summarise the result of the analysis. From the tables, it can be understood that none of the demographic variables shows a significant difference with the measures of firm export performance. The research hypothesis is failed to accept and null hypothesis is accepted since the p values of all tests are greater than .05. Export performances by units in Cochin and Madras, by firms of

small, medium and large size, by various sectors, by various years of export experience and by a various number of countries of export destinations are almost same.

6.7 Conclusion

This Chapter is mainly dedicated to the analysis of primary data related with the determinants of export performance, benefits of SEZ perceived by exporters and the factors attracted them to the two central govt. zones. The overall factors that attracted the exporters to SEZ are easiness of export inside the zone, better governance and availability of incentives. SWCM has not attracted them compared to other factors. Physical infrastructure and easiness of export have attracted cochin units than madras. Madras firms are attracted by SWCM than cochin. Availability of incentives had a big influence on medium and small firms. Physical infrastructure had attracted sectors differently.

Among the benefits of SEZ, Incentives have the highest mean score. There was no significant difference across various zones, sectors, firm size etc in the level of benefits perceived. The units have a good possession of resources and their level of commitment is low compared to other determinants of export performance. Resources, commitment, capabilities and knowledge are high among Madras units than Cochin. Since it is located in a metropolitan area, these findings are not surprising. The determinants are high among large firms and there existed significant difference among large & small firms and large & medium firms in the matter of resources, commitment, capabilities and knowledge. Sector-wise difference exists in the case of commitment and capabilities.

The export performances of all the firms are equal irrespective of difference in location, sector, size, export experience an number of destination countries. Hence, this chapter gives an overall idea about the significant differences existing between main constructs and firm demographic variables.

**Determinants of Firm Export Performance
and Moderating effect of SEZ program
on Firm Export Performance**

7.1 Introduction

This chapter tells the factors influencing firm export performance and the direct and moderating effect of Special Economic Zone. The RBV theory has laid the foundation for deciding the determinants of export performance. The major determinants identified for the analysis are resources, capabilities, knowledge and commitment of exporting firm. For analysis purpose, they are categorised under one construct “Resources and Capabilities”. Then the direct impact of being situated at Special Economic Zone on export performance is tested. The benefits contain, the infrastructure, incentives, governance and ease of access to outside facilities. Finally, the study tests the moderating effect of SEZ benefits on firm export performance. It tests when does the strength of relationship between determinants and firm export performance changes due to the inclusion of benefits of SEZ into the model. For testing the conceptual model, PL-SEM is used. for understanding the impact of individual moderators on export performance, multiple linear regression is also applied.

7.2 Partial Least Square –Structure Equation Modelling

Partial least square is a variance based SEM statistical technique, which take care of both outer model (measurement model) and inner model (structural model). The study model is based on the suggestion of Ringle, C. M., et al, (2015). In this model, two major constructs such as Resources & Capabilities and Perceived benefits of SEZs are used. Resources and capabilities contain four dimensions namely, Resources, Commitment, Knowledge and Capabilities. Perceived benefits of SEZ have four dimensions, such as, Infrastructure, Access, Incentives and

Governance; besides, model has dependent variable namely Export performance which has two indicators: Average export performance and Growth of export. The model is attempted to set hypotheses that is given below:

H1: Resources and capabilities are not reflected by the dimensions such as Resources, Commitment, Knowledge and Capabilities.

H1a: Resources and capabilities are reflected by the dimensions such as Resources, Commitment, Knowledge and Capabilities.

H2: Perceived benefits of SEZ are not reflected by the dimensions such as Infrastructure, Ease of Access, Incentives and Governance

H2a: Perceived benefits of SEZ are reflected by the dimensions such as Infrastructure, Ease of Access, Incentives and Governance

H3: Resources and capabilities and Perceived benefits of SEZ are not related to Export performance

H3a: Resources and capabilities and Perceived benefits of SEZ are related to Export performance

7.2.1 The inner model or structural model

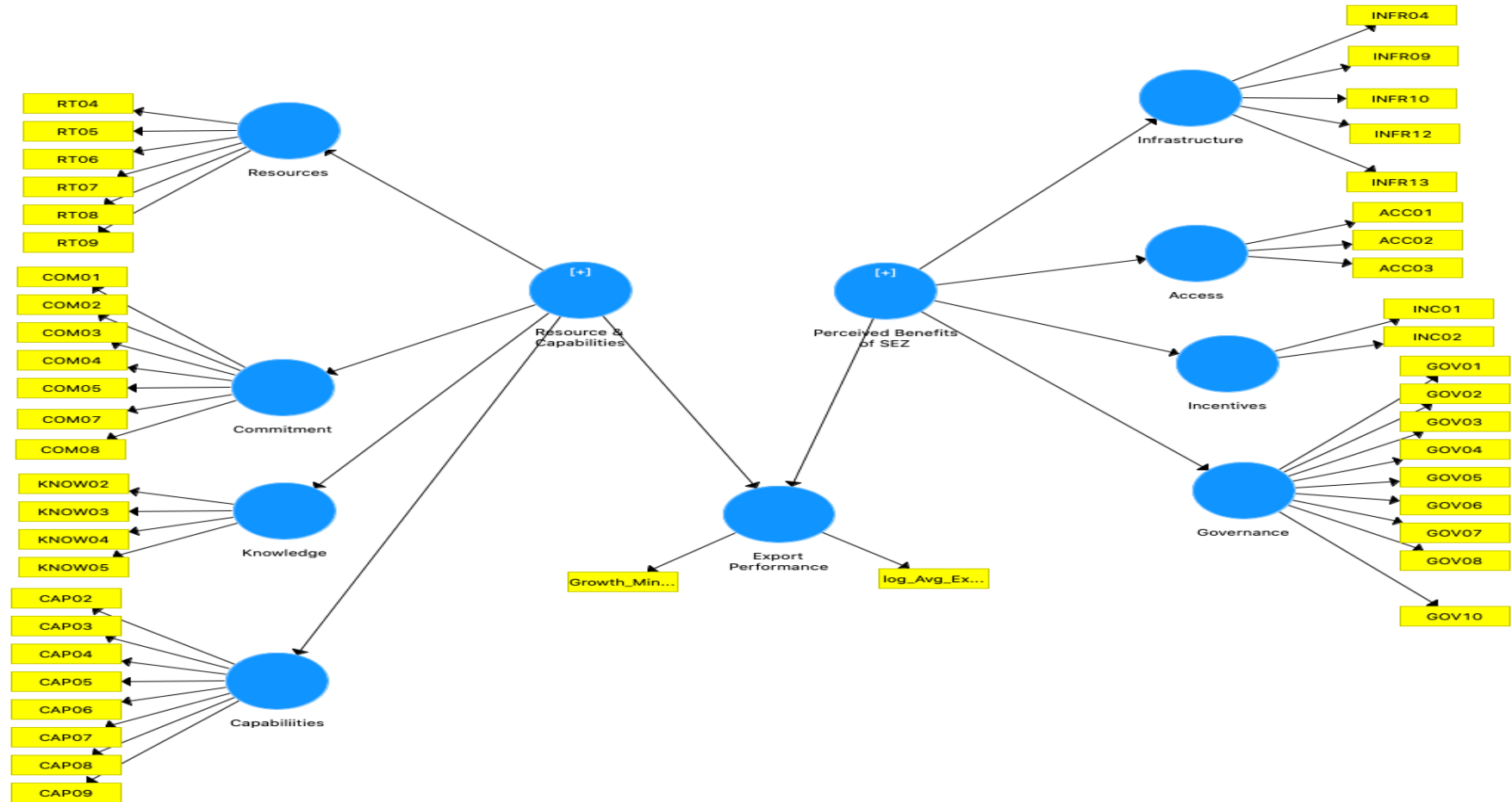


Figure 7.1 Structural Model

The structural model of the study is given above. It includes one endogenous variable namely export performance that is reflected with two factors growth of export min_max and log_average export. There are two exogenous variables perceived benefits of SEZ and Resources and capabilities.

7.2.2 Outer model (Measurement model)

Outer model is one of the key components of PLS-SEM. Outer model has reliability, convergent validity and discriminant validity.

- **Cross Loadings:**

The outer model focus on measurement model, which exhibits the reflective indicators between constructs and indicators. Hair and et al(2015) suggested to keep at least .7 as factor loadings. In this study, minimum .65 is kept as factor loadings cut off, higher the loads reflects the higher relation between constructs and indicators

- **Reliability:**

The cronbach alpha and composite reliability is used to check the inner consistency of the measurement model. The valuation of the construct reliability and prediction of inner consistency are based on composite reliability. Higher values generally indicate higher levels of reliability. For example, reliability values between 0.60 and 0.70 are considered “acceptable in exploratory research,” values between 0.70 and 0.90 ranges from “satisfactory to good.” Values of 0.95 and higher are problematic, as they indicate that the items are redundant, thereby reducing construct validity (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012 ; Morrison, 2001). Reliability is the consistency of the item, which measured the constructs Nunally (1997) suggested Cronbach alpha should be more than .7, which indicated that, proportion variance is .70 and permissible error is .30

- **Convergent validity:**

Next, the convergent validity is measured. Convergent validity is the extent to which the construct converges to explain the variance of its items. AVE (Average Variance Extracted) is the measure to check the convergent validity. AVE is calculated by taking the square of loading of each item and computing the mean value. AVE higher than 0.50 is acceptable.

- **Discriminant validity**

This tests how a construct is different from other constructs in the model. (Fornell & Larcker, 1981) proposed the traditional metric and suggested that each construct's AVE should be compared to the squared inter-construct correlation (as a measure of shared variance) of that same construct and all other reflectively measured constructs in the structural model. The shared variance for all model constructs should not be larger than their AVEs .

Heterotrait-monotrait (HTMT) ratio of the correlations proposed by Henseler is another measure to check discriminant validity. The HTMT is defined as the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct. Discriminant validity problems are present when HTMT values are high. The limit proposed by him for the similar concepts are 0.90. The constructs which are more distinct should have threshold limit of 0.85.

7.3 Initial model of Resources and Capabilities

As PLS model consists of measurement model and structural model, the measurement model is assessed first then structural model is tested. The measurement model or initial model tests the relation between variables or items or sub-factors and latent variables (factors) .The initial model is tested with the help of scale reliability, discriminant and convergent validity of the constructs. In the figure 7.2, the coefficients and values of loading of each constructs are given.

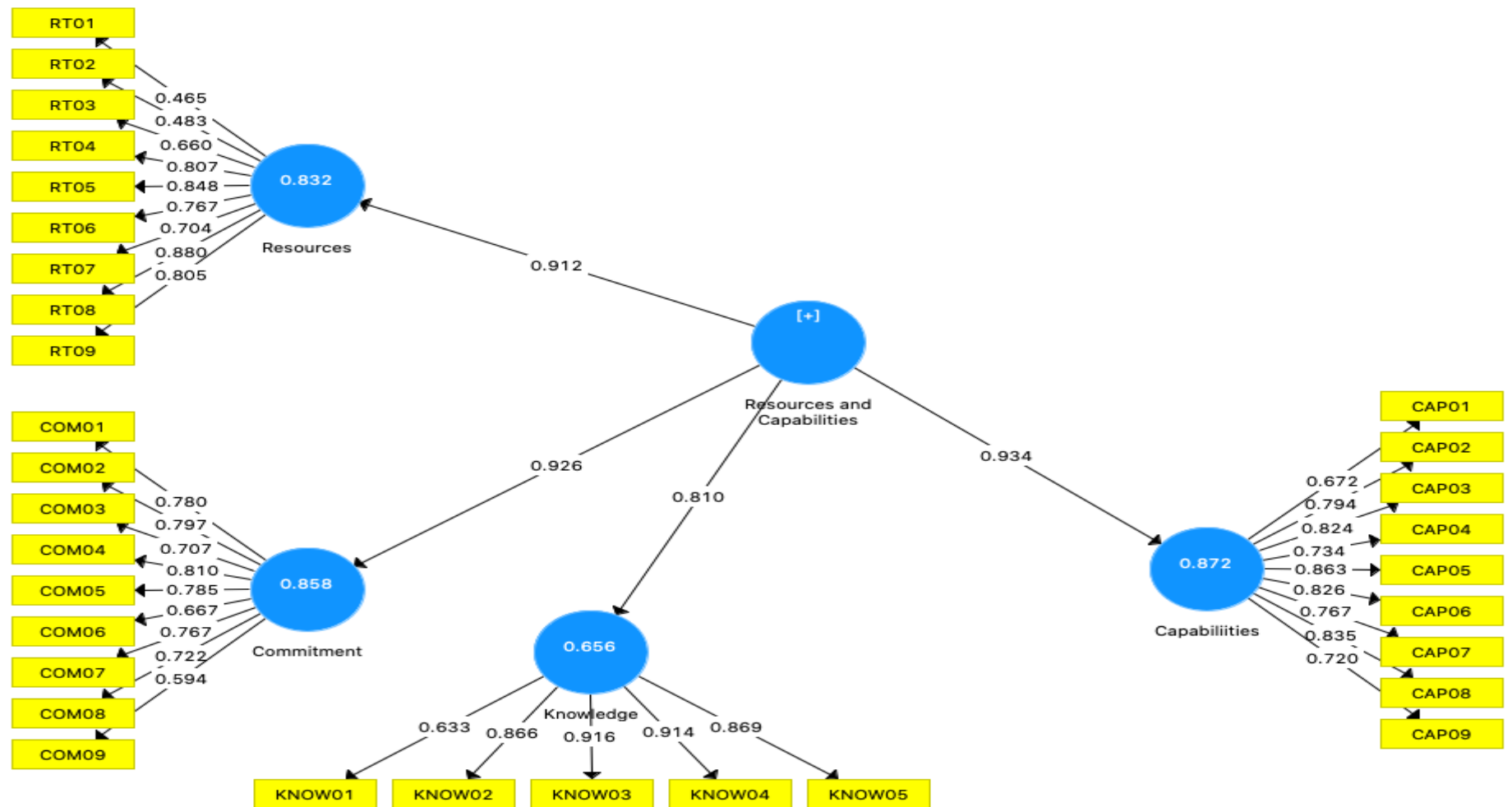


Figure 7.2 Initial model: Resources and Capabilities

The graph above shows the initial outer model of the construct Resources and Capabilities. The construct “Resources and Capabilities” is reflected through four dimensions such as Export knowledge, export commitment, Resources and Capabilities. The model includes all the items in the scale and their cross loadings.

In the first level the reliability and validity of the measurement model is analysed. In order to check the reliability of the items or sub- factors, the factor loadings of the items were assessed with the help of PLS software.

The initial model is tested with the help of table of reliability and validity given below.

Table 7.1
Initial model-Reliability and Validity of Resources and Capabilities.

Dimension	item	Cross loadings	Cronbach's Alpha	rho_Alpha	Composite Reliability	Average Variance Extracted (AVE)
Capabilities	CAP01	0.672	0.921	0.925	0.935	0.615
	CAP02	0.794				
	CAP03	0.824				
	CAP04	0.734				
	CAP05	0.863				
	CAP06	0.826				
	CAP07	0.767				
	CAP08	0.835				
	CAP09	0.720				
Commitment	COM01	0.780	0.895	0.902	0.915	0.547
	COM02	0.797				
	COM03	0.707				
	COM04	0.810				
	COM05	0.785				
	COM06	0.667				

Dimension	item	Cross loadings	Cronbach's Alpha	rho_Alpha	Composite Reliability	Average Variance Extracted (AVE)
	COM07	0.767				
	COM08	0.722				
	COM09	0.594				
Knowledge	KNOW1	0.633	0.897	0.92	0.925	0.716
	KNOW2	0.866				
	KNOW3	0.916				
	KNOW4	0.914				
	KNOW5	0.869				
Resources	RT01	0.465	0.882	0.911	0.907	0.529
	RT02	0.483				
	RT03	0.660				
	RT04	0.807				
	RT05	0.848				
	RT06	0.767				
	RT07	0.704				
	RT08	0.880				
	RT09	0.805				

Source: Developed for the study

Cronbach alpha is more than .7 for most of the constructs. The Cronbach alpha of all the constructs is between rho alpha and composite reliability. Cronbach alpha, rho alpha and composite reliability indicate that all the dimensions under the Resources and Capabilities have satisfied the permissible level of measurement error. The factor loadings of some items under the constructs capabilities, commitment, knowledge and resources are less than 0.7.

7.4 Initial model of Perceived benefits of SEZ

Another construct under study is perceived benefits of SEZ, which is being studied with the help of dimensions like Infrastructure, Incentives, Access and Governance. The graph below shows the coefficients and factor loadings of each factors and sub factors or items.

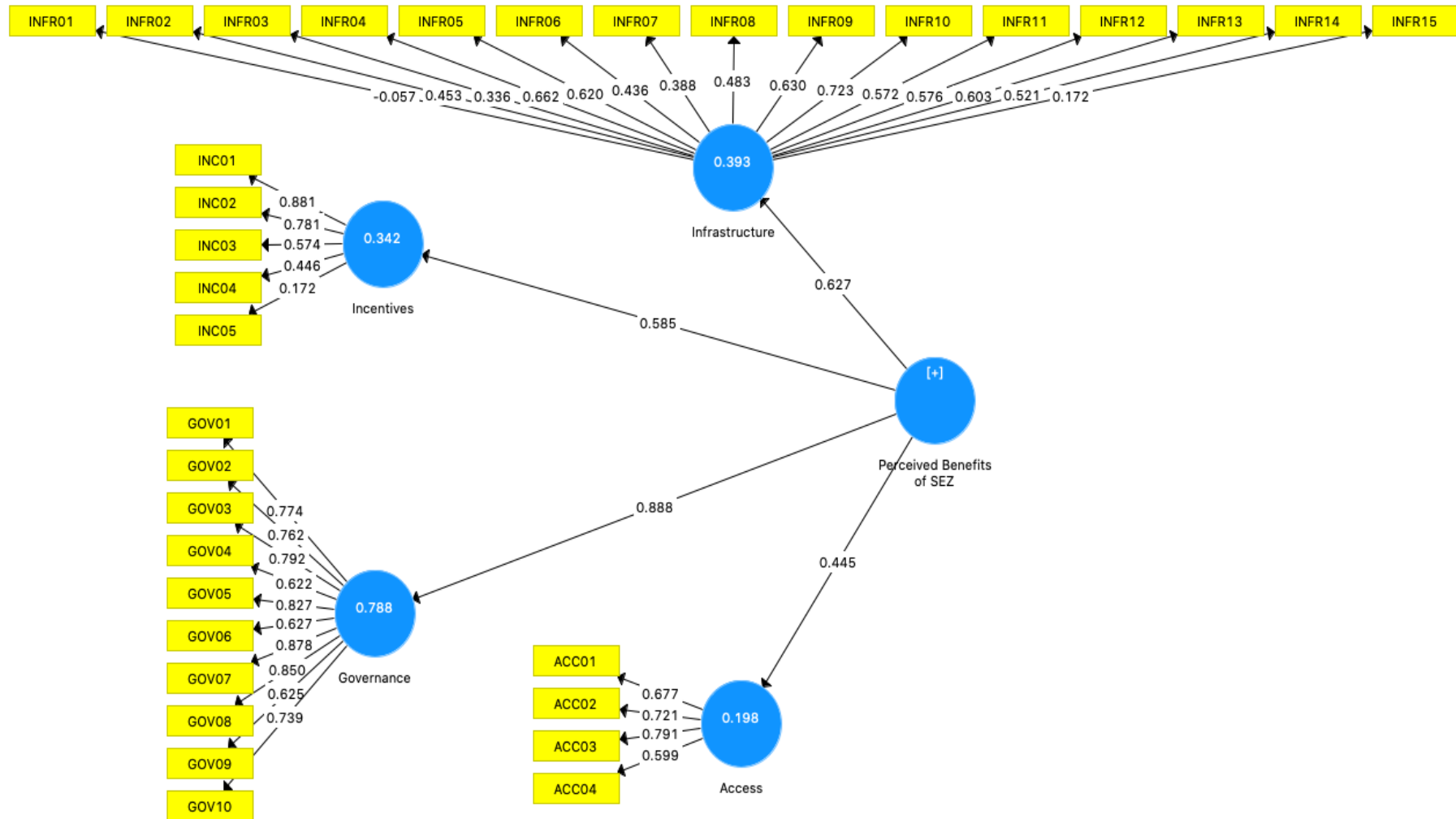


Figure 7.3 Initial model: perceived benefits of SEZ

The graph shows the measurement model of perceived benefits of SEZs. The construct is reflected through 4 dimensions including Access, Infrastructure, Incentives and Governance. The coefficients of each factor and the factor loadings of each item can be seen. In the model, the dimension “infrastructure” has more items with low factor loadings. In case of “Access”, item acc04 has low cross loading. The coefficient is high for governance (0.788) followed by infrastructure (0.393), incentives (0.342) and access (0.196)

Table 7.2

Initial model -Reliability and Convergent validity of perceived benefits of SEZ

	Items	Cross loading	Cronbach's Alpha	rho_Alpha	Composite Reliability	Average Variance Extracted (AVE)
Access	ACCS1	0.677	0.667	0.702	0.792	0.491
	ACCS2	0.721				
	ACCS3	0.791				
	ACCS4	0.599				
Governance	GOV01	0.774	0.914	0.92	0.929	0.57
	GOV02	0.762				
	GOV03	0.792				
	GOV04	0.622				
	GOV05	0.827				
	GOV06	0.627				
	GOV07	0.878				
	GOV08	0.850				
	GOV09	0.625				
	GOV10	0.739				
Incentives	INC1	0.881	0.622	0.808	0.727	0.389
	INC2	0.781				
	INC3	0.574				

	Items	Cross loading	Cronbach's Alpha	rho_Alpha	Composite Reliability	Average Variance Extracted (AVE)
	INC4	0.446				
	INC5	0.172				
	INFR01	-0.057				
	INFR02	-0.453				
	INFR03	-0.336				
	INFR04	-0.662				
	INFR05	0.620				
	INFR06	0.436				
	INFR07	0.388				
Infrastructure	INFR08	0.483	0.769	0.812	0.821	0.264
	INFR09	0.630				
	INFR10	0.723				
	INFR11	0.572				
	INFR12	0.576				
	INFR13	-0.603				
	INFR14	-0.521				
	INFR15	0.172				

Source: Developed for the study.

There are some items with low cross loadings under each constructs. Cronbach alpha is satisfactory in case of governance and infrastructure where as access and incentives , it is less than 0.7. The cronbach alpha of each construct lie between rho alpha and composite reliability. The composite reliability is satisfactory for all the constructs. AVE is above the threshold limit only in the case of governance. For all the other constructs, the AVE is less than 0.5.

7.5 The final Outer or measurement Model

The initial outer model lacked some criteria. Hence, the outer model is rebuilt by considering following criteria.

a. Items Elimination

From the initial model which is given below in the form of diagram, many items are eliminated based on the following criteria suggested by Hair and et al(2015)

1. When factor loadings are less than .70
2. When items are not contributing to Cronbach alpha score which is at least .65
3. When items are not contributing to Average variance extraction score which is at least .50
4. Items are negatively related to the dimensions in spite of reverse score

Table 7.3

Final model Outer model – Cross Loading

	Access	Capabilities	Commitment	Governance	Incentives	Infrastructure	Knowledge	Resources
ACC01	0.683							
ACC02	0.752							
ACC03	0.801							
CAP02		0.798						
CAP03		0.835						
CAP04		0.731						
CAP05		0.847						
CAP06		0.814						

	Access	Capabilities	Commitment	Governance	Incentives	Infrastructure	Knowledge	Resources
CAP06		0.814						
CAP07		0.780						
CAP08		0.856						
CAP09		0.739						
COM1			0.769					
COM2			0.810					
COM3			0.717					
COM4			0.826					
COM5			0.785					
COM6			0.604					
COM7			0.768					
COM8			0.738					
GOV1				0.790				
GOV2				0.777				
GOV3				0.820				
GOV4				0.632				
GOV5				0.841				
GOV6				0.625				
GOV7				0.869				
GOV8				0.833				
GOV9				0.554				
GOV10				0.706				
INC1					0.973			
INC2					0.871			
INFR4						0.710		
INFR9						0.680		
INFR10						0.716		
INFR12						0.660		

	Access	Capabilities	Commitment	Governance	Incentives	Infrastructure	Knowledge	Resources
INFR13						0.725		
KNW2							0.869	
KNW3							0.931	
KNW4							0.921	
KNW5							0.872	
RES4								0.828
RES5								0.859
RES6								0.795
RES7								0.703
RES8								0.888
RES9								0.800

Source: Developed for the study

b. Final outer model-Overall Reliability and convergent validity

The table provides the final reliability and convergent validity of the constructs after considering items elimination.

Table 7.4
Final outer model: Reliability and Convergent Validity

		Cronbach's Alpha	rho_Alpha	Composite Reliability	Average Variance Extracted (AVE)
Resources and capabilities	Capabilities	0.920	0.925	0.935	0.642
	Commitment	0.888	0.893	0.913	0.599
	Knowledge	0.920	0.921	0.944	0.808
	Resources	0.898	0.908	0.922	0.663
Perceived benefits of SEZ	Incentives	0.848	1.230	0.921	0.853
	Infrastructure	0.741	0.745	0.826	0.488
	Access	0.613	0.631	0.790	0.558
	Governance	0.912	0.919	0.929	0.594

Reliability: The overall cronbach alpha is greater than 0.7 for all constructs except access. It has cronbach alpha of 0.613, which can be considered since the value is somewhat close to 0.7. The measures like rho alpha and the value of composite reliability also ensure the internal consistency of the constructs. The rho alpha for all the constructs lie between cronbach alpha and composite reliability. Hence this criteria is also fulfilled. Composite reliability is another measure. In order to have a reliable model, the composite reliability value must lie between 0.6 and .95. Here the composite reliability for all the constructs are between this range. Hence, it can be concluded that the model is reliable and trustworthy.

Convergent validity: Average variance extraction is indication of convergent validity, SEM literature suggested that, AVE should be more than .5. All the dimensions are more than .5, infrastructure is .488, which is close to .5

Discriminant validity : The discriminate validity proves the extent to which a construct is different from the other constructs in the model. Discriminant validity is the square root of average variance extraction, which is higher than the correlation of other dimensions, suggested by Fornell-Larcker (2015)

Table 7.5

Discriminant validity

	1	2	3	4	5	6	7	8
1 Access	0.747							
2 Capabilities	-0.043	0.801						
3 Commitment	0.075	0.800	0.774					
4 Governance	0.281	0.033	0.023	0.771				
5 Incentives	0.168	-0.026	-0.025	0.404	0.924			
6 Infrastructure	0.258	-0.024	-0.049	0.268	0.218	0.699		
7 Knowledge	0.187	0.637	0.763	0.104	0.150	-0.073	0.899	
8 Resources	-0.027	0.800	0.768	-0.058	0.005	-0.113	0.682	0.814

Source: developed for the study

The square root of AVE of each construct is given. this is compared with the correlation of other dimensions. In the case of all the constructs, the square root of AVE is greater than the correlations. Hence, this table shows discriminant validity.

Table 7.6
Heterotrait-Monotrait Ratio (HTMT)

	1	2	3	5	6	7	8	9
1 Access								
2 Capabilities	0.199							
3 Commitment	0.175	0.886						
4 Export Performance	0.608	0.408	0.738					
5 Governance	0.369	0.109	0.113					
6 Incentives	0.194	0.109	0.108	0.392				
7 Infrastructure	0.341	0.188	0.150	0.313	0.249			
8 Knowledge	0.241	0.684	0.845	0.129	0.163	0.126		
9 Resources	0.121	0.912	0.836	0.123	0.070	0.212	0.739	

Source: developed for the study

HTMT is another statistics to indicate discriminant validity, especially from PLS-SEM perspectives, HTMT should be ranged between .10 and .90. Except one correlation all others are in the level of range, this showed, model attained discriminant validity.

7.6 Goodness of fit for structural models -The structural model analysis

The quality of structural model can be assessed with R square and F square.

R^2

R square refers to the coefficient of determination, it measures the variance explained in each of the endogenous constructs. Hence, it provides the explanatory power of the model. The R^2 is also referred to as in-sample predictive power (Rigdon, 2012). The R^2 ranges from 0 to 1, with higher values indicating a greater explanatory power. As a guideline, R^2 values of 0.75, 0.50 and 0.25 can be

considered substantial, moderate and weak (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2011)

Table 7.7

R²

		R Square	R Square Adjusted
Perceived benefits of SEZ	Access	0.219	0.212
	Infrastructure	0.340	0.333
	Incentives	0.301	0.294
	Governance	0.799	0.797
Resources and Capabilities	Capabilities	0.838	0.837
	Commitment	0.818	0.816
	Knowledge	0.684	0.681
	Resources	0.816	0.814
	Export Performance	0.018	0.002

Source: Developed for the study

R square is indicating the quality of the model, in other words, R square is the explained variance between independent and dependent variables. Export performance has least R square, within the constructs. The dimensions of resources and capabilities and Perceived benefits of SEZ, R square seems to be more than 20%.

F²

F square is effect size between constructs and dimensions. The F-square equation expresses how large a proportion of unexplained variance is accounted for by R² change (Hair, Babin, & Krey, 2017). As a rule of thumb, values higher than 0.02, 0.15 and 0.35 depict small, medium and large f² effect sizes (Cohen, 1988).

Table 7.8

F²

	Perceived Benefits of SEZ	Resource & Capabilities
Access	0.281	
Capabilities		5.191
Commitment		4.486
Export Performance	0.007	0.011
Governance	3.974	
Incentives	0.431	
Infrastructure	0.515	
Knowledge		2.169
Resources		4.437

Source: Developed for the study

Here all the dimensions have good effect size except the export performance. The dimensions under the construct “Resources and Capabilities” have large effects. The dimensions under perceived benefits of SEZ has medium to large effect.

7.7 PLS-Structural Equation Modelling Output

The diagram below shows the factor loadings and R square of the dimensions.

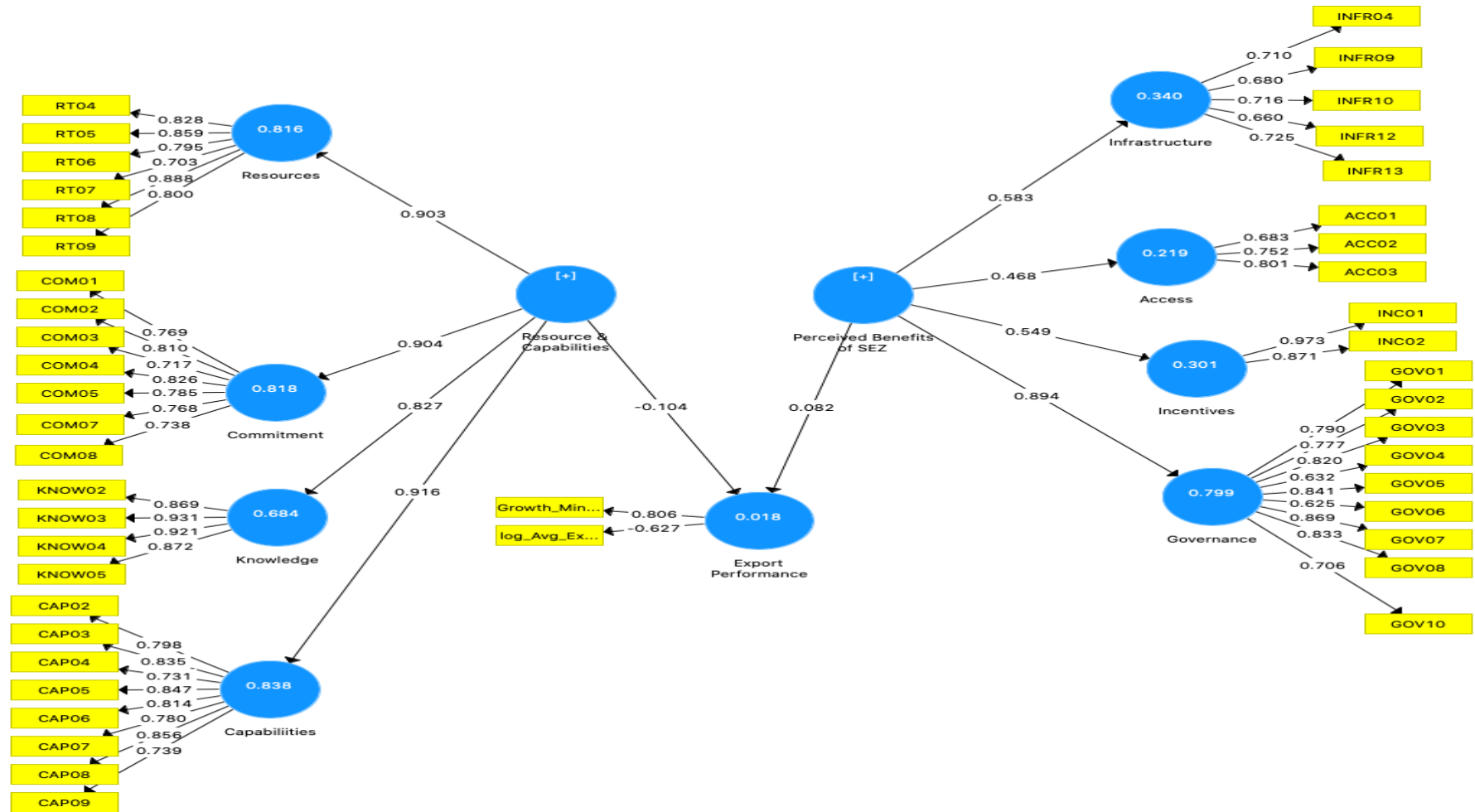


Figure 7.4 PLS-SEM outputs

7.8 Statistical significance of structural path coefficient

The final step in the process is to assess the statistical significance and relevance of path coefficients. The data is standardised hence the value ranges from 0 to 1. These loadings should be significant when we perform bootstrapping. Therefore the researcher has run bootstrapping to assess the significance and evaluate the value of it. All the t value above 1.96 shows that the path is significant. This tests guides us to accept or reject hypotheses

H1: Resources and capabilities are not reflected by the dimensions such as Resources, Commitment, Knowledge and Capabilities.

H1a: Resources and capabilities are reflected by the dimensions such as Resources, Commitment, Knowledge and Capabilities.

H2: Perceived benefits of SEZ are not reflected by the dimensions such as Infrastructure, Ease of Access, Incentives and Governance

H2a: Perceived benefits of SEZ are reflected by the dimensions such as Infrastructure, Ease of Access, Incentives and Governance

H3: Resources and capabilities and Perceived benefits of SEZ are not related to Export performance

H3a: Resources and capabilities and Perceived benefits of SEZ are related to Export performance

Table 7.9
Bootstrapping

	Original Sample	Sample Mean	STDEV	T Statistics	P Values
Perceived Benefits of SEZ -> Access	0.468	0.478	0.116	4.033	0.000
Perceived Benefits of SEZ -> Export Performance	0.082	0.033	0.158	0.519	0.604
Perceived Benefits of SEZ -> Governance	0.894	0.891	0.032	27.780	0.000
Perceived Benefits of SEZ -> Incentives	0.549	0.562	0.070	7.794	0.000
Perceived Benefits of SEZ -> Infrastructure	0.583	0.581	0.100	5.849	0.000
Resource & Capabilities -> Capabilities	0.916	0.918	0.017	54.504	0.000
Resource & Capabilities -> Commitment	0.904	0.905	0.024	37.158	0.000
Resource & Capabilities -> Export Performance	-0.104	-0.011	0.171	0.607	0.544
Resource & Capabilities -> Knowledge	0.827	0.828	0.049	16.751	0.000
Resource & Capabilities -> Resources	0.903	0.907	0.019	46.960	0.000

Source: Developed for the study

The above table shows the boot strapping estimates. Perceived benefits of SEZ and Resources & capabilities showed no relation with Export performance as the p value is greater than 0.05. Hence, H3 is accepted. Perceived benefits and their dimensions are statistically significant because the t values are greater than +/- 1.96 and p values are <.05, therefore the hypothesis H2a is accepted. In similar way, Resources & capabilities and their dimensions are highly significant. So the hypothesis H1a is also accepted.

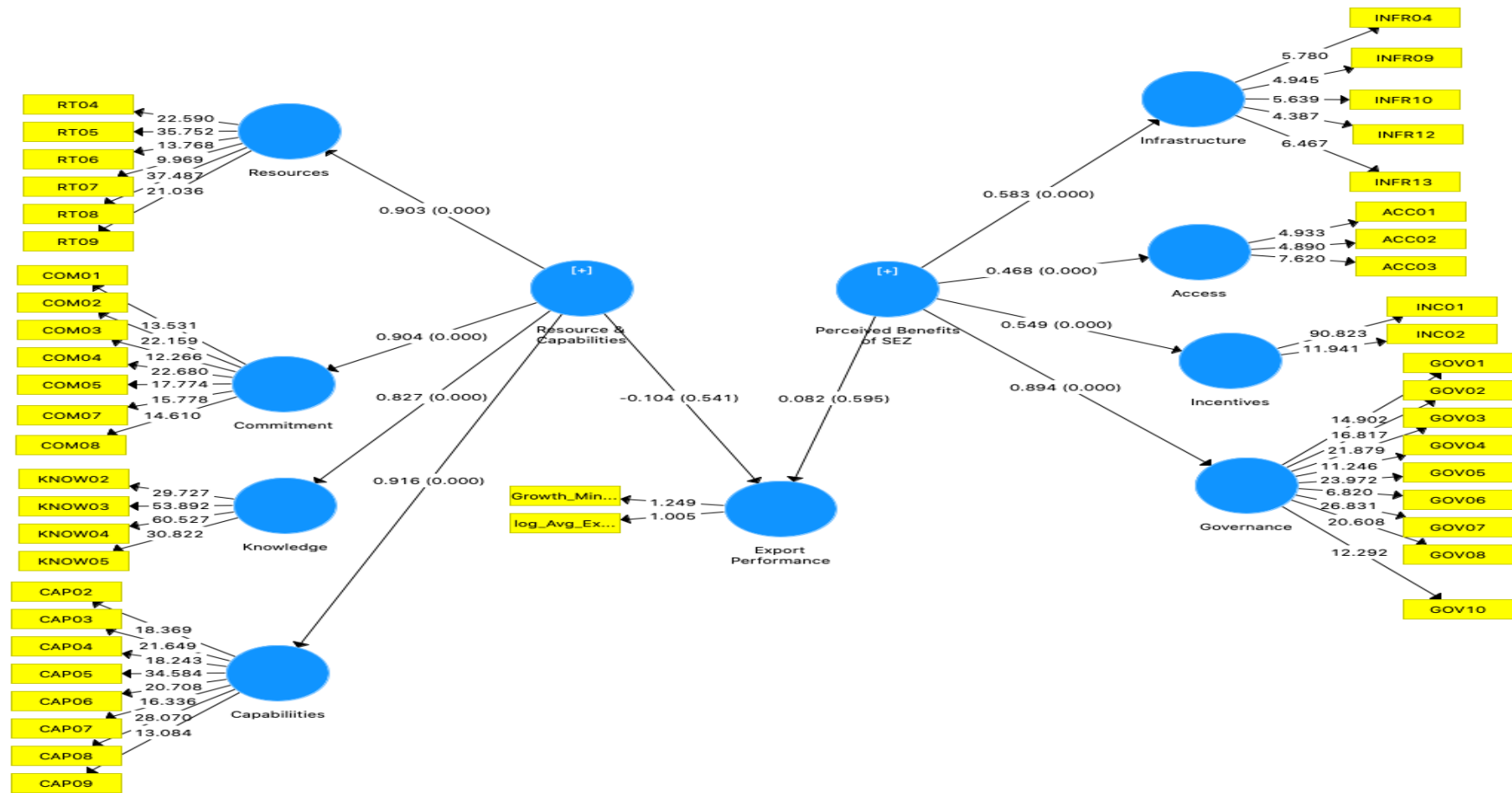


Figure 7.5 Boot strapping estimates

Hence, from the bootstrapping, it is understood that the two predictors, Resources & Capabilities and Benefits of SEZ have no direct impact on firm export performance

7.9 Correlation of Dimensions

Even if the model impact of independent variable on dependent variable is insignificant, the researcher checked whether the constructs are correlated or not. If the predictors and moderators are correlated, moderation can be checked with the help of multiple linear regressions. The table below shows the correlation between the constructs.

Table 7.10
Correlation of Dimensions

	1	2	3	4	5	6	7	8	9	10
1	1									
2	0.68**	1								
3	0.59**	0.77**	1							
4	0.81**	0.8**	0.58**	1						
5	-0.11	-0.03	-0.07	-0.04	1					
6	-0.06	0.03	0.18*	-0.08	0.22*	1				
7	0.08	0.09	0.15*	0.06	0.22*	0.02	1			
8	-0.04	0.03	0.11	0.04	0.25*	0.22*	0.37	1		
9	0.05	0.02	0.02	0.01	0.13	0.11	-0.02	0.04	1	
10	-0.02	0.26*	0.09	0.07	0.01	0.07	0.09	0.01	-0.04	1

*5% level sign. **1% level sign.

1- Resources,2- Commitment,3- Knowledge,4- Capabilities,5- Infrastructure,6- Access,7- Incentives,8- Governance,9- log_Avg_Export,10- Growth_MinMax

Source: Developed for the study

From the above table of correlation matrix, relation between few variables are established this may be due to small sample size, since data come from SEZ firms, collecting large sample is not feasible too. Among the resources and capabilities dimensions, correlations are quiet high, which is ranged between .58 to .81. Among perceived benefits of SEZ, Access, incentives and governance were

found to have significant relation with other variables. Between dependent (Export performance, Growth) and rest of the variables, only commitment seems to be correlated and the rest of the combinations are very weak.

7.10 Multiple linear regressions

Since correlations are found between some constructs, multiple linear regression is used to assess the explanatory power of the model. This model contains dependent variables: Log Average Export and Growth of change in percent. Predictors are dimensions of resources and capabilities and Perceived benefits of SEZ.

7.10.1 Multiple linear regressions with Resources and Capabilities as Predictors

The table shows the result of multiple linear regression including coefficients and standard error, which is given inside the brackets. It shows two models, model 1 with Dependent Variable: Log Average Export and model 2 with Dependent Variable: Growth of change in percent.

Table 7.11
Multiple Regression on the effect of Resources, Capabilities, Commitment and Knowledge on Export Performance

	Dependent variable	
	log_Avg_Export (1)	Growth (2)
Constant	17.789*** (1.742)	0.215** (0.103)
Resources	0.724 (0.735)	0.020 (0.043)
Commitment	0.270 (0.743)	0.177*** (0.044)
Knowledge	0.140 (0.595)	0.065* (0.035)
Capabilities	0.374 (0.690)	0.068* (0.041)
Observations	103	103
R SQR	0.013	0.155
Residual Std. Error (df = 98)	2.174	0.128
F Statistic (df = 4; 98)	0.320	4.490***

*p<0.1; **p<0.05; ***p<0.01

Source: Developed for the study

In Model 1, none of the predictors are statistically significant. In model 2, predictors such as commitment, capabilities and knowledge are significant at 1% and 10% level. The model 2 showed the R square of .155 or 15.5%, F value = 4.49 and P value is <.01. Beta is .177, .065 and .068 for commitment, knowledge and capabilities respectively. This can be understood as, 1 unit change in commitment leads to .177 change in Growth in percent of export performance, 1 unit change in knowledge leads to .065 change in Growth in percent of export performance and 1 unit change in Capabilities leads to .068 change in Growth in percent of export performance. RSE of model 1 and model 2 is 2.17 and .128 respectively. The error has reduced in model 2. On export performance, predictors can provide better in model 2 than model 1.

7.10.2 Multiple linear regression perceived benefits of SEZ as predictor

Table 7.12
Multiple Regression on the effect of Infrastructure, Governance, Access and Incentives on Export Performance

	Dependent variable: log_Avg_	
	Export (1)	Growth (2)
Constant	18.811*** (2.289)	-0.004 (0.148)
Infrastructure	0.640 (0.410)	0.012 (0.026)
Access	0.462 (0.348)	0.016 (0.022)
Incentives	0.010 (0.513)	0.024 (0.033)
Governance	0.088 (0.372)	0.009 (0.024)
Observations	103	103
R SQR	0.036	0.016
Residual Std. Error (df = 98)	2.148	0.139
F Statistic (df = 4; 98)	0.918	0.392

*p<0.1; **p<0.05; ***p<0.01

Source: Developed for the study

In Model 1 and Model 2, none of the predictors is statistically significant. This clearly indicated set of predictors does not have much explanatory power.

7.10.3 Multiple linear regressions with moderators

We could establish a relation between some dimensions in perceived benefits of SEZ and Resources and Capabilities. Hence, multiple linear regressions are performed by taking the dimensions like governance, incentives and access as moderator variables.

❖ *Multiple Linear Regression analysis with moderator effect (Commitment & Governance]*

Here the log average export is taken as outcome variables and commitment is taken as the predictor and governance is considered as moderator variable.

Table 7.13

Multiple regressions with Moderator Governance and Predictor Commitment

	Dependent variable:	
	log_Avg_Export	
	(1)	(2)
Constant	18.770*** (1.807)	-7.019 (8.207)
Commitment	0.078 (0.353)	6.824*** (2.173)
Governance	0.059 (0.336)	6.818*** (2.127)
Commitment: Governance		1.807*** (0.562)
Observations	103	103
R SQR	0.001	0.095
Residual Std. Error	2.165 (df = 100)	2.071 (df = 99)
F Statistic	0.038 (df = 2; 100)	3.473** (df = 3; 99)

Note: *p<0.1; **p<0.05; ***p<0.01

Source: Developed for the study

This regression model is attempted to show the interaction effect or moderator effect between predictors (commitment) and moderator variable

(governance) on outcome variable (Export performance). In both model, Dependent variable is taken as Log_Avg_Export. In model 1, none of the predictors are significant, in model 2, both commitment and governance are significant at 1% level and interaction is effect also significant. This established the moderator effect. In model 1, R square is just .001, after including moderator variable, Governance, R square is enhanced to .095, the change in R square seems to be statistical significant. Whereas RSE, while compared to model 1 (2.165) , model 2 (2.07) , is reduced, this indicating, model 2 is better than model 1. This outcome proved the governance enacts as moderator between commitment and Export performance.

❖ ***Multiple Linear Regression analysis with moderator effect [Capabilities & Governance]***

Here the capabilities is taken as predictor, governance as moderator and lo of average export as outcome variable.

Table 7.14

Multiple regression: Governance as Moderator and Commitment as Predictor

	Dependent variable:	
	log_Avg_Export	
	(1)	(2)
Constant	18.643*** (1.744)	3.495 (6.684)
Capabilities	0.041 (0.319)	3.826** (1.679)
Governance	0.058 (0.336)	4.227** (1.808)
Capabilities: Governance		1.063** (0.453)
Observations	103	103
R SQR	0.0005	0.053
Residual Std. Error	2.166 (df = 100)	2.119 (df = 99)
F Statistic	0.023 (df = 2; 100)	1.847 (df = 3; 99)

Note: *p<0.1; **p<0.05; ***p<0.01

Source: Developed for the study

This regression model is attempted to show the interaction effect or moderator effect between predictor (capabilities) and moderator variable (governance) on outcome variable. In both model, dependent variable is Log_Avg_Export. In model 1, none of the predictors are significant, in model 2, both capabilities and governance are significant at 1% level and interaction effect also significant. This established the moderator effect. In model 1, R square is just .0005, after including moderator variable, Governance; R square is enhanced to .053. The change in R square seems to be statistical significant. In case of RSE, while compared to model 1 (2.166) , model 2 (2.11) is less and indicating, model 2 is better than model 1. This outcome proved the governance enacts as moderator between capabilities and Export performance.

❖ ***Multiple Linear Regression analysis with moderator effect [Capabilities & Access]***

In this model capabilities is taken as the predictor, access as moderator and growth of export as outcome variable.

Table 7.15

Multiple Regression: Access as Moderator and Commitment as Predictor

Dependent variable:		
Growth		
	(1)	(2)
Constant	0.302*** (0.106)	-0.490 (0.405)
Commitment	0.059*** (0.022)	0.156 (0.108)
Access	0.017 (0.021)	0.250** (0.117)
Commitment: Access		0.063** (0.031)
Observations	103	103
R SQR	0.073	0.110
Residual Std. Error	0.133 (df = 100)	0.131 (df = 99)
F Statistic	3.940** (df = 2; 100)	4.071*** (df = 3; 99)

Note: *p<0.1; **p<0.05; ***p<0.01

Source: Developed for the study

This regression model is attempted to show the interaction effect or moderator effect between predictor (commitment) and moderator variable (Access) on outcome variable. In both model, Dependent Variable is Growth_Export,. In model 1, commitment is statistically significant, in model 2, both commitment is not significant but access is significant at 1% level and interaction effect also significant, this established the moderator effect. In model 1, R square is just .073, after including moderator variable, governance, R square is enhanced to .110. The change in R square seems to be statistically significant. . On RMSE, while compared to model 1 (.133), model 2 (.131) , is reduced. This shows, model 2 is better than model 1. This outcome proved the access enacts as moderator between commitment and Export performance.

❖ ***Multiple Linear Regression analysis with moderator effect [governance & Knowledge]***

Here the knowledge is the predictor, governance is the moderator and log of average export sales is the outcome variable.

Table 7.16

Multiple Regression: Access as Moderator and Capabilities as Predictor

Dependent variable:		
log_Avg_Export		
	(1)	(2)
Constant	18.311*** (1.798)	5.034 (7.646)
Knowledge	0.053 (0.370)	3.673* (2.060)
Governance	0.051 (0.338)	3.583* (2.006)
Knowledge: Governance		0.960* (0.538)
Observations	103	103
R SQR	0.0005	0.032
Residual Std. Error	2.166 (df = 100)	2.142 (df = 99)
F Statistic	0.024 (df = 2; 100)	1.079 (df = 3; 99)

Note: *p<0.1; **p<0.05; ***p<0.01

Source: Developed for the study

This regression model is attempted to show the interaction effect or moderator effect between predictors (knowledge) and moderator variable (Governance) on outcome variable. In both model, Dependent Variable is Log_Avg_Export, In model 1, knowledge and governance are not statistically significant. In model 2, both knowledge and governance are significant at 10% level and interaction effect is also significant at 10% level. This established the moderator effect. In model 1, R square is just .0005, after including moderator variable, Governance, R square is improved to .032. The change in R square seems to be statistically significant. In the case of RSE, while compared to model 1 (2.166), model 2 (2.14), is low. This indicates, model 2 is better than model 1. Hence, this outcome proved the governance enacts as moderator between knowledge and Export performance.

7.11 Research Hypotheses

From the results of PLS-SEM and multiple linear regression, the decision to accept or reject research hypotheses are summarised in the table given below.

Table 7.17
Summary of Research Hypotheses

	Hypothesis	Hypothesis outcome
H1	The level of firm Resources has positive impact on firm's export performance [Avg_export]	HR
	The level of firm Resources has positive impact on firm's export performance [Growth_export]	HR
H2	The firm's ability to develop capability positively influences firm's export performance [Avg_export]	HR
	The firm's ability to develop capability positively influences firm's export performance [Growth_export]	HA
H3	Export Commitment has positive impact on Firm's Export performance [Avg_export]	HR
	Export Commitment has positive impact on Firm's Export performance [Growth_export]	HA

	Hypothesis	Hypothesis outcome
H4	Export Knowledge positively influence Firm's Export performance [Avg_export]	HR
	Export Knowledge positively influence Firm's Export performance [Growth_export]	HA
H5	The level of Quality of Infrastructure perceived by exporter is positively associated with Firm's Export performance [Avg_export]	HR
	The level of Quality of Infrastructure perceived by exporter is positively associated with Firm's Export performance [Growth_export]	HR
H6	The level of Quality of Governance perceived by exporter has positive relation with Firm's Export performance [Avg_export]	HR
	The level of Quality of Governance perceived by exporter has positive relation with Firm's Export performance [Growth_export]	HR
H7	The Access to outside facility has positive impact on Firm's Export performance [Avg_export]	HR
	The Access to outside facility has positive impact on Firm's Export performance [Growth_export]	HR
H8	The Usefulness and Timeliness of Incentives positively associate with Firm's Export performance [Avg_export]	HR
	The Usefulness and Timeliness of Incentives positively associate with Firm's Export performance [Growth_export]	HR

Source: Developed for the study

7.12 Moderator result

The result of multiple regressions with interaction effect in brief is given in the table given below.

Table 7.18
Research Hypotheses: Interaction effect

Hypothesis		Infrastructure		Governance		Access		Incentives	
		Log Average Export	Growth Export	Log Average Export	Growth Export	Log average Export	Growth Export	Log Average Export	Growth Export
H1	The level of firm Resources is positively related with firm's export performance								
H2	The firm's ability to develop capability positively influences firm's export performance			HA					
H3	Export Commitment has positive impact on Firm's Export performance			HA			HA		
H4	Export Knowledge positively influence Firm's Export performance			HA					

Source: Developed for the study

7.13 Conclusion

This chapter is devoted to identifying the factors influencing firm export performance and the direct and moderating effect of SEZ on firm export performance. In the first section, PLS-SEM is tested. The model consists of two

independent variables and one dependent variable. The independent variables consist of “Resources & Capabilities” and “Benefits of SEZ”. The dependent variable is the firm export performance that is reflected through two measures, average export sales and export growth. From the analysis, it is found out that these two independent variables are not good predictors and the benefits of SEZ is not a moderator. Therefore, the researcher checked the correlation between the dimension under three constructs. Some significant relationships were found. Hence, the researcher tested multiple regression with each dimension of predictor construct and moderator construct. Multiple regression with and without moderators were tried with each dimension the findings of the analysis are capabilities, commitment and knowledge have a significant and positive impact on the firm export performance. However, none of the dimensions under benefits of SEZ had a significant influence on firm export performance. But when they were taken as moderators, significant relations were found. Governance acted as a good moderator in the relationships between capabilities & average export sales, commitment & average export sales and knowledge & average export sales. Ease of access to facilities outside acted as a moderator in the relationship between export commitment and export growth.

When these two moderators were included in the model, the strength of the relationship between determinants and firm export performance has improved. It shows the role of being situated at SEZ on the firm export performance. When the governance increases, they can work smoothly, this helps them to improve their commitment, knowledge and capabilities which directly influence export performance positively. The access to outside facilities also helps them to have more commitment to export which positively affects the export growth of the firm.

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Chapter 8

**Summary, Findings, Suggestions and
Conclusion**

8.1 Introduction

Exporting is one of the cheapest and easiest ways to internationalize the business of a domestic firm. Specifically, it helps small and medium domestic firms to sell their products internationally especially at the time of severe competition from domestic rivalries. This will help them to reduce dependence on a single market. Once the firms export, they begin to grow. They begin to learn new skills that help them to improve their performance. When the small and medium firms were allowed to export, their profit was improved by 26% and when firms earn a profit, it will be reflected in the rise in the consumption patterns of owners, workers and their Families. (Atkin & Jinhage, 2017). From govt.'s point of view, exporting generates foreign exchange, increase employment in the country, increase productivity and improve the overall standard of living. Hence, the Govt. has been focusing on export promotion. They formulate various programs and policies to enhance the export from the country. The programs include setting up specific boards or institutions for products, starting institutions that finance export business, implementing various schemes like MEIS, SEIZ etc. and formulating policies like Special Economic Zone policy, Export Oriented Unit Scheme etc.

Understanding the antecedents of firm export performance and studying the effectiveness of export promotion programs are very important things among firms and policymakers respectively. Firms are interested to know the factors that help them to grow their business so that they can try to acquire that if it is any particular resource or learns if it is any particular skill. The impact of promotion programs helps the policymakers to study the strength and weaknesses of a program. This helps them to revise the policy as and when needed.

This study aimed to explore the factors influencing firm export performance and analyzing the effectiveness and impact of Special Economic Zone Policy on the firm export performance. Special economic zone program which was started as part of the EXIM policy of India and later came into existence as SEZ Act in 2005, is a priceless export promotion program of India because they constitute more than 25% of the total export from India for the past 5 years.

The last seven chapters discussed the problem under study, previous literature, conceptual model, methodology and analysis and interpretation of the hypotheses. This chapter summarizes the study. It also includes the findings of the study, suggestions based on the findings and topics suggested topics for future studies.

8.2 Research problem at a glance

The govt. all over the world is trying to prosper through increasing export from the country. For that, they are providing concessions, tax exemptions, financial assistance, market assistance etc. just like that majority of domestic firms are entering into the foreign market by selling excess products. Then slowly they enter into the mainstream by producing for the international market. When they begin to export, certain barriers always wait for them. they include environmental, cultural variance, resource barrier, marketing barrier and knowledge barrier. To overcome these barriers, they need resources, knowledge and institutional support. This can be provided by the govt. External barriers can be overcome through institutional support. They need to get better support to face the export barriers. Hence the effectiveness of the export promotion scheme or program they availed and the impact of its benefit on their export performance is another concern.

SEZ is a distinct program of govt. of India. The reason for that is it given almost all the support for an exporter who wishes to start their export business. The scheme provides better infrastructure some at a concessional rate compared to the area outside it, gives concessions, income tax exemptions, and several other exemptions. The program focuses on reducing the time spent by the exporter in the documentation and procedural complexities by giving better governance. Since the

zones are located in a strategic area, it always helps them to access facilities outside easily.

Even after getting or availing these facilities, some succeed while some fails. Certain factors determine success. Hence, the factors influencing firm export performance is always a concern for an exporting firm. It is always a topic of discussion among strategic management scholars also. Market. Analyzing the determinants of export performance help the firms to identify the strongest and weakest points. When these are identified, they can concentrate on these factors. Moreover, thereby increase their export and increase profitability.

Hence, this study addresses two issues mainly, what are the internal factors influencing the firm export performance and whether being situated at Special Economic Zone help the firms to export more. This study tries to get an overall view of the SEZ program. It analyses how effective the program is in generating export at the aggregate level and firm level.

The study seeks to find answers to the questions like;

- ✓ What is the export performance of SEZs in India?
- ✓ How much does it contribute to the total export of India?
- ✓ Is there any variation in the contribution sector-wise, zone wise and state wise?
- ✓ What is the export performance of Cochin and Madras SEZs?
- ✓ Do they differ in export performance over the years?
- ✓ What are the zone levels factors determining the export?
- ✓ What factors attracted the exporters to locate their units at SEZ?
- ✓ Whether the availability of incentives was, the major factor attracted them to SEZ?

- ✓ What is the level of satisfaction of units regarding infrastructure, governance access to outside facilities and incentives?
- ✓ How much beneficial the policy is?
- ✓ What are the factors influencing the export performance of firms?
- ✓ Do the benefits of being situated in a Special Economic Zone strengthen the relationship between determinants of export and performance?
- ✓ If yes, which are they?

8.3 Significance of the study

Export is considered the backbone of an economy. It leads to the overall development of the nation through building better infrastructure and creating backward linkage in the domestic market. India had exported goods and services of 546033.12 million \$ in the year 2019, which was 18.4% of its GDP. India's share in the total world export is 1.7% in the year 2020. India has 17th rank among the countries exporting in terms of market share. This reveals the prospects of India in the export business.

35.9% of the national export during the period 2019-20 is generated from the Special Economic Zones of the country. The SEZ scheme not only contributed to export but also generated incremental employment of 20,99,214 after 2006. It has also attracted an investment of 5,91,083.76 cr. to the nation after 2006. Like any other project of the country, SEZ scheme has also witnessed several criticisms like govt. is foregoing huge amount in the name of tax exemption that creates a huge burden on the economy, the scheme is irrelevant, units are starting their business only for availing incentives etc., therefore, a study on the effectiveness of the scheme perceived by the main beneficiaries of the scheme i.e, exporters are highly demanded. The direct impact of the scheme on the export performance of the units is studied and it helps to understand the importance of the scheme. This study also focuses, the factors determining the export success of a firm. This helps the exporters to identify the critical success factors of their business. Accordingly, they

can plan their activities to succeed. The impact of the program along with other determinants of firm export is also analysed. Hence, the direct and moderating effect of the program is studied.

In addition to all these, the study also focuses on the performance evaluation of SEZ in India since 2000. It will help us to know the best performers in each section like sector-wise, DC wise, central govt. zone wise and state wise. The study helps the developers to know the key determinant of zone success. By understanding this, they can increase the availability of that factor to have more export. The study also focuses on the factor that attracted the exporters to locate their units inside the zones. The policymakers can attract more units into the zone by understanding the most influencing factor.

Therefore, this study will be of great help to policymakers and exporters. The findings of the study will help the Policymakers to understand the strength and weaknesses of the scheme. They can understand the area to be improved.

8.4 Objectives of the study

The study tries to cover the following objectives;

1. To analyse the export performance of SEZs in India.
2. To identify the factors influencing the zone level exports
3. To find out the core factor that attracted the exporters to locate their units in the SEZs
4. To measure the perception of the exporters about the quality of infrastructure provided, quality of governance, access to outside facilities and usefulness & timeliness of incentives
5. To evaluate the effect of Resources, Capabilities, export knowledge and Export Commitment
6. To test the direct and moderating effect of the usefulness of Special Economic Zone policy on the export performance of units.

8.5 Methodological design

The study was descriptive and exploratory in nature. It had been conducted with help of data collected through literature review and from sample respondents. The study covered primary and secondary sources of data. The secondary sources of data included all published materials like books, journals, data from the website, official records of various DCs etc. the primary source of data collection was the exporters in the special economic zones of India.

For secondary data analysis, three data sets had been used. The first data set included the export data from India and SEZ DC –wise from 2000-01 to 2019-20. The second set of data included the export data of zones in India that exported during the period 2018-19. It contained 230 observations. The final data set consisted of the year-wise sector-specific data of Cochin and Madras Zones.

For primary data analysis, sample firms in the special economic zone were taken. The population for the study was all the units working in the special economic zones. As of now, 5109 units were working under 240 zones in India. However, for this study, the seven central govt zones working in the country were considered as sub-population. Since the population was finite, the sample size was calculated with the formula for the finite population. 103 samples were finalised for the study.

For getting samples, a cluster-sampling method was used. Hence seven central govt zones were considered clusters. From the total seven clusters, two clusters were selected at random. From each cluster, only manufacturing units were selected.

The data from the respondents were collected with a structured questionnaire. The questionnaire covered the demographic profile of firms and sections related to determinants of export performance and satisfaction with SEZ program. The main constructs for the study were;

- Firm resources
- Capabilities
- Export knowledge
- Export commitment
- Satisfaction with governance
- Satisfaction with incentives and concessions
- Satisfaction with infrastructure
- Ease of access to outside facilities
- Firm export performance

The variables were analysed with the help of SPSS, Smart-PLS and E-views software. The statistical inferences were made based on the descriptive statistics like mean, frequency, standard deviation and tests like t-test, ANOVA, post-hoc test, factorial ANOVA, Man-Whitney test, Kruskal-Wallis test, correlation, Multiple Linear Regression and Partial Least Square –Structural Equation Modelling.

8.6 Chapter schemes

The study is presented in 8 chapters. They are;

1. Introduction
2. Literature Review
3. Model and Hypothesis Development
4. Special Economic Policy in India: Theoretical framework
5. Performance Evaluation of Special Economic Zones in India
6. Exporter perception towards benefits of SEZ and Determinants of Export performance
7. Determinants of Firm Export Performance and Moderating effect of SEZ program on Firm Export Performance
8. Summary of Findings, Suggestions and conclusion

8.7 Limitations of the study

- Only central govt. owned SEZs are considered as sub-population.
- Among the units, the perception of IT/ITES are excluded from the study since the factors affecting their export performance is different from that of manufacturing sectors.
- The researcher faced non-availability and difficulty in collecting data from units. The units were reluctant to give their export data. Hence, the researcher collected the data through DC offices.
- There was no cooperation from some of the respondents.
- The geographical area of sample clusters was another problem
- The researcher faced time constraints since the respondents were units. It was difficult to collect data
- For analysing the sector-wise and zone wise contribution and factors influencing zone level export, data for a single period is only available and is used
- The factors influencing export performance has been limited to the Resource-Based View of strategic management.

8.8 Findings

Major findings of the study are briefed below based on the objectives of the study.

8.8.1 Performance evaluation of SEZs in India

1. The total export from India is showing a diminishing trend. But the export from SEZs is showing a positive value except during the period 2014-15. In the same period, the growth rate of export from India was the lowest (-0.4).

2. The contribution of SEZ export in total export from the country has increased from 5% to 35.9%.
3. Even the export from India was showing a diminishing trend, the SEZ share in total export from India is showing growth.
4. The Santacruz SEZ has contributed more to the total export compared to Central govt. owned zones.
5. The export from Cochin began to grow after the enactment of SEZ Act 2005.
6. The Vizag and Falta SEZs are the least performers during most financial years.
7. In the total export from central govt. owned SEZs, Santacruz SEZ has more contribution (total=244208.7, %=31) and Falta SEZ has the least contribution (total export =18953.1, %=2.4).
8. Overall contribution is much better for Santacruz, Cochin, Noida and Chennai zones compared to Kandla, Vizag and Falta zones.
9. The highest aggregate export from the seven central govt SEZs was during the period 2018-19 (export =88757.23, 11.3% of the total export from central govt. owned zones). The lowest export was in the period 2000-01(8493.99 and 1.1%).
10. The Santacruz zone has been the leader among the central govt owned SEZs except for a fall during the period,2007-13 and 2017-19.
11. The zone that has improved in export performance is Cochin SEZ. They were the least performers at the beginning of SEZ regime. However, after 2004-05, they began to survive and became the best performer in almost all the financial years after 2009-10.
12. Chennai is the one, which has a steady export share in almost all the years. Its export has been increasing until 2013-14. Thereafter, it has been

diminishing and the year 2018-19 saw its least contribution to the total (6.7%).

13. Noida SEZ is found to be the zone with consistent or increasing export all over the study period. The share in total export was always greater than 10% and it was the best performer during the period 2007-10.
14. The Vizag is a problematic zone. Its total export has never touched a 5 digit. The best contribution from the Vizag zone happened in the year 2011-12(5.2%).
15. Cochin SEZ has a high potential for export growth.
16. The export growth of Kandla SEZ over the years is quite satisfactory compared to Falta, Vizag, Chennai and Noida zones.
17. Falta, Noida and Vizag zones are facing a sudden fall in export growth in most of the years.
18. Cochin, Santacruz, Kandla and Chennai have better prospects for export growth than others. The export from Santacruz SEZ is consistent over the years. The shares of other zones under SSEZ are always increasing and their share in the total export is always greater than or equal to 75%.
19. The export from the Kandla multi-product zone is regular over the years. The exports from other zones under KSEZ are fluctuating and their contribution to the total export from KSEZ is always higher than 95% every year.
20. The export from the Noida multi-product zone is decreasing after 2016-17. The contribution of other zones in the total export has risen to 88% in the period 2019-20 from 75% in the period 2014-15.
21. The shares of other zones under MSEZ have increased from 91% in 2014-15 to 94% in 2018-19. The share of MEPZ in 2014-15 was 9% and it fell to 6% in 2018-19.

22. Even though the export from the Falta zone had increased over the years, their share in the total export had decreased from 11% to 4%.
23. In the case of Vizag, 97% of export in each year is contributed by other zones.
24. Among seven central govt. zones, Cochin is the only zone that contributes more than 34% to the total DC export for the last 2 years.
25. Gujarat (26.8%) is the largest contributor to the total SEZ export of India followed by Tamilnadu (14.44%) and Karnataka (13.73%).
26. Even the number of SEZs (n=40) in Tamilnadu is higher than any other state, their contribution (14.44%) to total export is less compared to Gujarat with twenty SEZs (26.82%).
27. Compared to the number of SEZs and proportionate contribution to total export, many states like Odisha, Madhyapradesh, Andrapradesh, Haryana and Telangana are not performing well.
28. The export value during the period 2018-19 is the same across almost all the sectors like multiproduct, IT/ITES, engineering, textiles, biotech, food processing, footwear, pharma, gems, aerospace and miscellaneous.
29. There is no significant difference across seven zones in the value of export for the period 2018-19.
30. The export from IT/ITES and other Sectors are not equal.
31. IT/ITES zones are exporting better compared to other sector zones.
32. Except for Noida and Kandla zones, the remaining 5 zone's IT/ITES export is more than other sector export.
33. There is an interaction of zones and sectors on the export value.
34. There existed a significant mean difference between the IT sector in Kandla and Santacruz zones

35. The export from Central govt. SEZs, SEZs established before SEZ Act and SEZs established after SEZ Act are not equal.
36. A significant difference existed in the export of 2018-19 and found between the export value of central govt. owned SEZs and SEZs set up after the 2005 Act.
37. The export growth from the Cochin zone shows a cyclical trend.
38. Cochin zone's performance is better compared to Madras in terms of share in total export.
39. The growth from Madras is diminishing whereas Cochin is improving except for a negative growth rate in the period 2013-14 and 2014-15.
40. Gems and Jewellery sector, engineering sector and software sector are the best sectors under MEPZ in total contribution to zone export.
41. In the case of Cochin, Gems & Jewellery sector is the highest contributor to the total zone export.
42. The import and investment positively influence the zone level export.

8.8.2 Demographic profile and Factors attracted to SEZs

1. 2.1. Majority of the sample units belong to Cochin SEZ (51 % n=53)
2. 2.2. Among 103 sample units, 50% are medium scale units, followed by 32% small scale units and 17% large scale units.
3. Majority of units in the Cochin zone is medium scale units (52.83%) followed by small (32.08%) and large scale units (15.09%).
4. Majority of units in the Madras zone is medium scale units (48%), remaining is spread across large (20%) and small scales (32%).

5. The majority of key persons (43.7%) in the unit have experience of 11-20 years of export experience. Most of the sample respondents (89.3%) come under the limit of 6 to 30 years of export experience.
6. Majority of sample units (54%) have been exporting for the past 20 years. 23 % of units are engaged in export for less than 10 years. The remaining units have experience of 20 years plus in the field of export.
7. Out of 103 units, the engineering sector place more (25%) followed by plastic and rubber (21%) miscellaneous (18%). However, Cochin majority of units come under the miscellaneous sector (26%) whereas in madras it is engineering (26%).
8. Countries on an average export to 7 to 9 countries. Only a few countries export to more than 10 countries.
9. The major factor which attracted the exporters to SEZ is the perception that “Export business is easy in SEZ”. The existence of the “Single Window Clearance Mechanism” has least influenced exporters to start units in the zone.
10. Units in Cochin SEZ is attracted by the factor “Easiness of Export Business in SEZ” whereas the units in Madras are mainly attracted by the factor “Better Governance and Support from authorities”.
11. Single window clearance Mechanism has been working well in MEPZ compared to Cochin
12. Physical infrastructures within the zone play a significant role in Cochin in attracting units. On the other hand, the influence is very less in MEPZ.
13. Availability of incentives and concessions has highly attracted medium scale units to locate their export business in zones.

14. The influence of physical infrastructure is different across sectors. Miscellaneous sectors have been influenced more by it and engineering and electronic sectors have been influenced less by it.

8.8.3 Benefits of SEZ perceived by exporters

1. Among the benefits of SEZs, exporters perceived “usefulness of incentives” (mean=4.03, SD=0.453) better than quality of governance (mean=3.77 SD=0.639), quality of infrastructure(mean= 3.17, SD=0.552) and ease of access to outside facilities (mean=3.36, SD=0.639).
2. The units in zones have high access to residential complexes (mean=3.47, SD=0.84) followed by ease of access to medical facilities (mean=3.38, SD=0.88) and shopping malls outside SEZ (mean=3.32, SD=1.05). The units have low access to educational institutions (mean=3.27 SD=0.84) nearby.
3. In the case of governance, units are highly satisfied with the Digitization of APR(mean=4.14, SD=0.69)
4. But they rated “Efficiency of Grievance redressal mechanism” (mean=3.42, SD=0.91) very low.
5. Respondents are highly satisfied in the fact that “concessions are received timely” (mean= 4.42, SD=0.68), Incentives are received timely (mean=4.34, SD=0.66) and exemption from GST(mean=4.16, SD=0.74). But they are not completely satisfied with the Income-tax exemption provided at present (mean=3.53, SD=0.80) and exemption from service tax(mean=3.72, SD=0.80)
6. The respondents are not highly satisfied with all the infrastructure facilities provided. The mean value for it ranges from 2.25 (canteen) to 4.07 (continuity of power supply).
7. The respondents are satisfied with continuity of power supply (4.07), security arrangements (3.91), banking service (3.56) etc. They are

dissatisfied with Canteens (2.25), basic medical facilities (2.38), car parking (2.40), and warehouses (2.61).

8. The type of SEZs, scale of operation, sector and year of export do not affect different benefits of Special Economic Zones.
9. Difference in the perception towards infrastructure exists between units having operations above 10 countries and 1 to 3 countries. The quality perceived by units exporting to 1 to 3 countries (2.57) is low compared with units exporting to more than 10 countries (3.56)
10. Among the determinants of export performance, resources have the highest mean value (3.93 SD=0.524) followed by capabilities (3.88, SD=0.674), knowledge (3.8) and commitment (3.74, SD=0.608). The resources they allocate to export are high and the commitment towards export is low compared to other determinants.
11. Under the construct Resources, the awareness among management about the exporting country has the highest mean value (4.33, SD=0.57), followed by experienced human resources in the firm (4.17, SD=0.68). Among the resources, instability in finance is a major issue (3.59, SD=0.89)
12. The units commit more time and effort for export (4.19, SD=0.63). “The priority is given to exporting” (4.14, SD=0.69) also shows the commitment of units towards export. The commitment towards in-house market research is a bigger concern among units working in the zones (2.79, SD=1.13).
13. The units highly keep in touch with customers to understand their tastes and preferences (4.39, SD=0.56). They try to bring innovation in manufacturing as and when needed (4.22, SD=0.75). Among the capabilities, the units find it difficult to monitor the performance with that of competitors frequently (3.33, SD=1.29)
14. The export knowledge is somewhat high in almost all the units. The units are having better knowledge about the foreign market (3.90 SD=0.53). The mean

value is comparatively low for the item “Easiness in preparing and managing export documents” (3.74, SD=0.70).

15. Determinants of export statistically differ across zones. The resources & capabilities and export commitment& knowledge are high among units in the Madras zone compared to the Cochin zone.
16. The export commitment and knowledge are almost the same levels across firms of various sizes.
17. Resources and Capabilities differ across firms of various sizes. The resources possessed by large, medium and small-scale firms are not equal. Large firms (4.35), possess more resources followed by medium firms (3.97) and small firms (3.65). The capabilities developed by the firms differ across medium &small-scale firms and small & medium scale firms.
18. There exists a sector-wise difference in commitment and capabilities. The mean difference in commitment is significant between plastic& rubber (3.88) and other sectors (3.28) and textiles &garments (3.85) and others(3.28). The level of capabilities differs across sectors of plastic & rubber (4.14) and other sectors (3.43).
19. The level of resources, capabilities, commitment and knowledge don't differ across various years of experience.
20. There is a significant difference between the level of resources and the number of countries it export to. The difference exists between firms exporting to more than 10 countries and 4 to 6 countries.
21. The export performance does not differ concerning the location of firms, the size, sector, age and number of export destinations.

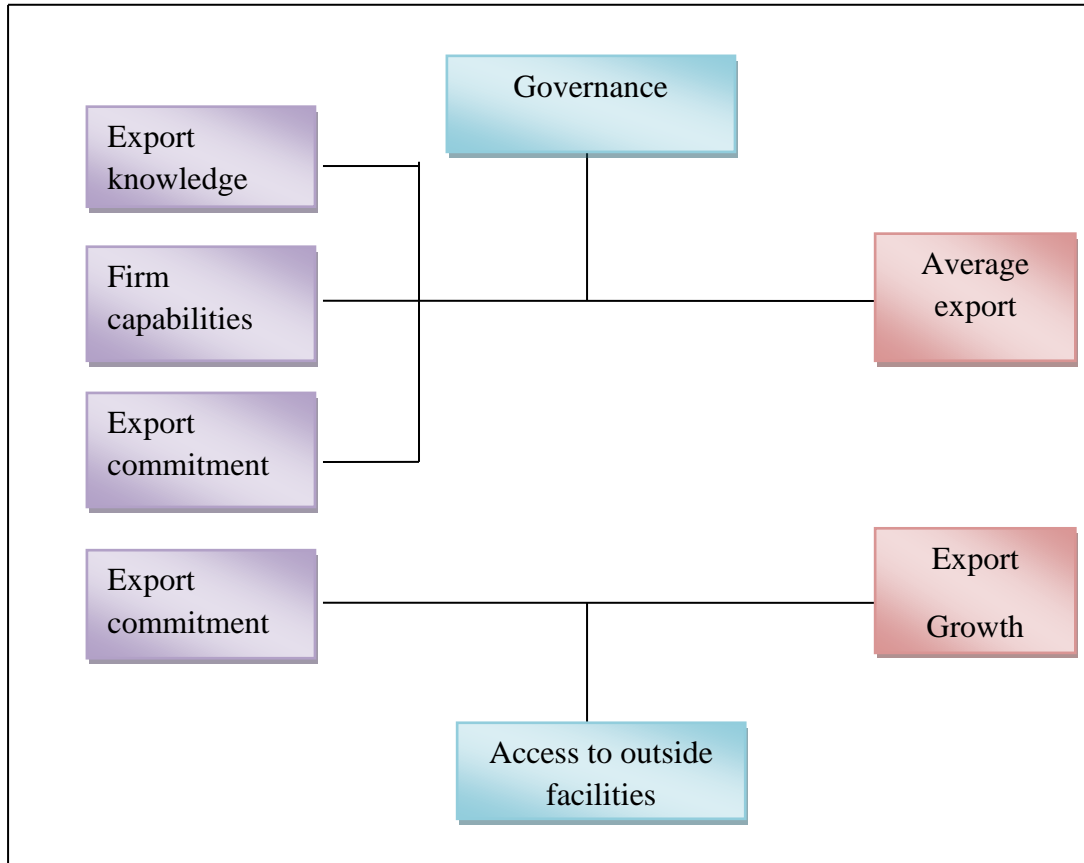
8.8.4 Factors influencing export performance; moderating effect of Special Economic Zone policy

1. The construct “Resources and Capabilities” and “Benefits of SEZ” have no direct effect on firm export performance.
2. While checking the individual impact of dimensions under each construct on firm export performance, the variables commitment, knowledge and capabilities have a significant positive impact on firm export growth.
3. The individual impact of dimensions under the benefits of SEZ program is nil.
4. While checking moderation, the variables governance and ease of access found to have a significant positive moderating effect.
5. Governance acts as a moderator between capabilities and firm export sales.
6. Governance strengthen the relationship between export commitment and export sales.
7. The relationship between export knowledge and export sales are strengthened through improving governance.
8. When access to outside facilities increase, the relationship between export knowledge and export growth increase.

8.9 Research Model Developed from the Study

The study tested the conceptual model developed by the researcher for analysing the benefit of being situated in Special Economic Zone Program on Firm Export Performance. Based on the analysis, the researcher has modified and finalised the model, which will help the academic community to study the importance of the program.

Research Model developed from the Study



The model will help the community as a guidance for further research.

8.10 Suggestions

8.10.1 To the policymakers:

- To have a balanced export from each state, approve more zones in states where the number of SEZs are low.
- At the same time, Approve more zones in the states like Gujarat, Tamilnadu, Karnataka, Maharashtra, Kerala and Telangana which are performing well compared to others.
- In India out of 417 formally approved SEZs, 349 zones have been notified as Special Economic Zones. However, 238 of 349 are exporting. Hence, the

govt. must provide more attention to the process, which starts from the approval to the notification, especially to the application received from these six states.

- Zimmerman, 2013 had studied the reason for the de-notification of SEZ in Maharashtra and the lack of Special Economic Zones in Goa. The main impediments were (1) the problem faced at the time of acquiring land (2) corruption in getting approval (3) environmental difficulties raised by the public. Goa has not delayed adopting SEZ; it has been searching for alternatives. Its problem lies in the lack of land for starting SEZ, whereas, in the case of Maharashtra, the problem is between farmers and project developers. The people in Maharashtra have lost faith in the company. Their concern is on the acquisition of land, actual usage of land and allocating Non-Processing Area to real estate groups. Hence, the govt. of these states has to frame suitable SEZ policy in a lie with its economic, geographical, social and political situations.
- Most of the states are following the same SEZ policy of 2006 without modifying it to the need of their state's geographical, social and political features. This has to be changed, the state-specific policy has to be framed. By developing their own SEZ policy, they can encourage more developers into the state with attractive state incentives, facilities and infrastructure. Otherwise, these states will stand behind other states in the number of SEZs operating which is going to affect the balanced regional development of the country negatively.
- States like Telangana, Andhrapradesh, Uttarpradesh have to revisit their SEZ policy since their contribution to Total SEZ export is less in proportion with the number of SEZs they own.
- The IT/ITES zones are performing well. It can be due to the availability of high skilled manpower and a short period of payback. Hence govt has to encourage more IT/ITES zones

- At the same time, it has to attract manufacturing-oriented zones too since the majority of manpower in the country are semiskilled or unskilled
- The Falta and Vizag zones need special attention. The govt. has to appoint a research team to study the problems of Vizag and Falta zones and implement possible remedies.
- Kandla and Noida zones authorities should try to attract more manufacturing units into the zones. Since their manufacturing export is greater than service export.
- Cochin, Madras, Santacruz , Falta and Vizag zones have more scope for IT business. Therefore IT/ITES zones must be given more approval.
- Govt. should encourage import and investment into the zones.
- The number of small scale units are less compared to medium scale units, even though they are getting benefits under MSME Act, more concessions like more concession in power, rent, water charge etc. must be allowed to small-scale units from the SEZ's side.
- The existence of Single Window Clearance Mechanism is not known to many units. SWCM has to be strengthened to ensure a hassle-free environment
- Medium scale units which rule the majority in the zones are attracted by incentives. Hence in such circumstances, the govt's decision to withdraw income tax benefits must be re-valued
- The govt. can itself start medical facilities nearby zones to easily access it by units
- Income tax exemption must be extended to a further period of 5 years. The exemption given at the beginning of the business is not sufficient. Because in the beginning, they are not profit earners. But when they start to earn income, the exemption periods may be over.

- Even though the benefits of SEZs have no direct impact on firm export, the variables governance and ease of access to facilities act as moderators.
- The govt. has to improve the governance continuously and make the access to outside facilities easy. They both strengthen the relationship between determinants of export and export performance.

8.10.2 To CSEZ Authorities

- Quality of road rated by the exporter is not satisfactory. The zone authorities have to improve the quality of the road inside the zone.
- Power back up, telecom, canteen, crèche, warehouse and canteen facility are also poor. Power backup and telecom facilities have to be improved. Two canteen facilities are inside the zone. The first one provides food at 20 rupees and the other one is an executive canteen. The quality of food at the former is poor. Zone authority must give canteen contract to some other parties like kudumbashree who provide quality food at affordable price. The crèche facility has to be operated in another building with better facilities.
- SWCM has to be implemented properly.
- The zone authorities should fasten the decision-making process since the exporters have faced a delay in decision making from the side of authorities.

8.10.3 To the MEPZ-SEZ authorities

- The security arrangement rated by exporters in Madras is not highly satisfactory. The car parking and canteen facilities are very poor inside the zone. The zone authorities should try to improve the performance of security arrangements. An outsider can easily enter into the zone if they say the name of any unit or person. However, inside the Cochin zone, an outsider has to see the securities first and they need to show proper documents of permission from SEZ authorities. This system can be implemented in Madras too. Canteen facility is very poor and costly. They lack proper sitting space. The zones can attract a new team to handle the canteen facility.

- A medical centre is to be opened inside zone to give first aid treatments.
- Fire protection system should be set up in the SDF.
- Zone authorities have to improve the system of dealing with labour problems.
- A separate cell for grievance redressal must be opened inside the zone to solve the problems faced by each exporter inside the zone.
- The custom related service has to be more people-friendly. The authorities must be compassionate in dealing with exporters.
- The rate charged for water from units is very high. The zone authorities can make the facilities for water.

8.10.4 To the firms

- The firm's commitment to export is low compared to other factors. They have to be more committed to export time-wise, effort-wise and capital wise.
- Financial resources are very low among units. Firms should find a regular source for finance.
- The commitment towards in-house research is very low. It has to be strengthened.
- Management has to conduct frequent travel for export purposes and gain knowledge.
- Firms should understand the changes happening around them in advance, they should pursue opportunities in advance rather than responding to the change. The firm should hire a team of experts who can forecast things in advance and help them to make decisions.
- Firms have to frequently monitor their performance with competitors.

- Firms must establish a good relationship with distributors and suppliers of materials.
- Firm's knowledge about export procedures is satisfactory but not highly satisfactory. They should gain more knowledge in exporting procedures, markets and distributors.
- Small-scale firms should try to acquire more resources and develop capabilities.
- The capabilities, commitment and knowledge have to be improved since they positively influence the export performance.

8.11 Conclusion

Special Economic Zone Program is an inevitable policy of govt. of India in the matter of export creation, employment generation and investment creation. 5109 units under 240 zones have together contributed 35.9% to the total export from India for the period 2019-20. However, certain sectors, zones and states contribute major chunk of share . Others are idle in the export generation. Govt. should give special focus to these low performing sectors, zones and states. A comprehensive policy must be framed to develop all the areas of the program. If planned and implemented well the program will be helpful to further increase the firm export performance and thereby increase the total export from India. The dependence of zones on a particular sector is going to affect its performance negatively when such units exit from the zones. While analyzing the sector-wise performance of two zones, the export from certain sectors was found to have a significant share in the total zone export. When the units under these sectors exited from the zone, the overall exports from the zones had reduced. The unit approval committee should approve all the types of units.

Some state's contribution to total SEZ export is very low, more zones should be approved in these states. A feasibility study of SEZ program must be conducted among states without zones. State-specific SEZ policy should be framed by incorporating the changes in the social, demographic and economic conditions of the states.

To increase export from the existing zones, more imports and investment must be attracted to the zones. The fame of SEZ among exporting community as an “Easy Place for business” has attracted exporters to the zones. Their expectation must become real through their experience. For that, this study recommends the zone authorities develop better infrastructure and governance inside the zone. The study suggests implementing Single Window Clearance Mechanism efficiently. Studies like Tandel (2012) and Vijay (2009) found that about 97% of the units reported availability of incentives as the most attractive factor for investment in the SEZ and Fiscal incentives rank first in the ranking of the factors responsible for the success of MEPZ-SEZ. The result of this study is the same. This study found “Availability of Incentives “a crucial factor in attracting units to the zone. Recently the govt. is trying to withdraw existing incentives instead of maintaining them and providing new incentives.

The govt has made the Minimum Alternative Tax (MAT) applicable to the developers and units from 1st April 2012.

The govt has also announced the sunset close of the Income Tax benefit to new developers and units which has started its operation after 31st march 2020. The withdrawal of MAT benefit has reduced the confidence in exporters. MAT exemption has been perceived to be a greater incentive for units in manufacturing, which has deductions under income tax for reasons such as depreciation, than units in the IT/ITES sector, although units across all the industries felt that they have been adversely affected by the imposition of MAT. (Arpita, Saubhik, Shreya, & Janu). The sunset close is not going to hamper the confidence of existing units in SEZ and thereby maintaining the previous export performance but is going to affect the new entrance to SEZ negatively. If the govt wish to increase the export contribution from SEZ, new units must also be motivated by providing direct tax benefits like income tax exemption (Thayyil & Habeeburahiman, 2021).

The study justifies the Resource-Based View of strategic management. It is concluded that Capabilities, Commitment and Knowledge have a great influence on export performance while resources have no great influence. The study suggests the

small firms should acquire more resources and develop capabilities. If it is not possible, the units inside the zones can exchange resources and technical expertise.

The relation between capabilities, commitment, knowledge and export performance are strengthened when the units are given better governance and ease of access to facilities, even the benefits of being situated in SEZ has no direct influence on their export performance.

Hence, it can be concluded that several factors are influence the firm export performance like commitment, knowledge and capabilities. These factors alone cannot influence the performance. The impact of these factors on firm export performance increases when certain strengthening forces are added. Being situated at the zone provides better infrastructure, governance, incentives and ease of access to facilities. When certain benefits like better governance and ease of access to facilities are added along with the determinants of export performance, the impact on firm export performance increases. Even if the direct impact of the benefits of SEZ on performance is not significant, it strengthens the relationship between determinants and performance. Hence, they act as better moderators.

8.12 Scope for further research

Even though this study covers major questions related to SEZ, certain areas are not covered. The interested researchers can research the following areas to fill the gap in research;

1. A case study of Falta and Vizag SEZs can be conducted to understand the reason for their low contribution to the total SEZ export.
2. The efficiency of Central Govt. owned SEZs could be evaluated by taking samples from seven zones.
3. A comparative study on the effectiveness of SEZ programs perceived by units under public and private parties as the developer can be assessed.
4. A comprehensive study about the sector-wise performance of SEZ in India can be carried out.

5. Since IT/ITES zones are large in number, determinants of export performance of IT firms and moderating or mediating effect of being situated at Special Economic Zone can be studied.

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Appendix

QUESTIONNAIRE

PART I

1. Nature of ownership: Public ltd Private ltd Partnership
2. Nature of business: Large-scale medium scale small scale
3. How many employees do you have at present? _____
4. Please indicate your years of experience in the field of export business _____
5. Do you have a sister concern in Domestic Tariff Area? Yes No
6. How many years have your company been exporting? _____
7. What is your company's sector of operation? _____
8. How many countries are you exporting to (Number)? _____
9. Please indicate the export sales of the unit for the past 3 years

Period	Export sales volume
2017-18	
2016-17	
2015-16	

	10. Factors that influenced you to concentrating business at SEZ	Not at all influenced	Slightly influenced	Somewhat influenced	Highly influenced	Extremely influenced
1	Physical infrastructure within SEZ					
2	Export business is easy in SEZ					
3	Availability of Incentives and concession					
4	Social infrastructure					
5	Port accessibility					
6	Better governance & support from SEZ authorities					
7	Favourable Business environment					
8	The presence of single window clearance mechanism					

Please consider your **MAIN EXPORT COUNTRY** while answering the following questions.

Please show your level of agreement and disagreement with the following statements		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11. With regard to Firm's Resources;						
1	We have been using latest technology in the production					
2	our products are identified for superior technology					
3	We have enough capacity to meet export orders					
4	Our management is well aware of the exporting country					
5	Our experts are well experienced in exporting					
6	Our firm can easily deal with domestic and overseas suppliers and fix competitive price					
7	we don't face any financial problems					
8	We observe & study the export country before starting export					
9	We could recognize the opportunities in advance and act accordingly					
12. With regard to Firm's Capabilities						
1	We have up to date information about our market					
2	We keep in touch with foreign customers and understand their preferences					
3	Our firm establish and maintain close relationship with supplier					
4	We establish and maintain close relation with overseas distributor					

5	We closely monitor our competitors					
6	We consult our customers while making changes to the product					
7	We bring innovations in manufacturing when needed					
8	We strongly emphasize on R&D, technology					
9	We frequently monitor our performance with competitors					
13. With regard to Export Commitment						
1	Our Firm executives conduct frequent travel to export market					
2	We have in-house export market research facilities					
3	Learning about exporting procedures and documentation is a high priority in this firm					
4	We have appropriate organizational structure to deal with export					
5	We pursue opportunities rather than responding					
6	Exporting is a high priority activity in the firm					
14. With regard to Export Knowledge						
1	It is very easy to prepare and manage export documents					
2	The salespeople are sufficiently knowledgeable about our existing foreign markets					
3	We know foreign government regulations that affect our products in foreign markets					
4	we are well aware of economic condition in the export market					
5	Overall, we have sufficient knowledge about the foreign markets we are serving					

13. Please indicate your level of agreement or disagreement with the regard to Export commitment		Very low	low	Average	high	Very high
7	The level of effort and time our management commits to export					
8	Level of financial resources allocated committed to export activity					
9	Level of human resources committed to export activity					

PART II

15. Please indicate your opinion about Quality of Infrastructure provided by SEZ		Very Low	Low	Average	High	Very High
1	Road					
2	Security arrangements					
3	Car parking					
4	Water supply					
5	Sewage and effluent system					
6	Continuity of power supply					
7	Telecoms and Internet facility					
8	Power backup					
9	Basic medical facilities					
10	Fire protection system					
11	Space for conducting business					
12	Warehouse/logistic arrangement					
13	Availability of banking service with ATM					
14	Hotels, restaurants & canteens					
15	crèche facility					

16. Please report your opinion regarding the water charge levied by the zone.

- Very low
- Low
- Average
- High
- Very high

17. What is your opinion regarding the power charge levied by the zone?

- Very low
- Low
- Average
- High
- Very high

18. Please indicate the Ease of Access to Social Infrastructure outside SEZ	Very Low	Low	Average	High	Very High
Commercial complex /shopping mall					
clinic and medical facilities					
educational institutions					
residential complex					

19. Please indicate your opinion about incentives and concessions from SEZ in promoting export		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	Benefits of incentives are received timely					
2	Benefits of concessions or subsidies are received timely					

19. Please rate the usefulness of following incentives and concessions (in the case, if it is availed by you)		Not at all useful	A little useful	Somewhat useful	useful	Very much useful
3	Income Tax exemption					
4	Exemption from service Tax.					
5	Exemption from GST					

20. Please indicate (✓) your satisfaction with quality of governance		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	I am satisfied with the rules of SEZ					
2	New rules related to SEZs are informed earlier					
3	I am satisfied with the transparency kept by the authority in implementation of rules					
4	There has been delay in taking decision by the officers					
5	Authorities are helpful in providing customs related services					
6	I am satisfied with the DC office in dealing with labour problems					
7	The grievance redressal mechanism is working efficiently					
8	I am satisfied with the time allotted for submitting APRs					
9	I am satisfied with the format of APRs					
10	APRs and digitization are relevant and user friendly					
11	I am satisfied with the attitude of SEZ officials					

21. Does **Single Window Clearance Mechanism (SWCM)** exist at your SEZ?

Yes No