CHAPTER VI

SUMMARY OF FINDINGS AND SUGGESTIONS

INTRODUCTION

Industrial sector has been recognized as an important productive sector, which deserves greater attention. Industrialization leads to transformation of a state from pre-industrial to an industrial State. However, the process of industrialization is closely related to technology development, which includes advancement of SMEs and large scale business enterprises.

Industrial development in India was initially, based on the assumption that it was essential for rapid development in the country. Accordingly, planned economic development started in the country which concentrated on heavy industries. Hence, public sector assumed a crucial role in the developmental process of the country. Moreover, enactment of FERA and nationalization of banks have further tightened the control over the economy.

Later, in the year 1991, the crisis that India faced was seized under the economic reforms wherein, government is committed to deregulate the economy that would promote trade and foreign investment. As a result, Indian industrial sector was made to face global competition. Indian companies are
either in competition or in collaboration with foreign companies. As such, Indian corporate sector has seen mergers, acquisitions and reconstructions. Moreover, the domestic entrepreneurial activities are to be encouraged in wake of competition.

In this context, high quality infrastructural facility, incentives to the entrepreneurs, technology support, and market assistance are vital to boost Indian manufacturing sector. The review of literature on need of infrastructure and industrial development has revealed that world class infrastructure is pivotal to compete with world class industries.

Moreover, Researchers also opined that industrialization is a multidimensional complex task which requires a constructive role of Government. Hence, Government machineries established to assist industrial development are to be strengthened. The studies on SMEs have revealed that strong vibrant SMEs is one of the key elements instrumental for attaining financial inclusive growth and, provides enabling environment for the entrepreneurs in nation building task with optimum utilization of available resource.

Further, the research on SMEs has stressed upon the need for and development of industrial estate/Industrial Park to ensure best industrial infrastructure to address the problems of industrial units.
INDUSTRIALIZATION IN GOA:

The State of Goa along with Diu and Daman was liberated from Portuguese rule after fourteen years of India’s independence on 19th December 1961 and was included as a part of Indian union. Later, people of Goa demanded statehood to foster development of the State as well as to preserve unique identity of Goa. As a result Goa has been declared a separate state on 30th May 1987. Goa the 25th state of India located in the Konkan coast 600 kilometers South of Mumbai and 300 kilometers North of Mangalore. According to 2001 census the State has an area of 3702 square kilometers and population of 13, 47,668. The state has divided into two districts and eleven talukas.

The era of planned economic development ushered into the country in 1951, when first five year plan was introduced. Goa was behind these development efforts launched in the country by two five year plans. However, considerable amount of socio-economic development has taken place since liberalization through implementation of planned schemes. Before liberation Goa had hardly any large scale business units, except mining. A few small scale units were there but they confined themselves to a narrow spectrum of industrial activities. Therefore, mining industry was the main stay of State’s economy, which was essentially trading economy. However, it was absolutely essential that proper steps were to be taken to put the economy of Goa on more
stable and sound footing. This naturally could be done only by a rapid process of industrialization, mainly because agriculture plays relatively less important role in the State. In addition to this relative importance of different sectors of the State’s economy based on their contribution to regional income has revealed that industry sector including mining and tourism is more than 50 percent to SGDP as against agriculture sector which is around 10 percent. Till liberation Goa had no industrial base as such and congenial conditions conducive to industrial development were lacking. However, during post liberation period a number of policies were adopted by the developmental agencies to foster industrial growth.

During first decade after liberation, the industrial development in Goa did not acquire the required speed. This was mostly because of lack of adequate infrastructure facilities and to some extent due to lack of industrial culture which involves risk taking decisions. The business community in Goa, essentially grown in pre- liberation period was import oriented economy which required time to switch over to production oriented economy in post liberation. However, once it was realized that industrial sector was most vital sector, both from the point of view of employment generation as well as revenue generation, a greater attention was given to the problems of industrial growth at all the quarters. The Government of India, as a part of National policy to correct regional imbalance, identified some areas as industrially backward areas. Accordingly, the territory Goa, Daman and Diu, except the
municipal area of capital city was declared as industrially backward areas. As a result industries set up in this territory became eligible to certain concessions. Hence, this gave encouragement to industrial sector in Goa.

Presently, State can boast of having found a place on the industrial map of India, as the number of registered business units in the year 1961-87 was 2907 with an investment of Rs. 4228.77 lakh employing 21162 people, whereas in the year 2009-10 the number of business units increased to 7350 with an investment of Rs. 46350.78 lakh and provided employed to 53714 people. The State also has High Powered Co-ordination Committee which looks after the establishment of large and medium scale units. This committee is headed by the Chief Minister as the chairman, and vice chairman being Minister for industries. The large and medium scale industries requiring substantial amount of water, power and prone to cause environment pollution will have to seek special permission.

MARKET AND FINANCIAL SUPPORT:

The market assistance to micro and small enterprises is provided through GHRSCIDC as well as NSIC. These institutions provide market for the final products as well as ensure the availability of raw-material to the business units, besides preferential purchase scheme introduced by GHRSCIDC for the benefit of registered small scale business unit established in the State.
The finance is a life blood of the business enterprises. The Economic Development Corporation, District Industrial Centre, Financial Institutions and Commercial Banks provide financial assistance to the business units established in the State. The number of bank offices in Goa was 287 in the year 1980-81 that has increased to 547 in the year 2009-10. After attaining Statehood, the Government of Goa has announced State industrial policies, from time to time, for the purpose of planned and speedy industrial development, creating an environment where both existing and new enterprises can prosper. Besides, the State has announced a number of incentive schemes to the entrepreneurs and also provided financial assistance in the form of subsidy.

INFRASTRUCTURE:

Infrastructure consists of providing necessary services that are foundation for development. Industrial infrastructure mainly revolves around water, power and transport network. The generation of power in the State is limited. However, the State gets adequate power supply from central power stations. The State is endowed with perennial rivers that are well distributed and flow across the State. The demand for water supply is met through seven water supply schemes under taken by the State Government.

The transport network, which is marked by easy accessibility as well as viability, induces the setting up of industries. The State has road network of
State Highway, District roads in towns/villages, besides National High way of 263.5 kilometers. As regards to railway network, the State has excellent railway connectivity to rest of the country. The Konkan railway which runs along the entire West coast of India has proved to be a boon to the State. Besides, the State has 253 kilometers of navigable inland water ways and a Mormugao port which is a major port on the West coast of India

After liberation in 1961, to give boost for industrialization in the State, the Goa, Daman and Diu Industrial Development Corporation was established by the Government of Goa, Daman and Diu in February 1966. Later on the name is changed to Goa-Industrial Development Corporation. It is established for the purpose of securing and assisting in the rapid and orderly establishment of business enterprises in the industrial estates. However, the main aim of the Corporation in particular, is to establish and manage industrial estates in the State. The Corporation is a body corporate with perpetual succession and common seal. It may sue and be sued in its name and shall be competent to acquire, hold and dispose of property movable and immovable and, to contract, and do all things necessary within the frame work of the Act. The Corporation has nine Directors; the State appoints one of the Directors of the corporation who shall be the Chairman of the Corporation. However, other necessary employees are appointed by the Corporation as per the need within the provisions of the Goa-IDC Act. Regarding finance, all property, funds and other assets vested in the Corporation shall be managed by the Corporation as
per the provisions of the Act. The Corporation maintains all Books of Accounts which are to be audited by the Auditor appointed by the State Government.

Industrial activities started picking up with setting up of Goa-IDC. In fact, its operation has been increased to a considerable extent over the year. The Corporation carries out activities within the frame work of Goa IDC-Act and in accordance with the aims of the Corporation. It acquires land for location of industrial estates through Government of Goa under land acquisition Act. The government land is alsohanded over to the Corporation as industrial area.

The main task of the Corporation is to establish industrial estates, and equip them with best infrastructure that will enable functioning of business units efficiently. The oldest industrial estate of the State is Corlim established in the year 1966. Moreover, between 1966 and 2001 it has established 20 industrial estates. These industrial estates are located across the State. The North district represents 07 industrial estates, whereas South district has 13 industrial estates. Moreover, these industrial estates in the State are established by considering the availability of land and related environmental factors. The State has 1552 business units functioning in the above industrial estates, being source of employment to 38546 people, with an average rate of 25 persons per business enterprise.
The present study, focused on (i) the quality of infrastructure available in the industrial estates managed by Goa-IDC (ii) examining the constraints faced by business enterprises located in the industrial estates (iii) assessing the effect of lack of infrastructure facilities and constraints on performance of the business enterprises, by considering the responses from 339 business enterprises representing different industrial estates located in North Goa and South Goamanaged by Goa-IDC. The study is structured on constraints, infrastructural issues and performance. The constraints are the actual factors due to which the normal production gets affected, whereas industrial infrastructure consists of facilitative requirements for the production.

The normal production of business enterprise depends on the factors like technology, availability of raw-material at a reasonable price, power with minimum load shedding, adequate transport facility, water supply at affordable rate, availability of skilled personnel, adequate demand for final products well as harmonious employee and employer relationship. The study conducted on industrial estates located in Goa, managed by Goa-IDC shows that:

- The technology constraint was not important to majority of business units operating in the industrial estates. However, it is moderately important in Mapusa industrial estate and less important in Margao and Honda industrial estates. Hence technology is not a hurdle to the business units, operating in the industrial estates.
Regarding raw-material as a constraint, it was moderately important to the business units operating in the industrial estates except Madkai, Cuncolim and Kakoda industrial estates. In majority of the cases required raw-material was not locally available.

Shortage of power as a constraint was not important to the business enterprises located in majority of the industrial estates. However, a need for adequate supply of water is most important in Verna industrial estate and moderately important in Cuncolim industrial estate.

Employee problem was most important in Corlim, sancoale, Mapusa and Bicholim industrial estates. However, the same was moderately important in Margao, Tivim, Conacona and Cuncolim industrial estates, whereas it was not important in rest of the industrial estates. Moreover, demand for final products as a constraint was not important in majority of the industrial estates except Sancoale and Honda industrial estates.

Industrial infrastructure namely water and power are essential inputs for production, whereas availability of communication facilities, well maintained roads within the industrial estates, network of transportation, banking facilities as well as civic amenities facilitate the operation of business at ease. However, the quality of availability of infrastructure in a particular industrial estate is assessed by the business enterprises operating in that industrial estate. The study shows that:
The banking and communication facilities exist in all the industrial estates. An inadequate power supply to business units was disagreed in majority of the industrial estates except Bicholim, Pilerne and Corlim industrial estates. Regarding water supply, scarcity was not felt in majority of the industrial estates except Verna and Cuncolim industrial estates. However, during the course of the study, it is seen that common facilities of warehousing, cold storage and truck terminus are needed within the industrial estates.

The infrastructural issues, constraints and performance scores of Corlim, Margao, Sancoale, Mapusa, Tivim, Bicholim, Honda, Bethoda, Kundai, Canacona, Tuem, Kakoda, Verna, Cuncolim, Pilerne, Madkai and Colvale industrial estates were analyzed by differential statistics with reference to objectives and hypotheses by performing differential analysis (ANOVA, Correlation and Regression analysis) and the results were as under:

- Significant variation was observed among business enterprises of different industrial estates in Goa with regard to constraints scores (F=20.8767, p<0.05) at 5% level of significance.

- Significant variation was observed among business enterprises of different industrial estate in the State with regard to infrastructural issues scores (F=14.8797, p<0.05) at 5% level of significance.
• Significant variation was observed among business enterprises of different industrial estate in the State with regard to performance scores ($F=2.8101, p<0.05$) at 5% level of significance.

• A significant and negative correlation was observed between constraints and performance scores of business industries enterprises in different industrial estates of the State ($r=-0.2662, p<0.05$) at 5% level of significance. This denotes that an increase or decrease in constraints scores results in the corresponding increase or decrease in performance scores.

• A significant and positive correlation was observed between infrastructure issues scores and constraints scores of business enterprises in the industrial estates of the state ($r=0.2738, p<0.05$) at 5% level of significance. The constraints and infrastructure issues scores of different business enterprises in different industrial estates are dependent on each other.

• A significant and negative correlation was observed between performance and infrastructure issue scores of different business enterprises in different industrial estates of the State ($r=-0.1595, p<0.05$) at 5% level of significance. This indicates that an increase or decrease in infrastructure scores results in the corresponding increase or decrease in performance scores.

• A significant and negative influence of constraints is observed on performance scores of different industrial enterprises in different industrial estates at 5% level of significance. Regression coefficient of performance scores
is sensitive to constraints of business enterprises of different industrial estates in Goa.

**SUGGESTIONS:**

On the basis of the study, to strengthen the industrial estates in the State, focus is needed on:

- A proper system for safe disposal of hazardous industrial waste to be chalked out in those industrial estates having industries of red category. Moreover, areas are to be earmarked for disposal of non-hazardous industrial waste.
- The common facilities of cold storage and warehousing within industrial estates are needed. Moreover, providing the facility of truck terminus and container depot in industrial estates would reduce congestion on the streets within the industrial estates, particularly in large sized industrial estates. Further, the industrial estates established in the early nineties have deficiencies in planning that can be overcome by providing a common facility of truck terminus and cold storage to a group of industrial estates.
- Industrial estates covering large area and more number of units have shortfall in water supply. Moreover, the water shortage may lead to a practice of tapping of ground water through bore well by the business enterprises. Over
extraction of ground water may lead to conflict with peripheral villages. Hence, the problem is to be tackled on prime basis.

- The industries have been categorized into as red, orange and green based on their environmental impact. Hence, categorization is to be considered while siting (locating) of industries in the industrial estates.

- Software technology, Biotech and pharmaceutical industries are to be encouraged by providing suitable industrial infrastructure conducive for these industries.

- Modernization and upgradation of existing industrial estates to be done with due regard to environmental and with other considerations such as sewage treatment facilities, rain water harvesting, recycling of waste water and ground water recharge.

- Raw untreated water requirement of business enterprises set up in the industrial estates can be addressed through water harvesting schemes.

- An area within industrial estate is to be specified for scrap yard. Moreover, hazardous waste generated by the business enterprises to be sent to identified disposal site.

- The open spaces available in the industrial estate to be developed for truck/vehicle parking, and maintaining greenery.