CHAPTER IX
FINDINGS, CONCLUSIONS AND SUGGESTIONS

9.1 INTRODUCTION
In India, since independence considerable emphasis has been laid on the industrial development for achieving rapid economic growth not only of the nation but also of the regions within the nation. But economic growth, by its very nature, is characterized by various types of imbalances. This phenomenon is more pronounced in the spatial dimensions of growth, which tends to get concentrated in certain regions within the economy. Therefore, along with industrial growth regional dispersal of industries was also aimed at in the strategies of industrial development. It was noted that the policy environment underwent drastic changes and the net effect of the industrial planning and policies was getting reflected in the trends in industrial production, investment, employment and exports.

This chapter presents the summary of findings, major conclusions drawn and policy suggestions made based on the study.

9.2 PURPOSE OF THE STUDY
Traditional industrial development pattern is a sequel of agro-based processing industries; consumer goods manufacturing enterprises and capital goods industries. The uniqueness of Indian national economy is bypassing of secondary industrial sector and leapfrogging from primary sector to tertiary sector. Unlike the national economy, Tamil Nadu, a state economy has the relative role of three sectors. The growth of primary sector’s share in gross domestic product proceeds that of secondary sector’s share, and in turn, the secondary sector’s share growth proceeds that of tertiary sector. Along with such structural change industrial sector has internal structural change with changes in productivity. The spatial spread or the concentration of
industries is the regional balance due to nearness to resource base, proximity to market and infrastructural connectivity. The impacting of factoral, sectoral and regional balances on the economy would determine the degree of industrial development.

The present study is both a follow up work and improvement over the previous studies on industrial development. In particular, an attempt is made to explain the issues related to growth and structural change, productivity performance and regional disparity in industrial development at the regional level in the industrial economy of India with special reference to Tamil Nadu.

The focus on Tamil Nadu State for in-depth investigation arises due to certain peculiar characteristics of the state compared with other regions and all-India. Firstly, the historical experience of Tamil Nadu in industrial development is very much divergent compared to other regions. Secondly, the regional characteristics such as topography, climate, resource endowments and infrastructural supports stand distinguished. Thirdly, the growth pattern of the state and the sectoral composition of State Domestic Product (SDP) have undergone significant change during the post-independence period. The shift in the focus of development from agriculture to industry and then to service sector makes the state’s case interesting to examine. Fourthly, Tamil Nadu had the rich experience of positioning its stand as one among the leading industrialized states in India. In addition, some of the regions of Tamil Nadu such as Coimbatore, Chennai, Chengalpattu, Kancheepuram, Thiruppur, Tirunelveli are known industrialised centres at the all-India level, makes the regional analysis appropriate. Finally, though there are few studies carried out earlier with reference to Tamil Nadu, the present study differs in terms of historical approach, coverage, period of study and analytical approach. Therefore, the choice of the region Tamil Nadu becomes relevant and gains importance.

The main objective of the study is to examine the spatial and temporal spread of industries in Tamil Nadu. The specific objectives are: (a) to trace the historical perspective of the industrial development in Tamil Nadu; (b) to study the structural change and comprehend the relative
importance of the industrial sector; (c) to analyse the growth pattern of manufacturing sector in Tamil Nadu at a dis-aggregated level; (d) to analyse the trends in productivity of the manufacturing sector; and, (e) to examine the spatial disparity in the growth of manufacturing sector across the districts of Tamil Nadu.

The study covers historical development of industries in Tamil Nadu during the pre-independence period, structural changes in the sectoral contributions and the relative importance of industrial sector, growth pattern of registered manufacturing sector, trends in productivity of the manufacturing sector and spatial disparity of industrial development across districts in Tamil Nadu. The study covers both pre-independence and post-independence period.

The findings would unfold several dimensions for policy implications and for balanced industrial development. This facilitates the policy makers and planners concerned. The study is an addition to the existing literature on this subject and serves as a base for similar studies at regional level. Further, the findings of this study would facilitate comparisons with other region specific studies.

9.3 METHODOLOGY

The study is empirical and analytical in nature and it is based on secondary data. The basic data source for the present study is Annual Survey of Industries (ASI), brought out by the Central Statistical Organisation (CSO), Government of India (GOI). The reference period of the investigation is from 1973-74 to 2007-08. The entire time period (1973-74 to 2007-08) had been sub-divided into Pre-Reforms period (1973-74 to 1990-91) and Post-Reforms period (1991-92 to 2007-08).

Growth performance of the registered segment of the industrial sector (which represented more than 60 per cent of the value added from total manufacturing) was analysed at two-digit level of dis-aggregation using variables such as number of industries, fixed capital, employment, and value added. Growth rates, shares and factor ratios were computed. The productivity estimates
were obtained using partial and total factor productivity methods. The regional disparity in the level of industrial development in Tamil Nadu was examined using district level information.

For the purpose of temporal assessment of the performance of the manufacturing sector, simple statistical measures like percentages, index numbers, average annual growth rates and trend rate of growth have been used. For computing trend rate of growth a semi-log linear regression model was used. For analysing the functional performance of industries, structural ratios and technical coefficients were estimated. It included ratios such as employment per factory (L/F), fixed capital per factory (K/F), value added per factory (V/F), fixed capital per employee (K/L), value added per employee (V/L) and fixed capital to value added (K/V). To analyse the productivity performance of industries, both total and partial productivity indices were estimated. Total Factor Productivity was estimated using Translog Production Function. In analyzing the regional industrial inequalities, methods such as Co-efficient of Variation (CV), Hirschman-Herfindahl Index (HHI) were employed. To capture the level of industrialization across districts, Quotient of Industrialisation (QI) was estimated. To examine the extent and trend of dispersion of industries, the graphical tool ‘box percentile plot’ was used.

In order to contextualize the regional dimension, various aspects of Tamil Nadu economy such as origin, geography, demography, economic, agriculture, industry, service sector – education and literacy, work participation rate, banking, infrastructure, power, transport and communication network were examined. The State profile was compared with All India wherever necessary and trends over time were also analysed to capture the long run dynamics. This served as a base to understand and analyse the industrial performance of Tamil Nadu.

9.4 SUMMARY OF FINDINGS

The findings of this study are summarized and presented below:

As a prelude to the main analysis an overview of the historical pattern of the industrial development in Tamil Nadu was traced. The history of industrial development was conveniently divided into three phases. The first phase from 1900-1929, hardly witnessed many growth of industries. However, during the period between 1930 and 1950 there was a phenomenal growth
of industries particularly cotton textile industries, and there was broadening of the structure of industries in the late 1950’s. Till then, the manufacturing sector was dominated by the few major industries like cotton textiles, sugar, cement and leather which were concentrated in a few regions of the state particularly in Coimbatore and Chennai. It was after 1950’s that rapid industrialization took place when the state started playing a major role in the development of industries by encouraging private investment through loans, financial and technical aid, by providing facilities for importing plant and machinery etc. The industrial base widened and deepened, with basic and capital goods coming into prominence and changes have been towards a more complex structure conforming to a higher level of industrialisation.

9.4.1 Historical Perspective of Industrial Development

The industrial development in the Tamil region had a fairly long tradition reflected by the presence of a large number of cottage or traditional industries. Though the modern factory sector was slow in taking roots in the region, its origin can be traced back to 1820s when a steel plant was set up in Porto Novo. Till 1870s, sugar industry was the only reasonably successful industrial venture. The major factors in encouraging private investment were the availability of palmgur and the growing demand for sugar. The tardy progress of the sugar industry in the pre 1930 period was broadly related to the absence of adequate supply of sugar cane and the fiercely competitive market conditions. However, the protection policy from 1950’s gave a fillip to sugar industry. Despite an earlier start, the sugar industry was unable to register the pace of expansion and spread as that of cotton textiles

During the last quarter of the nineteenth century, investment in textile industry was significant. The growth in the overseas demand for yarn and the availability of cheap cotton were among the major factors inducing this initial investment. In sugar and textiles, right from the very outset, the control by European firms was fairly pronounced. Most of the textile mills controlled by the European houses were established during the last quarter of the nineteenth century. The history of cotton textile development was divided into three phases. The first phase from 1900 to 1929, hardly witnessed any growth of industries. However during the period between 1930 and 1950 there was a phenomenal growth of cotton textile industries. It was after 1950s, a rapid
industrialisation took place. The spinning department developed more than the weaving departments. The entry of the mill made yarn into the handloom sector eroded the growth of the hand spinning industry and handloom weavers increasingly came to depend on mill made yarn for their requirement. Even during the period of global depression between 1929 and 1934, the mills at Coimbatore recorded handsome profits. The most striking feature of changes in industry during this period were the steady rise of the number of spindles and yarn production and the significant entry of Indian Capital into textile industry. Between 1951 and 1961, there was another spurt of expansion as reflected in the increase in the number of mills, spindles, output of yarn and number of persons employed in the textile industry.

Leather industries had also gained some importance in the state and tanneries concentrated in the North Arcot district. Though the Great Depression of 1930s severely affected the tanning and leather industry, the abolition of the export duties on hides and skins in 1935 helped the recovery of the export trade, and World War II induced a big boom. Moreover, leather industry was for long dominated by British trading houses, but during the inter-war years Indians also began to enter the trade and most of the tanneries were small units.

A noticeable expansion of cement industry took place only after 1930s. The growth of the industry occurred after the Second World War, following a heightened growth in demand for cement and fairly significant change in state policy, which sought to curb monopoly conditions in the industry. In addition to the protection given to this industry, the availability of electricity and limestone deposits in selected regions led to further investment in cement industry.

Investments in chemicals, engineering and capital goods sector began to assume importance between 1950 and 1956. These initiatives were taken up by both public and private sector. Development of the public sector undertakings in Tiruchirapalli, establishment of Industrial Estate and the starting of the bicycles industry at Madras acted as catalysts for the growth of many other units in the transport and allied industry.
The performance of the industrial sector had undergone significant changes in size, composition and magnitude of industries during the period 1962 and 1971. The industrial base had widened and deepened, with basic and capital goods coming into prominence in since 1960s. From a primary sector based structure, the change has been towards a more complex structure conforming to a higher level of industrialization. It was also evident from the analysis that the major industrial centres were Madras and Coimbatore.

9.4.2 Growth and Structural Change in Manufacturing Sector

There was a steady increase in the state domestic product in Tamil Nadu during the period between 1960-61 and 2008-09. As far as the changes in sectoral composition of Tamil Nadu economy are concerned, a steady decline in the share of primary sector, a moderate rise in the share of the secondary sector and continuous increase in the share of tertiary sector were observed. The changing pattern of sectoral composition of Tamil Nadu economy had been more or less in consonance with that of all India, especially in terms of declining share of the primary sector and the growing importance of the tertiary sector. However, the rate of decline in the primary sector’s share was more pronounced in Tamil Nadu than for India. The decline in the share of agriculture was compensated more or less equally by the growth of the secondary and tertiary sectors in the case of Tamil Nadu. An important feature of the structural transformation in Tami Nadu economy had been the expansion of the secondary sector at a rate significantly higher than that of all India.

Tamil Nadu’s industrial growth experience was in contrast to the overall rate of growth of the national economy. In Tamil Nadu the growth rates of the total manufacturing and its constituents were the highest in the period 1975-76 to 1979-80 and it was observed that Tamil Nadu expanded its industrial base during this period. The growth rates in employment and capital employed indicated that increased industrialisation in the state had taken place with an
increase in capital revealing that the process of industrialization that was taking place in Tamil Nadu was capital deepening and labour displacing.

The industry-wise analysis at two digit level of disaggregation indicate differential growth pattern in terms of value added, employment and capital stock across industries and also over time. The growth of value added had declined from 7.51 percent in the pre-reforms period to 6.4 percent in the post reforms period, implying that the registered manufacturing sector failed to sustain the growth momentum during the period after 1990. This had been primarily on account of slow growth of employment during the said period.

Among the industry groups, textile industry emerged as the single largest industry in terms of number of factories (28.60 per cent and rank 1), employment (43.07 per cent and rank 1), and fixed capital invested (14.93 per cent and second rank) and value added (28.37 per cent and rank1) in the manufacturing sector of Tamil Nadu.

The growth rate of value added and that of capital stock were found to be significantly associated in the industry groups such as paper products, machinery products, transport equipments and chemical products. In industry groups such as food products, rubber products, non-metallic mineral products and leather products, the growth in value added was faster than that of capital and in all other industry groups and relationship was in the reverse that is, the capital grew faster than the value added. Similarly, an association between growth in value added and growth in employment was found to be significant in industry groups such as, paper products, wood products, leather products, basic metal products, and machinery products. Though textile products and metal products registered the highest growth in value added, the employment did not grow in equal phase. In contrast, wood products and leather products accounted for a higher growth rates in employment and a low growth in value added.

Though the overall growth of the manufacturing sector had been quite impressive at the state level, all the industry groups did not behave uniformly between 1973-74 and 2007-08. A clear
trend of traditional industries being replaced by modern industries was observed. It was also observed that growth rates of value added and fixed capital were higher than that of employment and number of units in the registered manufacturing sector.

9.4.3 Productivity Performance of Manufacturing Sector

It is evident from partial productivity analysis that labour productivity has been increasing at 4.19 per cent, capital productivity declining at 1.11 per cent and capital intensity increasing at 5 per cent per annum during the period from 1973-74 to 2007-08. The trend in partial labour productivity followed the pattern in the output growth indicating that the deceleration in output growth has been largely contributed by a fall in labour productivity.

The long-term trends in partial factor productivities shows as a sharp increase in capital intensity accompanied by falling capital productivity (rising capital-output ratio) and moderately rising labour productivity indicating the process of strong capital-deepening and capital inefficiency

The period-wise partial factor productivity analysis indicates that individual industry-groups behave differently during the sub-periods. The industry-wise estimation of growth in partial capital productivity shows that all the industry-groups (except leather products, rubber products, non-metal products, metal products and other manufacturing industries) recorded negative growth rates during the period 1973-74 to 2007-08. The estimated growth rates in capital productivity for the sub-periods reveals that individual industry-groups showed a mixed trend during the two sub-periods. There was a continuous rise in the growth rate of capital investment in the total manufacturing sector. A significant positive growth rate was registered in all industries, except chemical and leather products recording a marginal growth of less than one per cent per year. This suggested that apart from chemical products and leather products in all other industry-groups, the capital investment increased and labour absorption declined.
The TFP growth for the manufacturing sector during the period 1973-74 to 2007-08 was 10.06 per cent per annum. The growth was highest in non-metallic mineral products (22.85 per cent), followed by rubber products and metal products (16 per cent). These three industry-groups recorded a growth rate of above the total average. Chemical products were by far the worst performers with respect to productivity growth recording TFPG of -0.51 per cent per annum during the study period. Moreover, growth was very insignificant in paper products and leather products (less than one per cent). The sub-period analysis showed that the high growth of total factor productivity in the first period was not maintained in the second period. In the first period the growth of TFP was 10.32 per cent whereas it was only 3.36 per cent in the second period.

The decomposition analysis revealed that 45.58 per cent of the growth in value added in the manufacturing sector was contributed by capital, 46.11 per cent by TFP and only 8.31 per cent by labour, indicating that labour had played minimum role in the growth of value added. In other words, the growth had been primarily as the result of increased investment and technology with labour contributing to a small part of it. The period-wise decomposition analysis indicated that the contribution of labour, capital and TFP to growth in value added followed different paths respectively. During the first sub-period (1973-74 to 1990-91) labour, capital and TFP contributed -6.70 per cent, 0.96 per cent and 105.74 per cent of value added growth respectively. There was a rise in the relative contribution of labour and capital to 22.46 percent and 89.18 per cent respectively during the second sub-period. Though labour and capital’s contribution to value added has risen, contribution of TFP ran into negative (-11.64 per cent) in the second sub-period (1990-91 to 2005-06).

The decomposition analysis for individual industry-groups of the manufacturing sector also reflected the same pattern. During the entire period of analysis, the contribution of labour was found to be the highest in rubber products (405.73 per cent), followed by wood products (78.37), textiles (29.93 per cent) and transport industries (15.85 per cent). In industry-groups such as food products, chemical products and basic metal products, the contribution of capital was greater compared to labour and TFP. In all other industry-groups the contribution of TFP to value added growth was the highest.
The period-wise decomposition analysis for industry groups revealed that in food products, metal products, machinery products and transport equipments labour contribution declines in the second sub-period while in all other industry groups the contribution of labour increases in the second sub-period. The contribution of capital has increased in industry groups such as food products, paper products, rubber products, chemical products and basic metal products in the second sub-period. For the industry groups such as textiles, metal and machinery products the TFP contribution increased in the second sub-period while in all other industry groups the TFP contribution declined in the second sub-period.

9.4.4 Regional Disparities in the Manufacturing Sector

The performance of manufacturing sector across districts and the trends in regional industrial inequalities during the period 1975-76 and 2005-06 judged from the four criteria, namely, number of factories, employment, fixed capital and value added, revealed the existence of glaring and widening regional disparities during the study period. Excessive concentration of industrial activity was found in Coimbatore and Chengalpattu districts and these two districts emerged as the most industrialized districts in Tamil Nadu. On the other extreme, there were Pudukkottai and Thanjavur districts perform with insignificant industrial activities.

The discussion indicated that the State had witnessed the problem of increased regional disparities over the study period. It was observed that the regions which occupied a dominant position in 1975-76 were found to be the same in 2005-06. In terms of number of factories, Coimbatore occupied the first position, whereas in terms of fixed capital and employment Madras occupied the first position in 1975-76. The industrially leading districts such as Coimbatore and Chengalpattu were forging ahead compared to the industrially backward districts indicating widening of regional disparity across districts of Tamil Nadu particularly since 1994-95. The emergence of few new industrial centres (Dharmapuri, Ramnad, Tiruchy, Salem and Madurai) had not brought about any significant change in the spatial concentration of
industries. It was also observed that there was not only an unbridgeable gap between industrially
developed districts and other districts, but also there existed a significant gap even among the
backward districts such as Nilgris, Kanyakumari, Pudukottai and Thanjavur. Quotient of
Industrialisation revealed that there was no significant change in the relative levels of regional
industrial diversification in Tamil Nadu. Concentration of industrial activities were found in
districts like Coimbatore, Madras and Chengalpattu

These findings of this study have led to the following conclusions.

1. A higher growth in the industrial sector of Tamil Nadu compared to all India does not
   contribute to substantial changes in its structure in general.

2. The growth pattern of industrial sector in Tamil Nadu is not sufficient enough to set
   in motion a process of dynamic structural change both in terms of composition of
   industries and other associated characteristics including spatial dimension.

3. Traditional industries continue to dominate composition of industries. Though there
   is a growth of reasonably diversified modern industrial complex in the recent past, it
   is not strong enough to alter the pre-existing industrial structure.

4. The major source of growth of industrial output is capital. The capital deepening
   process is the main cause for the continuous rise in growth rate of capital-intensity

5. A moderately increase labour productivity and a sharp increase in capital intensity
   accompanied by a decline in capital productivity reflect the process of strong capital-
   deepening and capital inefficiency.

6. Both partial and total factor productivity growth decelerate in the post reform period
   for total manufacturing sector.

7. Value added growth is largely contributed by capital accumulation and the role of
   labour is marginal in it.

8. In fact, the problem of increasing regional disparities in industrial development is
   glaring and widening over time in Tamil Nadu.
9. Coimbatore and Chengalpattu districts emerge as the most industrialized districts in Tamil Nadu, since excessive concentration is given for industrial development in these two districts by Government of Tamil Nadu.

10. The industrially leading districts such as Coimbatore and Chengalpattu forge ahead compared to the industrially backward districts indicating widening of regional disparity across districts of Tamil Nadu particularly since 1994-95.

11. The emergence of new industrial centres (Dharmapuri, Ramnad, Tiruchirapalli, Salem and Madurai) has not brought about any significant change in the spatial concentration of industries.

12. There is no significant change in the relative levels of regional industrial diversification in Tamil Nadu.

9.5 SUGGESTIONS

The suggestions evolved based on the findings are two folds in nature. They are suggestions for (a) policy recommendations and (b) further study.

9.5.1 Policy Recommendations

Tamil Nadu is considered as one among the most industrially advanced States in the country. However, the study provides a clue that there is scope for further improving the industrial performance and achieving higher growth in industrial production and productivity. This calls for attention from planners and policy makers of industrial development on the following lines.

1. “Fast Track’ industries which have comparative advantage identified through either availability of raw material (like cotton), or process capability (like auto components, castings), or large local demand (like two wheelers) or local product development capability (like food products, gems and jewellery) or skills (design and engineering) or a
combination of these factors should be focused on for ‘leapfrog growth’ by providing them all support for fast and radical growth.

2. Infrastructure, public services and utilities should be improved and made more efficient to assist manufacturing growth.

3. Uninterrupted power supply should be made available to industries and towards this solar power harvesting structures must be installed at every houses and institutions and thereby additional energy should be generated and energy use for household consumption purposes must be diverted for industrial development purposes.

4. Foreign Direct Investment must be encouraged by granting tax benefits, enabling easy transfer of technology, easing labour regulations, removing restrictions, facilitating easy setting up of business and enhancing infrastructure supports in Tamil Nadu.

5. Development of indigenous technology and innovation through Research and Development (R& D) must be encouraged.

6. Cluster development programmes must be implemented nearby R & D institution and thereby an industrial culture needs to be developed.

7. The locational advantage of Tamil Nadu being nearby Kerala should be exploited by establishing good transport, marketing network and inter-state relationships.

Though the overall growth of the manufacturing sector had been quite impressive at the state level, all the industry groups did not behave uniformly between 1973-74 and 2007-08. A clear trend of traditional industries being replaced by modern industries was observed. The increase in growth rates of value added and fixed capital without commensurate rise in employment and number of units in the registered manufacturing sector was seen as a disturbing feature of the industrial structure of Tamil Nadu. It is imperative in this scenario to give focus on employment oriented industries and their growth prospects. The specific recommendations are:

1. District Industries Centres have to concentrate on employment generating fast moving consumer goods (FMCG) and non-durable consumer goods industries.
2. Labour intensive industries such as fruit canning, fish canning, different types of textile and leather products need to be promoted at war-footing to tackle the problem of the unemployment of the trained manpower.

3. Agri and agro based industries should be encouraged so as to strengthen the linkages between agriculture and industry.

4. Training programmes must be organised for the use of capital judiciously so that cost reduction and industrial competitiveness are achieved.

5. Education should focus on fostering a culture that encourages innovation and manufacturing so that people are trained for alternative avenues of employment.

The results of the total factor productivity growth indicated the manufacturing sector as a whole along with certain industry-groups performed inefficiently in the post-reform period. TFP estimates for industry-groups showed that non-metallic mineral products, rubber products and metal products experienced substantial increase in TFP, while chemical products, paper products and leather products experienced a fall. The basic point of concern is that the industries which one would consider strategic from the point of view of economic development such as chemical products, basic metal products and machinery were among the lowest ranked in terms of TFP growth. In this scenario, there is a need for greater impetus on productivity performance for the sustainability of growth in the manufacturing sector.

1. Attention should be focused on efficient use of capital and enhancing productivity at firm level.

2. Indigenous industry based education must be practiced so as to improve the functional performance of industries.

3. Entrepreneurs must be trained for the rational and efficient use of new technology and to improve productive performance of industries.
4. Skilled manpower must be developed through primary, secondary and tertiary education with collaborated efforts by government, industry, research institution and academia

5. Specialised training institutions should be started with Public Private Partnership (PPP) approach wherein infrastructure must be provided by the government and the management must be left with any Non-Government Organisation (NGO) or user industries or any industry association.

The regional disparity in industrial development not only continues, but also widening in Tamil Nadu. In fact, it is neither necessary nor possible that all regions or districts develop equally. In a multi-regional economy with mobility of factor inputs, the industrial composition of a regional or district economy will have a tendency to specialise in certain activities depending upon its natural resource base, localisation economies and the local demand base. However, lopsided development, regional concentration and widening disparity would lead to several socio-economic problems and imbalance and instability in the economy. Keeping this aspect under consideration, the following recommendations are made.

1. Regional spread and diversification of industries across districts must be given due weightage in the planning process.

2. Demarcation of urban areas must be clearly spelled out and limits to industries at urban areas must be strictly exercised, thereby establish spatial balance in industries across regions.

3. Main industries should be planted in urban areas and ancillary industries must be encouraged in rural areas so as to reduce concentration of industries in few regions.

4. Business houses, large companies and foreign investors must be encouraged to start industries in the industrially backward districts of Tamil Nadu.

5. Banks and other institutions should provide both financial and technical support to start resource based rural industries in the industrially backward regions.
6. The decentralised planning or micro level planning should be properly carried out focusing on resourced based industries and to combine the local planning with state level planning.

7. A targeted entrepreneurial developmental programme must be necessarily implemented in the newly industrialised regions like Dharmapuri, Tiruchy, Ramnad, Salem and Madurai, and the industrially backward districts like. Nilgris, Kanyakumari, Pudukottai and Thanjavur.

8. Industrial expansion prospecting has to be planned urgently by the administrative authorities, business groups, non-government organizations and entrepreneurs jointly in a coordinated manner.

9. Rural resource and artisan based clusters must be formed targeting manufacturing development.

The above policy recommendations are aimed primarily at achieving radical growth and developing excellence in manufacturing in Tamil Nadu and thereby transforming the state into a global manufacturing hub.

9.5.2 Further Study

- A major limitation of ASI data is that it excludes the entire unregistered sector, which includes the household and non-household non-factory units. Therefore, it is important to study the unregistered sector and there exists wide scope for such studies.

- An analysis based on 3 digit classification would generate more accurate picture of the factor productivity performance of manufacturing industries.

- Industry and region specific micro level studies are to be conducted to support the findings based on secondary data analysis.
This study is a region specific study conducted with reference to Tamil Nadu. A similar study of this nature for other states and regions would facilitate comparisons and therefore such studies may be carried out using similar analytical approach.

9.6 CONCLUSION

To conclude, the study unfolds several shortcomings such as inefficiency in factor-use, limited labour absorptive capacity, low capital productivity, high capital-labour ratio, lack of diversification and spatial concentration in the process of industrialization of Tamil Nadu in recent years. All these, which are connected with lack of dynamism in the structural change and the performance of manufacturing sector, are matters of serious concern and in the context of the present strategy of industrial development of the state, call for necessary policy intervention.

CHAPTER V

INDUSTRIAL DEVELOPMENT IN TAMIL NADU:

A HISTORICAL PERSPECTIVE

5.1 INTRODUCTION