Chapter One

CONCEPTUAL BASE AND METHODOLOGY

1.1 Introduction

Spatial organization of the earth surface has been the focal theme of geographical analysis over a period of many centuries. At the dawn of human civilization, population concentration was less, technology was poor and man-land ratio was positive. Areal differentiation was therefore very limited and most of it was due to natural factors. After 1500 AD, the situation changed tremendously. Discovery of new lands, availability of sufficient food, new crop varieties and human initiatives helped not only a rapid growth of population but also new inventions. The most notable turning point in the history of human civilization was the Industrial Revolution. Though manufacturing of various products started with civilization, it became mechanized only after Industrial Revolution. Goods can now be produced in large numbers, at cheaper rate with limited manual labour and at very short period of time. It also brought the utility of new mineral resources. Regional dominance and Colonization complicated the concentration of population. Gradually anthropogenic factors started playing a decisive role in areal differentiation. Division of labour, emergence of middle class and improved means of transportation resulted in varied forms of lifestyle making changes in the social structure of the society. In this period of regional turmoil and transformation, the world wars brought the need for international cooperation through bodies like the United Nations. Transfer of technology, faster means of transportation, the need for adjustment between countries and development of science, technology and communication helped human society to diversify its activities. Consequently areal differentiation of any phenomenon became not only complex but also dynamic posing challenges to geographical research. Planning became a necessity and for planning, an in depth understanding of the phenomenon became basic. Geography
which was “Geocentric” in the ancient times shifted to “Anthropocentric” in the last century. Dynamism in the socio-economic structure of population made it necessary for Human Geography to diversify into various sub branches. Broad sub fields like Economic Geography, Settlement Geography, Population Geography, etc came into existence. Further development resulted in increased specialization and thrust areas like Agricultural Geography, Urban Geography, Industrial Geography, Transport Geography have been identified for concentrated study and research.

Industrial Geography as a branch of Economic Geography deals with the spatial and temporal distribution of manufacturing activities of man on the earth’s surface. It is the study of the location of manufacturing activities, their characteristics, their geographic distribution, areal differentiation, spatial interaction and industrial landscape. Manufacturing includes the system in which raw material, by sailable process is converted into a semi-finished or finished product. It includes all the production efforts of man that involve attraction, reshaping or assembly of one or more of the raw materials, which take place under a roof and which produce a tangible good. The shape and utility of raw material is changed and its value increased through the manufacturing process. A number of products which were considered luxury at one point of time have become essential making them to be in demand. Manufacturing activity has thus become an integral component of development planning in all countries.

Manufacturing activity may be classified into large scale and small scale operations. While large scale manufacturing is basic to the economic development of a region or country small scale industries play a vital role in developing economies.

The small scale industry has been recognized as one of the most appropriate means of developing the industrial economy of backward countries. Small scale industries facilitate the tapping of resources which otherwise would remain unused. These resources include entrepreneurship, capital, labour and raw materials. They
can mobilize rural savings which may otherwise remain idle or may be spent on luxuries or channelled into non-productive ventures. Small and Medium Enterprises (SMEs) are showing their impact on national and regional economies throughout the world. They have been recognized in both developed and developing countries as an effective instrument for creating employment opportunities with a small amount of capital investment. In most of the developing countries like India, Small Scale Industries (SSI) constitute an important and crucial segment of the industrial sector. They play an important role in employment creation, resource utilisation and income generation and helping to promote changes in a gradual and phased manner. Small scale enterprises are generally more labour intensive than larger organizations.

The role played by the small scale industry in the economic activity of advanced industrialized countries like Japan, Germany, Great Britain and the United States of America is significant. Many Nations, both developed and developing, exteriorized that the small industry sector is a useful vehicle for growth and in the latter for the creation of new employment opportunities on a wide scale in the shortest possible time.

In America, manufacturing generates the most suitable economic activity per dollar of production. The United Kingdom (UK) has a vision to see its manufacturing sector as a globally competitive force and leading the way in higher value components of the value chain and high technology manufacturing.

It was predicted that in 2012 manufacturing will grow by 4.6% whilst the economy will grow at 3% (The Manufacturing Institute 2009). Germany also claims success in its manufacturing sector and the German economy is very heavily dependent upon 6 of 47 export-oriented, industries accounting for one-third of national output. Its major exports are: motor vehicles, electrical devices, chemical products, machinery, and telecommunications technology.
China ranked as the world's largest manufacturer in 2010. Its lower labour costs and economic growth have allowed it to attract the main share of Foreign Direct Investment (FDI). China's total manufacturing production expanded by 107.9% in real terms over the period 2005-2010. All these countries depend not only large industrial units but also on medium and small scale units which contribute a vital share in the total production of manufacture products.

Since the end of the Second World War, most of the developing countries are giving priority to industrialization as panacea for under development and poverty. The most primitive economies are now keenly interested in rapid enlargement of manufacturing industry. It is in rapid industrialization they place a major hope of finding a solution to their problems of poverty, insecurity and overpopulation and ending their newly realized backwardness in the modern world.

In India, small and medium enterprises (SME) is a generic term used to describe small scale industrial (SSI) units and medium-scale industrial units. Any industrial unit with a total investment in its fixed assets or leased assets or hire-purchase asset up to Rs 10 million is considered as a SSI unit and investment upto Rs. 100 million is considered as a medium unit. In addition, an SSI unit should neither be a subsidiary of any other industrial unit nor can it be owned or controlled by any other industrial unit.

SSI is one of the significant segments of the Indian economy, contributing about 7 per cent to the Indian GDP and providing employment to over 28 million people. The Indian SME segments current production value is almost Rs 816,000 crore. It contributes to around 40% of industrial production and exports. It manufactures more than 8,000 diverse products, ranging from low-tech items to technologically-advanced products. The SSI sector targets both domestic as well global markets.
The role of small scale sector in economic development of the country has been well understood right from the period of independence. Hence a prominent position has been given to this sector along with Khadi and Village industries by the Government of India in all its Five Year Plans.

In the First Five Plan (1951-56) attempts were made to set up an organizational and policy base which could help to rehabilitate small scale and cottage industries. About Rs 30 crores were allotted for the development of village and small scale industries during the first plan. A number of All India Boards were constituted during this period. They include All India Handloom Board (1952) All India Handicrafts Board (1952) Coir Board (1954) and Small Scale Industrial Board (1954).

During Second Five Year Plan (1956-61) a number of new programmes were organized and steps were taken to provide a more assured market for the products of some of the industries. A sum of Rs 200 crore has been provided in the plan for this sector. The plan envisaged development of capital goods industries as central to the process of development. Karva committee (1955) reviewed the implementation of programmes related to small scale industries. Sixty industrial Estates were completed during this plan period.

In the Third Five Year Plan (1961-66) the main objectives were to improve the productivity of the workers in small scale industries to enlarge the availability of institutional finance and promotion of small industries as ancillaries to large industries. During this plan period total outlay of Rs 264 crores was proposed for programmes of village and small industries. During the Fourth Five Year Plan (1966-74) steps were initiated to improve the production techniques so as to enable small scale industries to produce quality goods. It also envisaged decentralization and dispersal of industries and concentrated on the promotion of agro based industries. Allocating Rs 1600 crores outlay for small scale sector, the Fifth Five
Year Plan (1974-1979) helped promotion of these industries in selected growth centres in semi-urban and rural areas including backward areas. During the Sixth plan period (1980-85) the outlay was enhanced to Rs 1780 crores.

During the Seventh Five Year Plan (1985-1990) the value of exports from small scale industries went up from Rs. 2553 crores in 1984-85 to Rs. 7626 crores in 1989-90. The number of small scale industrial units under the purview of small scale industries organization (SIDO) (registered and un-registered) increased from 12 lakh units at the end of 1984-85 to around 18 lakh units at the end of 1989-90.

In the last few decades, globalization has become an inevitable aspect. It signifies a process of internationalization plus liberalization, in which the world has become a small village. The competition has become intense in every field. Nations fight with game plan to sustain their economy by introducing new policies and announcing incentives to support mainly their economic indicators. After the world economy was open to attack, the Indian economy has initiated to concentrate on the development of small industrial base, which had contribute positively to the India’s GDP. Starting from Eighth Five Year Plan (1992-97) the impact of globalization could be felt.

During Ninth Five Year Plan (1997-2002) a sum of a Rs. 8,384 crores were spent on the development of small scale industries which is about 8.2% of total plan expenditure. Special efforts were made for setting up new industries in backward areas. Further, credit facility for loan up to Rs 100 lakh per unit was initiated in August 2000. This followed by other steps such as ISO Certification Reimbursement Scheme, Minitool Room Assistance scheme and Small Scale industries Marketing Assistance, helped as catalysts for growth of small scale industries.
The Tenth Five Year Plan (2002-2007) focused on creating an industrial policy environment in which private sector companies could become more efficient and competitive. It also formulated policies which were supportive towards the small scale industries. Liberalization of controls and adequate supply of credit were made available to small scale industries. Special concessions were extended to ready made garment industry since it had a very high potential for exports. Special economic zones have been set up for promoting rapid industrialization of the economy. For promoting agro-based industrial units, agri export- zones have been set up. Performance and credit rating scheme and credit linked capital subsidy scheme launched in 2005 helped MSEs to get loan facilities based on their productivity and performance. Micro and Small Scale enterprises cluster development programme and Entrepreneurial and Managerial development of SMEs through incubation programme helped new innovation and clusters of SMEs in various parts of the country.

In the Eleventh Five Year Plan (2007-2012) Micro small and medium enterprises and labour intensive industries were given special concessions. Labour laws are made more flexible so that these do not create obstacle in the growth of industries. The number of industrial items reserved for micro small medium enterprise will be reduced so as to increase competition and efficiency. Commercial banks and financial institutions will provide liberal loans without much formalities and delay to small and medium size industrial units. Schemes such as Rajiv Gandhi Udyamitra Yojna (RGUMY) and Prime Minister’s Rozgar Yojna targeted particularly the first generation entrepreneurs and helped them to establish new units.

According to the Ministry of Small Scale Industries, (4th All India census) the number of registered SSI units in India has increased from 89.71 lakh in 1997 to 285.16 lakh in 2007 and the workers from 213.16 lakh to 659.35 lakh. The production of SSI units in India increased from Rs.187217crore in 1997-1998 to
Rs.880805 crore in 2008-2009. In 2011-12, there were 26 million small scale units with around 60 million workers. After 2001, the production value of small scale units registered more than 10% annual growth. A notable aspect of the small scale industries in India is that their share in the exports was also increasing. In fact after 2001, the exports of products from small scale industries registered nearly double the annual growth rate of production.

Around 8000 different products are manufactured in the small scale sector. The National Industrial classification 2008 identifies 24 different groups of small scale industrial units. Among them, a greater share is taken by textile group, agro based group, wood and furniture group, printing group and metal products group both in production as well as export. These groups therefore are given much priority and hence they registered a comparatively higher growth rate than the other group of small scale industries after 2001. Specifically industry groups like hosiery and garments, food products and leather products play a vital role in the export trade of the country.

Like any other economic phenomenon, the spatial distribution of small scale industries also is uneven. As per the 4th All India Census of Small Scale Industries conducted in 2007, Tamilnadu ranked first among the States in the total number of registered small scale industrial units. Nearly 15% of the total small scale industrial units in India are in Tamilnadu. Gujarat with a share of 14.7% follows closely while Uttar Pradesh ranked third with a share of 12%. Kerala has nearly one-tenth of the total small scale industrial units in India. Thus these 5 States together account for more than 50% of all registered small scale industrial units in the country. Karnataka and Madhya Pradesh are the other notable States. The contribution of SSI in India to national development was meagre compared to the contribution of SSI in other countries of the world. India’s SSI shared 95% of all establishments, 40% of output, 45% of employment and 35% of exports. But Taiwan ranked first with a share of 97% of establishments, 81% of output, 7% of employment, 48% of
exports followed by Japan contributing highly with 99% of establishments, 52% of output, 72% of employment and 13% of exports (SIDBI Report, 2000). Generalizations are also difficult because though there are firms which are growing rapidly, there also exist 1,38,000 sick units within the sector in India. As already noted, small scale industries contribute a vital share in Indian economy and since Tamilnadu ranks first in the number of small scale industries, a study of this sector can help to increase the efficiency of performance.

1.2 Small Scale Industries in TamilNadu

The small scale industries, which are defined in terms of value of productive machinery, made an early start in Tamilnadu with the Government stepping in to create major industrial estates at Guindy and Ambattur in Chennai. In 1973 Tamilnadu had the largest number of Small scale industries in the country with 18500 registered units and it has maintained this leadership, by and large when the Second All India Census of small scale industries was carried out in 1987-88. It is still the leader in terms of units and employment, though not in the growth rate.

In 2011-2012 Tamilnadu accounts for the largest number of 15.07% micro small and medium enterprises in the country with 6.89 lakhs registered units, producing over 8000 varieties of product for a total investment of more than Rs. 32,800 crores.

As an important sector of the economy as a whole, small scale industries sector accounts for 95% of industrial units, 40% of output in manufacturing sector, 35% of exports and employment to 30 lakh persons in the State. The small scale industries sector has been considered as a powerful instrument for realizing the twin objectives additional productive employment potential in rural and backward areas.

Tamilnadu is a leader in Auto parts and components, Readymade garments and Leather and leather goods. In order to give special drive the following 13 industries have been identified as thrust sector:
1. Electrical and electronic industries  
2. Leather and leather goods  
3. Auto parts and components  
4. Drugs and pharmaceuticals  
5. Solar energy equipment  
6. Gold and Diamond Jewellery for exports  
7. Pollution control equipments  
8. Sports goods and Accessories  
9. Cost effective building material  
10. Readymade garments  
11. Food processing  
12. Plastic and  
13. Rubber.

The Commissionerate of industries and commerce, Tamilnadu Small Scale Industries Development Corporation Limited (TANSIDCO) and Tamilnadu Small Industries Corporation Limited (TANSI) play an increasingly effective catalyst role by rendering services in issuing industrial clearances and granting subsidies, allotment of industrial plots, providing and developing infrastructure facilities and supply of plant and machineries required by the Micro, Small and Medium Enterprises. The Entrepreneurship development institute, popularly called EDI was constituted by the Government in 2001 with the aim to fulfill the long felt need for creating an apparatus for catering to the training needs of small scale industries. There is a growth in the automobile ancillaries industry because companies like Ford and Hyundai have come to Tamilnadu. The food processing sector again is
growing as there is a demand for processed and packaged food. Entrepreneurs are setting up cold storages and exporting frozen vegetables and fruits.

Similar to the national pattern, small scale industries in Tamilnadu also exhibit an uneven distribution among the Districts. Nearly one-tenth of all small scale industrial units in the State are in Coimbatore district which ranks first. Chennai with its advantage as the State capital ranks next with about 9% of the total small scale industrial units. Salem (7.5%) Thiruvallur (5.5%) Kanchipuram (5.3%) and Virudhunagar (5.2%) are the other significant Districts with regard to this sector. The problem of sick units is also large in the State. In fact nearly one-third of the total units are closed in the rural areas of Tamilnadu while it is nearly 40% in urban areas. Thus there has been an urgent need to have a detailed study on this sector. The present investigation is one such step in this direction. Though the number of closed small scale industrial units are more in all Districts, it is very high in Madurai, Dindigul and Theni districts. Nearly half of all registered small scale industrial units in Theni District have been closed (All India Census 2001). Hence it is taken as the study area for the present study.

It is not out of place to have a brief discussion on the earlier empirical investigations on small scale industries sector here.

1.3 Earlier Empirical Investigations

A number of research works have been made with regard to manufacturing activity is general

Alfred Weber (1909) a German economist is the first to work out a comprehensive theory accounting for the location of manufacturing industries. He discovered that transportation and labour costs influence the location of manufacturing industries.
Renner (1947) classified industries into four groups viz extractive, reproductive, fabricative and facilitative. He identified six ingredients of plant location namely, raw material, market, labour management, power, capital, and transportation. He introduced the law of location of fabricative industry that has optimum access to its ingredients.

Hoover (1948) has made an attempt to analyze the location effects of labour cost and identified three kinds of location, which might have a labour supply conducive to low cost production.

Greenhut (1956) made his first major attempt on the least cost and locational interdependence theories. He has noted the least cost and locational interdependence factors as transportation costs, processing costs and the demand factors.

Alexander (1963) attempted varied techniques to explain the spatial pattern of industries. Alexanderson (1967) has made an attempt to analyze the geography of manufacturing at various levels such as global, continental, national, regional and urban. He was mainly concerned with the interpretation of present distribution pattern. He focused mainly on recent and planned changes in the distribution of industries since they reveal present location tendencies.

Moriarty and David Cowen (1982) discuss recent changes in the spatial distribution of manufacturing. By innovative use of the venerable location quotient, the authors are able to assess trend in three broad industrial categories- market-oriented, footloose industries and material – oriented industries.

Scott (1983) tried to analyze the intra sectoral organization and spatial structure of printed circuits industry in the Greater Los Angeles region. In another study (1986) he discusses the division of labour, vertical integration of production and its crucial relations to intra and inter firm transaction. Giving a unified description of the organization of the industry and the theory of firm, Scott tries to
synthesize the above issues. He also explains the implication of this synthesis for analyzing location theory and spatial pattern. Two specific geographic problems, namely origin and dynamics of growth centres and restructuring and the multiestablishment firm are addressed.

Research specifically on small scale industries are comparatively less. Yhi-Min Ho and Huddle (1970) considered a development alternative in which the potential role of the sector of small-scale and traditional industries, particularly culturally oriented ones, is explicitly recognized. The biases and deficiencies of government policies and theoretical models of development that overlook the actual and potential contributions of the small-scale sector are discussed first. The attributes of the small-scale sector and the growth implications of an alternative that incorporates the small-scale sector is analyzed next. The empirical relevancy of the theoretical consideration and the type of programs required to develop the sector as a viable source of growth and employment are discussed finally.

Dalitso Kayanula and Peter Quartey (2000) bring out the achievements of the Small and Medium Scale Enterprise (SME) sector in Ghana and Malawi. The role of government, internal and external support institutions in promoting the sector is discussed so as to ascertain the appropriate strategy to improve the SME sector.

Hayter (2001) tried to analyse the dynamics of industrial location. Taking examples from USA, Germany and Japan, he tried to highlight the differences depending upon the country based competitive characteristics. As part of the analysis, he discusses the small and medium size units and their characteristics.

Tambunan (2006) explained the pattern of change and development of MSMEs. Taking example from various regions, the relative importance of MSMEs in terms of employment share is discussed. Explanation of main factors affecting the pattern of MSMEs has also been given.
A number of studies have also been made on small scale in India and Tamilnadu. Kanan Chakrabarti (1973) analysed the small scale Cotton textile industry in West Bengal. He brings out its vital role in the economy of the State. Though the industry was facing an acute yarn crisis caused by yarn shortage and high prices of cotton yarn there is a vast scope for the expansion of the small scale cotton textile industry in view of a high cloth demand at home and abroad and a large employment potential.

Cartillier (1975) investigated the growth of small scale pump industry in Coimbatore. Discussing its marketing dimension, the study tries to bring out the significance of this industry in the economy in general and agricultural sector in particular.

Based on All India Sample Surveys conducted by the Reserve Bank of India and the National Small Industries Corporation, Nagaraj (1985) attempted to understand the rate, pattern and characteristics of the growth of small scale industries in India. Some other aspects like marketing of output, availability of inputs, nature of competition, pricing, etc, are also discussed.

Sharma (1993) analysed the spatio temporal evolution and regional structure of industrial clusters in Madhya Pradesh. The analysis revealed that there has been a decentralization of these industrial clusters. His study brought out that small scale industries are relatively more decentralized than the large scale industries.

Behari (1997) in his study entitled, “Rural industrialization in India” examined the problems, possibilities and perspectives of rural industrialization and discussed the crises in Indian villages and the need for the new strategy of rural industrialization and the provision of fuller employment in rural and small scale industries and technologies. He traced out agricultural development encouragement to village and small scale industries and general awareness for incorporating appropriate technologies as principal sources of impetus to the programme of
technological transformation in rural India. Further he reviewed various measures undertaken by the Government towards rural industrialization.

Laxmi Narasaiah and Deevena Margaret (1999) have an elaborate assessment of the small scale industries in Anantapur District of Andhra Pradesh. The impact of Government policies, capital structure, employment potential, problems and prospects of small scale industries are discussed in detail.

A case study of small scale industrial units in Karnataka state has been undertaken by Narayana (2001). He tries to analyze the nature and extent of awareness of policies and programmes among small scale industrial units.

Bala Subrahmanya (2005) studied the performance and prospects of small scale industries in India in the era of globalization. The impact of competitive environment due to liberalization on the production and growth of small scale industries has been analysed.

Kambhampati (2007) investigates the regional characteristics of small scale industrial units in India. Its aim is to assess whether geography plays any major role in determining the performance or characteristics these units. A sample of 1607 firms across the 30 Indian States has been considered. The results suggest that firm performance and characteristics are related to many of the expected industrial organization variables. However, there is also evidence of significant region-state influences on both the performance and characteristics of Indian manufacturing industry. As such, the results suggest that industrial spatial concentration, regional specialization, and regional market size play a key role in determining the performance and characteristics of small scale industries.

Srivastav (2008) studied the role of small scale industries in the rural development of Northeastern States of India. Changes in the number of enterprises and employees, working status classification, firm size and types of organization of small scale industries in the region is analyzed. It focuses specifically on the role
and profile of entrepreneurs. The small scale industries are broadly classified into manufacturing, assembling, processing services and repairing and maintenance. It is found that the manufacturing, assembling and processing activity is the dominant group among the various small scale industries activities in the Northeastern States in rural and urban areas.

Pandey and Dixit (2011) analyzed the impact of globalization on Indian Small Scale Industries. The main theme is to evaluate the performance of SSI, before and after liberalization and compare them with average annual growth rates, to know the impact of Globalization on the performance of SSI. The period of the study is 1973-2007 and it is based on secondary information.

Vaijayanti (2011) makes an attempt to study the problems of SSIs in the Nanded District of Maharashtra. Categorizing the problems as market oriented, logistic, structural and other aspects suggestions are given to improve the efficiency of small scale industrial sector.

Shastri and Tripathi (2011) describe the implications of globalization and domestic economic liberalization for small-scale industries and analyse its growth performance in terms of units, employment, output and exports. The paper concludes with policy recommendations to ensure the sustenance and competitive growth of small scale industries in India.

Bhatia et al (2012) analyzed the key role played by the SMEs in India, major problems or threats faced by these industries and also the various factors influencing the growth of small scale industries in India. At the end, role of entrepreneurs and their key skills are highlighted in context with the development of SMEs in India.

Mulimani et al (2012) attempted to study the SSI units in Goa and their problems and prospects. These units are playing a key role in the gross root economy in the study area. The resource base and the locational advantages and
disadvantages are considered to identify the problems. Suggestions are given for improving the efficiency of small scale industries.

Studies on small scale industries in Tamilnadu have also been conducted.

Manjula Devi (1982) analyzed the growth and spatial distribution of small scale manufacturing industrial nodes in South Tamilnadu. Gunasekaran (1985) analyzed a study on Agro based industries in Salem District taking sago industry as case study. Prabhavathi (1988) and Kumaran (1988) studied the Geographical analysis of handloom weaving industry in Madurai district and Thanjavur district respectively. Susheela (1997) analyzed a spatio temporal analysis of the distribution of small scale industrial units in Madurai city. Nagarajan (1999) analysed the spatial pattern and characteristics of small scale industrial units in Kumbakonam taluk. Pandiselvi (2007) analyzed a spatio temporal analysis of the distribution of registered small scale industrial units in Madurai district. Revathi (2007) analyzed a geographical analysis of small scale industries in Karur taluk. Thus both manufacturing and small scale industrial sector have attracted the attention researchers from various fields. These investigations have exposed that small scale industries play a very vital role in the economy of the country as well as a State or regions. It also brought the light that more regional studies are needed to understand the problems better. The present study is a small contribution in this regard.

1.4 Choice of the Study Area

Theni district is one of the southern districts of Tamilnadu and has been bifurcated from the Madurai district. A perusal of closed small scale industrial units indicates that the erstwhile Madurai district had the maximum percentage of closed small scale industrial units in rural areas among the various District of Tamilnadu. Since the Madurai district has been now trifurcated into Madurai, Dindugal and Theni, the present study has taken Theni District. The District has sizable forest area and is drained by Vaigai and Suriliyar rivers. It has a varied resource potential
suitable for development of small scale industrial units. In spite of its rich potential, nearly 30% of the units have been closed as per the census undertaken in 2008-2009. Hence there is an urgent need to understand the problems of this sector so that suitable control measures may be undertaken. The present study is one such attempt to fulfill this major objective.

1.5 Aims and Objectives

The following are the main aims and objectives of the present study:

- To study the spatial pattern of small scale industry in the study area.
- To analyze the group wise small scale industrial category in Theni district.
- To explain the temporal changes and factors for development of small scale industry in the study area.
- To identify areas of concentration for various industrial groups.
- To identify problem areas and suggest planning measures.
- To assess the relative significance of different areas in terms of industrial diversification.

1.6 Methodology

1.6.1 Sources of Information and Data Base

For the present study data is collected from both primary and secondary sources. Data pertaining to the number of units and labour in small scale industries of the district is tapped from the records of the District Small Scale Industrial Center. The study area details are collected from District Statistical Department. Data regarding different aspects of population have been provided by the Census of India (1991 and 2001) and it includes data regarding total population, sex, literate,
population and workers in different sectors. Simple cartographic and statistical techniques are used for analysis.

The primary data has been collected from sample small scale industrial units through a simple random sampling method. The selected industrial units operating in Theni District are grouped into seven industrial categories of small scale industries. Totally 190 sample units in all the seven categories are selected for the study area. Care has also been so that the sample units are distributed in all the blocks. The method adopted here is personal interview. The entrepreneur is contacted in person and details regarding investment, raw material source, marketing and problem are discussed. The information gathered by the interview has been tabulated and analyzed.

1.6.2 Techniques Used in the Present Study

The techniques used are varied. Simple cartographic and statistical techniques such as percentage share are used to explain the varied characteristics of small scale industries in the study area. Distribution of population was studied by using the choropleth maps. Ratio map, Location quotient, Co-efficient of geographic association and Index of Diversification have been utilized to bring out the spatial variation of small scale industrial units. The results of the analysis are represented in the from of thematic maps using Arc GIS. Bared on the analysis inferences are made and conclusions are drawn.

1.7 Limitation of the Present Study

The present study has the following limitations:

1. Demographic parameters considered in the study pertains only to 2001 because the official publication of 2011 census for the study area is yet to materialize. Since projections may not give accounts results, it is not followed.
2. Data pertaining to small scale industries are collected from District Industrial Centre. However information from other sources indicate variations is data. Hence only the data collected from District Industrial Centre has been considered for analysis and interpretation.

3. Restriction on time and finance forced the researcher to concentrate only on a sample of 190 small scale industrial units in Theni district

1.8 Organization of the Thesis

The Thesis is organized into six chapters.

The first chapter deals with introduction, characteristics of small scale industries, Government policy, schemes and Five Year Plans. It also discusses the small scale industries in World and India, small scale industries in Tamil Nadu, review of empirical studies on manufacturing and small scale industries, choice of the present study area, aims and objectives of the present study, methodology, techniques used, limitations of the study and organization of the thesis.

In the second chapter, the location, physical base and demographic information of the study area is given in detail. In addition, the economic base of the study area is also described.

The third chapter explains an overview of small scale industries, Role of Small Scale Industries in the Economy of India, definition, the varied characteristics, problems and financial support of small scale industries in India have been discussed.

The fourth chapter describes the classification of Small Scale Industries, their spatial pattern of distribution and their levels of concentration in Theni district in 1997.
The fifth chapter describes spatial pattern of small scale industrial group in 2007. The major changes in the distribution of small scale industries between the two time points are highlighted. Sample study of selected unit has been undertaken through generation of primary data. The results are analyzed and used for understanding the problems of small scale industries so that suggestion for suitable planning measures can be given.

The sixth chapter describes the summary and conclusions of the five chapters. The result and finding of the analysis are given here. The future scope of the present study has also been suggested.