CHAPTER TWO

TERRITORIAL DEVELOPMENT AND INDUSTRIAL LOCATION: THEORY AND LITERATURE SURVEY

CHAPTER: II

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INTRODUCTION:

Industrialization is regarded as synonym with economic development; in fact these two terms are most often used inter-changeably. This is due to the fact that industrialization is a process, which ultimately results in economic progress. This happens because industrial development exploits the idle resources of the economy and leads to multi- sector economic development, thereby promoting economic welfare of the society.

Industrial development can contribute to three major economic objectives of developing countries like India. These are (i) To facilitate rapid economic growth, (ii) To bring about stability in the economy, and (iii) To promote territorial development of backward region. It is in this context that this chapter attempts to study theories associated with territorial industrial development as well as to examine the literature available in this area. The main purpose for this is to provide a justification for conducting the present study. The chapter is divided into two parts: - the first part, deals with the theories associated with territorial economic development, while the second part deals with survey of literature in the area.

I

THEORITICAL FRAMEWORK:

The theoretical framework can be looked at from two angles; first, theories associated with the problem of regional disparities in industrial development; second the theories of industrial location. This is because the problem of regional disparities and industrial location are inter- connected. In fact, it is the concentration of industries in selected regions that may lead to faster development of these regions at the cost of other regions.

A. THEORIES OF REGIONAL DISPARITIES IN INDUSTRIAL DEVELOPMENT :

In this section of the present chapter, an attempt is being made to provide a theoretical explanation for the problem of regional disparity in industrial development, so that a solution to regional disparity can be drawn from these theories.

There are several regional economic theories which explains, why some regions develop industrially and others are labeled as' Industrially Backward Regions. '

The territorial disparity between different regions may be because the process of development initiated in a region, their degree and speed is different from another territory. This may be due to some natural and man made advantages in that regions.

One of the first theoretical explanations was provided by Perroux (1955). He developed the concept of "growth pole" in the development process. He said that, the forces that come into play in a market economy generally tend to increase inequalities between the regions. Growth poles are centers from which centrifugal forces originate and to which centripetal forces are attracted. Each centre being the centre of attraction and repulsion, has its proper field, which is set in the field of other centers. The theory recognizes that inequality functional or spatial is inherited in the process of development. According to him, "growth does not appear everywhere at the same time with variable intensity, it spreads through different channels, with variable terminal of effect on the whole of the economy." The accumulation and concentration of human, capital and other resources in centre (pole) give birth to other centres. The basic idea behind the growth pole concept is that, economic activity tends to concentrate around certain focal points. Economic development is thus polarized and it inevitably resulted in clusters of economic activity.

In 1958, Myrdal used the concept of cumulative causation to explain why growth gets concentrated in the regions, where it has been initiated. He supported the view of Perroux that economic growth starts in some regions rather than in all regions. Once the region starts growing, all activities begin to concentrating there, because of ever enjoying internal and external economies of scales, which are cumulative advantages of growth. Thus, "because of such circular causation, a social process tends to become cumulative and often together speed up at an accelerating rate". Myrdal further argues that the free play of market forces normally tend to increase, rather than decrease inequality between the regions. According to Myrdal, by nature, free market system causes advanced region to grow, at least in part, at a cost of other region and as an effect, income inequality takes place.

To explain inter-regional disparity in the development process, Myrdal used the concept of "Backwash effect" and "Spread effect", which are functionally opposite to each other. Once the development process starts, the developing regions would attract labour, capital and commodities from the lagging regions by offering higher wages and interest, which would support the further growth of the developing regions. This process according to Myrdal is "Backwash effect". Thus, the "Backwash effect" refers to all those unfavorable forces which causes disparity in development among the different regions. The backward regions losses their best labour due to migration from backward areas to developing areas. Likewise, due to this "backwash effect" that, the backward regions are also lacking in social infrastructure. In absence of education and other facilities, the society continues to remains traditional and anti-progressive. In absence of education and other facilities, the society continues to remains traditional and anti-progressive which further leads to income inequality and poverty. The backwash effect is strengthened with the passage of time, because as the developing regions grow rapidly, the socio- cultural gap between the developing and backward regions goes on increasing. However, development process in the developing regions does generate "Spread effect". The expansion in economic activities in the developing regions may increase the demand for agricultural products, raw-materials produced by the backward regions. Even the labourer who has migrated from backward to developing regions may send remittances to their region; which increases the income and saving of these backward regions. All these factors would lead to a self-sustained economic growth in lagging regions. Thus, the "Spread effect" refers to all those favourable forces which brings about inter-regional parity, but the "Spread effect" works only when the country has reached to high level of economic development.

Myrdal has explained why the rich and the poor countries differ in their strategies to tackle regional disparities. He said in the early stages of development the "backwash effect" are stronger than "spread affects", therefore he opined that there is a strong need of government intervention in distribution of economic activity to induce strong spread effect as to remove regional disparities. Regional disparities in development especially in industrial development cannot be removed unless the government intervenes in distribution of industrial activities by influencing location decision of industries, which in absence of government intervention is guided by free market forces, if left free increases further inequality in industrial development and economic growth.

Hirchman (1958) in his theory, has explained the causes of inter- regional disparity in the process of development. Like Myrdal he also used two concepts- "trickle down effect" and "polarization effect ". These concepts are opposite to each other. Like Myrdal, he also supported Perroux statement that the growth does not take place in all the regions at the same time. He is of the opinion that growth is necessarily unbalanced and inter- regional inequality of growth is an inevitable condition of growth. Though he is of the view that growth is necessarily unbalanced, but he believes that regional inequality is not a permanent phenomenon. Later on, in the growth process, spread effect would be stronger than backwash effect, if the developed region depends on backward regions for the requirement of raw material and food. This will ultimately encourage primary activities and food processing manufacturing industries, thereby promoting the development of the backward region. This has been termed as "Trickle down effects". According to him, trickle down effect is "by far the most important effect is the increase that is sure to take place, if economies of the two regions are complimentary. In short, trickle down effects are those favourable forces, which brings about inter-regional parity, which Myrdal explained as "spread effects".

By polarization effects, he means, all those unfavorable forces which causes regional disparity or divergence. The unfair competition between the manufacturers of the North and South and the undesirable inter migration of human resources are by far most important polarization effects. Among the unfavorable forces, according to him, internal brain drain is the most unfavorable forces. Because of this, the development of the backward region detoriates and at the same time development of developed regions speeds up at the cost of backward regions. This is because the advanced regions, of the presence of internal and external economies, leads to more investment than in backward regions.

The theoretical generation in the pioneering work of Perroux, Myrdal and Hirschman and others provide the concept of "Backwash effect" versus "Spread effects" and "Polarization effects" verses "Trickle down effects". The development process in the economy is worked by two concomitant but opposite spatial tendencies, concentration and dispersion or convergence and divergence. Concentration or convergence leads to clustering of economic activities in a few growth centres, where as dispersion or diversion brings about an even spread of activities in other regions. When the process of concentration multiplies, the dispersion process is weakened .However, if any strong concentration process is counter balanced by an equally strong injected dispersion; the result is decentralization.[9]. The above discussed theories, agree that growth does not take place everywhere at the same time, and start with, the growth is necessarily unbalanced. They also accept that development process involves the operation of both, the divergence causing and convergence causing forces. These theories also strongly supports that, the existence of the regional disparities is due to economic reasons.

It is also felt that the play of free market forces tends to increase in regional disparities. To remove this, disparity, government intervention becomes a must. Government through certain incentives subsides and through making easy availability of finance, can develop backward region.

B. THEORIES OF INDUSTRIAL LOCATION:

In the present time, with the changing industrial environment, the concept of industrial location is also changing rapidly. Due to the globalization, market area of the particular firm becomes wide and open, and there is always an interdependence of industries, which always add to complexity in choosing the industrial location. The location of industries is not very random. The pattern of industries in the world reveals the industries tend to concentrate in certain places. The tendency of some industries to 'concentrate' and some to 'disperse' is the combined result of individual decisions, which are affected by factors of industrial location.

Since the problem of regional disparities arises due to the uneven distribution of industrial investment and industrial employment and concentration of the above in a few developed centres, the regional disparities can be thought of, as a problem of industrial

[9] See Sarkar (1999)

location. Thus in this section, an attempt is made to give a brief overview of some of the locational theories so as to focus on the important locational factors.

It was Weber (1909) who first developed his famous "Least Location Theory". He attempted to develop a general theory of industrial location, which could be applied to all industries for all the times. The basic objective of Weber's theory was to find out minimum cost of an industry. He identified three factors (i) Influence of transport cost (ii) Influence of labour cost (iii) Agglomeration, which determines industrial locations.
And for an optimum location site, least transport cost was considered as the most influenced one. The advantage of transport cost largely depends on the nature of raw materials used, which may be ubiquitous or localized. Transportation costs also vary according to the weight.

With regard to 'labour cost', Weber assumed that, an industry would be located away from the site of least labour cost, if the labour cost saving is lower than the increment in transport cost ,at this site, above the minimum possible transport cost. To measure the importance of labour as a location factor, Weber used the average cost of labour per unit weight of product as an index. Greater the labour cost index; the greater will be the susceptibility to move from the least transport cost site.

Weber next examined in theory the effects of agglomeration. Agglomeration means concentration of production for a commodity at a place. There can be two types of effects as a result of agglomeration, (a) economies of scale within a plant, (b) economies from the association of several plants. A plant would tend to be located in agglomerated area, if the saving of production cost at this location offset the increase in transport cost, as a result of a shift from least transport cost location.

This theory considering costs as an important aspect of production, advocates that the production activity may become profitable at a point at which the costs are minimum. According to this theory, factory sites would be chosen at such a place, where cost will be at minimum to earn better margin between the costs to the manufacturer and the price at which he can sell his product in the market.

Palander (1935) developed a theory called "Market Area Theory" of industrial location. His theory is an extension of Weber's theory and also be made valuable contribution to the locational theory by adding the market area dimension to it. In his theory, he considered two different, but inter–related questions. First, given the price and location of materials and the situation of market, where would production take place, second, given the place of production, factory costs, and transportation rates, how does price affect the extent of the area in which a particular producer can sell his goods?

The size of market area would influence the profit of the firm. Given the production cost and the rate of profit per unit of output, larger the market area more will be the total sales and therefore, total profits of the firm. According to him, industries are attracted to market, indirectly proportionate to the size of market. To raise or capture the market, the important variables are production costs and transport cost. By controlling these costs, price can be kept low and increase the sales and thereby the profits. Thus, he linked the least transport cost analysis of industrial location with the market area analysis.

Hoover (1948) had developed a new approach to the theory of industrial location and called it "Minimum Production Costs" in location theory. According to him, probable site for industrial location is the minimum production costs site and not the minimum transportation costs site. Minimum transport cost site as advocated by Weber, may not be the site of minimum production cost site because it depends on three factors (i) Cost of agglomeration of raw materials, (ii) Cost of transportation of finished goods to the market, and (iii) The processing cost that involves labour costs and technology cost. While calculating transport costs, he emphasized on (a) Terminal costs and (b) Line and haul costs. In this theory, he had incorporated both production costs and transport costs as determinants of industrial location. Thus according to him the site of the industries would be chosen by taking minimum production costs into consideration.

Another theory called "Central Place Theory" was developed by Losch in 1954. He applied the profit maximization approach to the industrial location problem. The central theme of this theory is that industrial location is characterized by conditions of monopolistic competition and not perfect competition as assumed by Weber. Losch assumed that firm would locate at place, not necessarily, but certainly, where revenue is maximum and thereby profit is maximum. Thus, instead of least cost Losch emphasized on demand, which will give maximum revenue. This theory sought to explain that the size and shape of market would command the largest revenue. He assumed in his theory of location, demand as a major spatial variable. He asserted that the right approach is to find the place of maximum profits, where total revenue exceeds total costs by the greatest extent.

Isard (1960) advocated "Industrial Complex Theory" of location. It is an example of linked firms clustering together to create their own cost competitive environment. Firms supplying raw materials or consuming by products from one another can also benefit from location in close proximity of industrial complex.

An industrial complex has been defined as "a ramified chain of a functionally inter connected industries" The presence of all links in the chain of interacting industries maintained by production technique. This inter connection is such that all the industries when function together, can operate optimally rather than when they function together over a wide areas. Industrial complex is conditional by input structure and distribution of output. Though the propulsive industry is not an absolute necessity for functioning of an industrial complex, economics of agglomeration and concentration is must. Such an industrial complex is generally "planned and has well developed industrial infrastructure.[10]

A brief review of the theories of industrial location explained above shows that, from the partial cost analysis, the theories have moved forward to cover demand, profit and revenue in locational analysis. In the earlier theories of industrial location, transport cost and labour cost assumed greater importance. However, modern theories emphasized demand as a significant factor. In practice, the choice is governed by not only cost and demand factors but also by personal factors, government policies etc. Nevertheless, ultimate goal of an industry is to maximize the profit, so they would prefer to locate their unit at a place where profit is maximum.

The ironic part is that none of the theories of regional disparities or industrial locations have indicated that there should be a role of government intervention in choosing location site and even how the government should intervene in location of industries, so that territorial disparity can be minimized. It is one of the issues that the present study will address.

After having examined the theories associated with territorial disparities and industrial location, in the next section a review of existing literature has been undertaken.

[10] See Sadhak (1986)

II

LITERATURE SURVEY:

The existing research on territorial industrial development and territorial industrial disparity lays emphasis on location of industries, which is further influence by various historical, economic, social and geographical factors. Several studies have been conducted so far, which have dealt with this issue of industrialization and territorial development. These studies are reviewed in this section. Just, as the theories were looked at from two angles, so also the literature survey. The first part deals with the literature on industrial location, regional development and policies pertaining to other countries. The second surveys the literature on the subject pertaining to India. The core purpose behind conducting literature survey is to identify the gap in the knowledge and there by provide justification for undertaking the current study

One of the first studies on regional development was conducted by Finger (1971). In his study, he made an attempt to analyze the efforts of the government of Israel in encouraging industrial development in general and backward areas in particular. He analyzed the impact of number of grants and subsidies on industrial development and concluded that these subsidies and incentive led to considerable industrial development.

The study by Rodger (1979) focused on the policy of Italian government, aimed at reducing disparities in industrial development between the northern and the southern parts of the nation. The Italian government prominently banked an incentive measures and huge investments were made in the south. As a result, industrial employment in south witnessed a stupendous growth during 1951 and 1957.

The joint study by Brugger and Stuckey (1987), proved that the problem of regional disparity in industrial sectors was also found in a developed countries like Switzerland. Their paper focuses on innovative activities at entrepreneurial level and regional disparities in Swiss economy. The study showed that sectoral, structural and entrepreneurial changes in the global economy had both direct and indirect spatial impact on the productive activities in Swiss regions.

Mercado (2003) in his study analyzed the regional development policy of Philippines, which is one of the developing countries, facing the universal problem of regional disparity. As the economy of Philippines has been adopting regional development policies since 70's, the economy now is witnessing a gradual reduction in disparities. This was possible because of a strong linkage between agriculture and industry. According to him, regional development can take place by enhancing agricultural productivity and small scale industrial development. He stated that dispersal policy along with the infrastructural development has led to the regional development of Philippines.

De (2008), in his paper analyzed how the availability of infrastructure in India and China has led to regional disparity in both the countries. Availability of good quality, infrastructure in coastal and non coastal belt of China is better than India. This has led to attracting a number of industries and progressive employment in China. According to the study, regional disparities arising out of industrial development has been gradually reducing in China, where as India has witnessed a reverse trend.

The studies reviewed above leads one to conclude that government incentive plays an important role in reducing regional disparity and promote development of backward regions.

In India one of the pioneering studies was conducted by Pathak (1971).He measured the impact of industrialization on the per capita income and employment of the people in Chhotaudepur region of Gujarat: He made an attempt to access the impact of Fluorspar Plant, a public sector project on backward economy of Chhotaudepur. The finding of this study revealed that there was a positive impact of this project on employment of un-skilled and semi skilled workers of this region and thereby on income and expenditure level of the people. He opined that project should be undertaken in all backward region of the state, where ever it is possible.

Hajra (1973) in his study compared the regional disparities between one of the most developed states of India– Punjab, with one of the most backward states of India – Bihar. According to his study, industrial disparity between Punjab and Bihar had increased during 1959 to 1966. The factor that contributes to the widening of disparities between Punjab and Bihar are ascendance in industrial growth of Punjab and crippled industrial growth of Bihar, which in turn is due to non availability of infrastructure.

Gupta (1973), in his paper emphasized, how the investment in public sector had reduced regional disparity. He used PCI (per capita income), as a yardstick of measuring regional disparity and assessed the impact of public sector investment on PCI of that region. He concluded that regional imbalance in India, between the periods 1950-65 has decimated because of public sector investment made in a backward regions of India.

Palsapure (1974), in his work probed the reasons for industrial backwardness of Vidarbha and existing regional disparity in terms of industrial development in the state of Maharastra. His findings states that there was intense concentration of industries within the limits of Mumbai – Pune region, where as rest of the state remained under developed. Bombay alone accounted for 77% net value added by manufacture in the state and 66% of the total factory employment in 1961. According to him, Vidarbha, a mineral and forest rich region, invites and establishes mineral and forests based industries, than it would leads to an upsurge in employment and industrial development, and a consequent decrease in disparity in the sate of Maharastra.

Godbole (1978), has dealt with "Industrial Dispersal Policies" measured inter district industrial disparity in the state of Maharastra. He expressed a serious concern on the acute nature of intra-state disparity in industrial development in the state. Bombay – Thane and Pune lying on a 120 miles corridor, accounting for four-fifth of the total factory employment in the state, leaving the other areas of the state industrially backward. He tried to measure the impact of the state on regional industrial development. He arrived at the conclusion that industrial dispersal policies have reduced regional industrial disparity in Maharastra.

Hashim (1979) in his paper has analyzed the regional variation in industrial development from 1950 to 1971.He found that industries in factory sector generally tend to develop in clusters. As a part of the methodology adopted, he took state wise employment and value added in factory sector. The outcome of his analysis reveals that Maharastra, Gujarat, West Bengal, Tamil Nadu, Kerala, Punjab and Haryana are the most benefited states owing to some historical reasons and the clustering of industries in particular regions. Moreover, government decision to invest in a public sector in the states like Bihar, Madhya Pradesh, Orissa and Assam has initiated the development of industries in industrially backward region. However, this did not lead to any significant improvement in terms of employment in the factory sector. He asserted that private sector investments though of considerable significance have continued to flow in the states that have already reached the zenith of industrial development. This has contributed to increase in regional industrial disparity.

Pathak's (1981), in his work "Industrial Dispersal in Gujarat" is notable because of an in-depth examination of the regional aspects of industrializing the backward regions and suggestions about the strategies for industrial planning. His work analyses region wise industrial structure and development prospects among the categorized regions in the state of Gujarat. His work further examines the fast growing industries, basic and service industries and regional industrial concentration. Industrial diversification policy is examined in the context of building a case for industrial dispersal, so as to quicken the process of industrial dispersal and analyses the extent and spread of industrial linkages across the categorized regions of the state. He concluded that in industrially advanced regions, government must discourage the location of industries, where as it must be encourage in a backward region, to develop them industrially.

Joshi (1982) assessed the distressing causes of relative backwardness of one area compared to other developed areas. The work "strategy for the development of backward areas – with special reference to Gujarat", is remarkable for categorization of various factors that bring about such geo-physical, economic social and historical factors, which leads to differentiation between the developed and backward areas. According to him, agriculture being the main source of activity in backward areas demands greater infrastructural facilities on the part of the government to substantiate the agricultural development and consequent rise in the income of the people. He proposed the establishment of labour intensive industries in the backward regions.

Jha (1982), in his paper laid emphasis on grouping the indicators of inter-state disparities as indices of income, poverty and unemployment, agricultural indicators, industrial indicators, infrastructural indicators, social services indicators and resource allocation indicators and their impact on regional disparity. He says that many poor states of India are blessed with rich natural resources but only the region with high rate of initial capital formation continue to grow, where as the rest lagged behind. Thus, according to him, the disparity between the two regions exists due to initial disparity in capital investment.

Bharadwaj Krishna (1982), in his study concluded that industrial expansion directly depends upon availability of agricultural surplus and effective demand for products of industry indicated by high level of standard of living. According to his study, industrial development of Gujarat and Haryana is because of availability of agricultural surplus and high standard of living of the people there, where as Bihar, Orissa, Uttar Pradesh, Rajasthan, Madhya Pradesh seem to explain the case of retardation.

Kaur Kulwinder (1983) in her research probed the inter-regional disparities in industrialization in the state of Haryana. The parameters to study disparity in industrialization, used by Kaur are number of registered manufacturing factories per lakh of population workers engaged in secondary sector as a percentage to total workers, workers in registered factories per one lakh of population and electricity consumed for industrial purposes as a percentage of total consumption of electricity. According to this study, Kurukshetra was the least industrialized district, where as Gurgaon ranked first, followed by Ambala and Sonepat districts during the study period of 1966 and 1978. The study concluded that the regional disparities in industrialization had not declined in the due course of study period rather it had noticed a sharp increase due to concentration of industries in 1978 as compared to 1966.

Uday Sekhar (1982), tried to analyze the trends in inter state disparities in industrial development in India, during the period 1961 to 1975 to find whether industrial regional disparity has increased or reduced. He analyzed the secondary data by using Hirshman – Herfindhal Index and Theil Index. According to him, there had been a significant decline in state wise concentration especially the value added in manufacturing sector. Theil Index exhibited a decline in a disparity to the extent of 40 percent in value added and 30 percent in employment; where as Hirshman Herfindhal Index also exhibited a decline in disparity by 18 percent in value added and by 15 percent in employment.

Mathur (1983) in his paper investigated the pattern of spatial economic disparities in India during 1950 to 1975. According to his study, until 1960's the disparities in terms of income through agricultural sector were declining and thereafter it increased at a faster rate. The regional disparities through industrial development, witnessed a rising trend and then a consistent decline was noticed in disparities. He found that regional disparities in primary and tertiary sector revealed on 'U' shaped behaviour while secondary sector revealed an inverted "U" shaped behavior.

Tewari (1985) in his paper analyzed regional disparities in Uttar Pradesh. He observed a wide disparity among the five regions of the state (Hill, Western, Central, Eastern and Bundelkhand). Agriculture, being the main occupation of the people, dominates the state economy. He also pointed out that in industrial sector too, there exists wide disparity among the five regions in the state. There were nine factories per lakh of population in the Western region, eight factories per lakh of population in the Central region, only two factories per lakh of population at Bundelkhand, Eastern and Hill regions. The Western region industrially advanced in the state, ranks first in industrial output to total output. He concludes that there exists region disparity in both agriculture and industrial development among various regions of the state.

Bajpai (1985), in his paper laid a pertinent emphasis on inter – regional disparities in industrial development by using per capita industrial output in the study period from 1969 to 1977. According to him, regional disparity in industrial development during the study period declined. The study revealed that Gujarat, Maharastra, Haryana, West Bengal, Tamil Nadu were industrially developed sates in 1969 and maintained their status till 1977, in terms of per capita industrial output. The coefficient of co-relation in terms of per capital output was significantly high indicating that inter regional pattern of industrial development, which existed in 1969 continued to persist until 1977.

Sadhak (1986) in his study, he attempted to assess, the impact of incentives and subsidies on the notified backward districts and developing districts in the state of Maharastra. He considered Aurangabad district, which was categorized as one of the most backward district of Maharastra during the period 1970-1971 to 1980-1981. He came forward with the observation that incentive played a crucial role in inducing industrial development in Aurangabad district. There was significant growth in industries, industrial investment and employment. He also reiterated that there is a positive relationship between industrial growth, state economy and state income. He concluded that the incentive policy of the central and state government have had a positive influence on the industrial development of the Aurangabad district.

Singh (1987) in his work has made and attempt to explore the causes and impact of disparities in industrial growth on the economy of Rajasthan. Within the state of Rajasthan, some districts are industrially backward while some are industrially progressive, leading to regional disparity in the state. He studied the extent of disparity between 1961 and 1981. His observation that out of 26 districts, 16 districts are found to be industrially backward and 10 districts are noticing industrial growth is due to the variables in the availability of resources. One of the reasons for industrial disparity in the state is lack of basic infrastructure. He concluded that there is definite co-relation between regional resources and industrial development.

Appa Rao (1987) critically examined that to what extent is planning in India, responsible for creating regional disparities. According to him, planning in India has been used as an instrument for bringing about regional development and a measure to remove regional imbalances. He concluded that, during the plan period, the cumulative result of plan outlays and central assistances has been more in favour of relatively developed states, thus widening the gap between developed and backward states. So our planning itself is responsible for regional disparity.

Vyasulu (1987) in his work on the development of backward areas emphasized on the decentralization of production, particularly on small-scale industries. According to him, small scale industries do not require substantial capital investment. This feature of small-scale industries ensures as well as perpetuates regional development. A number of empirical works assert that decentralization in the process of regional development will give a fillip to the quality of life in a district. He surveyed Koraput district of Orissa. He concluded that within the small scale industrial development and decentralization planning, the Koraput district which was one of the most backward district of Orissa, witnessed to some extent improvement in the quality of life by people there.

George Rasen (1988), has made an attempt to study the industrial development of three southern states namely Andhra Pradesh, Karnataka and Tamil Nadu. He considered a study period from 1952 to 1981. He found that among the three states Tamil Nadu grew very rapidly between 1950 and 1970, during 1970 and 1981, industrial development in

Tamil Nadu slowed down. Industrial development in Karnataka was tremendous during 1960 and 1975. He arrived at the conclusion that the potentiality of growth of industries in three southern states depends more on the investment policies of both central and state government.

The emphasis of Jayalakshami and Abdul Aziz (1988) their study was on industrialization and regional imbalance in the state of Tamil Nadu. Indicators such as the numbers of registered factories per 1000 sq. Km. of geographical area productive capital in industry- district wise in the state, value added and employment in the factories per lakh of population served as the major parameters to study regional imbalance in the state. They inferred that level of disparities in industrial development between the districts of Tamil Nadu persisted as earlier.

Sebastain and Leanard (1988), attempted to study district wise industrial development of Tamil Nadu in the stipulated study period from 1976-1982. Three indicators; district wise distribution of registered factories, number of employees per district and district wise distribution of the value added serves as determinant for the extensive study. They found that five major districts of Tamil Nadu- Coimbatore, Salem, Tirunaveli, Madras and Chegalpattu dominated the factory sector, they accounted for 63.8 percent of the total registered factories, where as the remaining districts accounts for only 36.2 percent of the total registered factories. The outcome of the study reveled that the degree of disparity in industrialization between the districts of Tamil Nadu had not been reduced.

Ziauddin (1988), in his article stated that the effect of disparities can be visualized in terms of economic activity, unemployment, per capita income and rate of employment growth, because of divergent process of development. According to him, regional disparities in the development, especially in industrial development cannot be removed unless and until government intervenes in the distribution of industrial activities by influencing location of industries.

Dadibhavi (1989), in his work is on the regional disparities in the state of Karnataka between the period of 1960-61 and 1975-76. The co-efficient of variation, co-relation and multiple regressions were employed as the parameters to measure the disparity. The study revealed that in spite of industrialization, the disparities in the level of development in the districts of Karnataka persisted because of wide variation in the level of development during the study period.

Rao's (1989) study of inter state disparities by using fixed capital, employment, output and value added as indicators led to the inference that there exists a positive relationship between per capita income of the state and proportion of working force in industrial as well as service sectors of the state. According to him, the inter state disparities in manufacturing sector had increased. Maharastra, Gujarat, West Bengal, Tamil Nadu had occupied the first four places. These four states noticed rapid industrial growth as compared to other states. This fact led to the conclusion that the three and half decade of planned development in India had not been enough to reduce inters state disparities in industrialization.

Das (1993) in his paper examined the strategies adopted in planned development of the Indian economy, with specific thrust on removing regional imbalances. According to him, though there was a great trust in industrial dispersal through various measures like financial support schemes, industrial licensing but in practice, the state already recognized as advanced state managed to obtain a lion's share of the entire range of benefits. The pattern of industrial development had been lopsided resulting in depressed region being starved of essential infrastructural investment. He concluded that the financial flows have been so far in favour of advanced states.

Jaishankar Raman (1996) in his paper used Barro and Sala– i Martin model and Sahay and Cashan Model to analyze how convergence had led to regional development in India. According to him, financial grants offered to the states of India are unconditional but despite this, the disparity persists. This is because granting financial support for industrialization, government did not take population of that particular state into consideration, Uttar Pradesh and Bihar constituting 25% of total India population received meager grants. He arrived at the conclusion that inter-state disparities have increased during 1960-90, which shows that the claim of convergence of regions cannot be stated as true.

Bhandari (1998), his work focused on the central and state government incentives for the development of backward region and their impact on industrial development of backward areas and regions of the country in general and of Uttar Pradesh in particular.

According to him, availability of concessional finance and subsidy has not been a significant motivating factor in location decisions. He stressed on development of infrastructure of the backward areas. He also analyzed that, central government incentives for the development of backward areas are mainly directed to backward region of developed states, rather than backward areas of the backward state. He is of the opinion that for the industrial development in both developed as well as backward areas, the central and state government required to work in co-ordination with each other.

Sarkar (1999) initiated his study on regional disparities in India" covering a span of thirty years i.e. from 1960-61 to 1689-90 using per capital income as the signal indicator of development, to measure the level of disparity. In order to probe the causes of inter state disparity, the analysis of over all development of the states was carried out by employing twelve (12) indicators pertaining to agriculture, industry and infrastructure. Various statistical techniques were used to analyze the disparities. According to the study, state disparities in terms of per capita SDP showed that the disparities had widened during the study period. This has been reflected in the fact that the gap between three highest income states and the three lowest income states had increased.

Somik Lal (1999) in this paper tried to establish relationship between public policies and regional growth, as well as the role of public investment in the development of the region. The infrastructure has a direct impact on output and thus influences the location decision of private industry. The availability of infrastructure can attract new business, if it is feasible in backward region. According to him, it is possible that infrastructure investment can influence regional disparity by changing the competitive and comparative advantages of neighboring states. The states with prominent industrial advancement are due to more investment in infrastructure and the backward states are because of low investment.

Dholakia (2000) in his paper focused on the liberalization policy of 1991.He found that the industrial sector of Gujarat has benefited, while agricultural sector has been totally neglected. It is because of this, after 1990's regional disparity increased with in the state of Gujarat. According to him, this policy of liberalization has favored the organized sector more than unorganized manufacturing sector. Even amongst the SSI, more SSI has been located in metropolitan and urban areas, whereas after 1995, only 37 percent of registered SSI in rural Gujarat. This is due to the availability of better quality of infrastructure in urban Gujarat. He concluded that this policy of liberalization has led to high growth of industrial economy in particular and the economy of Gujarat in general, but at the same time it had led to increase in regional disparity.

Similar conclusion was arrived by Awasthi (2000) in his study. He tried to analyze the changing pattern of industrial structure in post liberalization period. According to him liberalization has helped Gujarat economy and its manufacturing sector, in particular. According to him, in post liberalization period regional disparity in industrial development in the state of Gujarat has increased. Out of total project investment, major investments are concentrated in the districts, which are already industrially advanced. However, other districts have also potentiality to attract investment. Gujarat needs to focus on the infrastructure to retain its dominant position in manufacturing sector.

Ghuman (2000), in his paper said that liberalization policy has accelerated industrial development in India. However, the benefits are not evenly distributed among the states. The gains of liberalization policy are enjoyed by two western states – Gujarat and Maharastra and one southern state- Tamil Nadu. The other beneficiaries are West Bengal, Karnataka and Orissa. These states enjoy certain added advantages such as proximity to ports, vigorous implementation of reform policy, a strong industrial base, (except – Orissa), greater availability of mineral resources, relatively better-developed infrastructure, and political stability. The remaining states either have gained little or have suffered losses during the liberalization. Most of these states are located in north India.

George (2001), He tried to examine the possible impact of reforms on regional disparities as well as industrial development. He concluded that existence of wide regional disparities in India is an inheritance from its colonial past. The study revealed that the phenomenon and process of widening disparities prevailed and persisted.

Jha (2001), focused on the result of economic reforms, the flow of both domestic and foreign investment was directed more towards better pertaining regions. The low performing regions received only a small fraction of commercial bank credit and credit from All India Financial Institutions. These findings indicate that inter regional disparities are likely to rise in the course of development in future.

Baruah (2001) in his paper put forth the statistical evidence that industrial disparities in India both during pre and post reforms period has persistently been widening. His study reveals that North Eastern states, in spite of being rich in natural resources were placed at the bottom of the ranking in the composite index of Industrial development. According to him, it is the infrastructural bottle necks which are responsible for regional industrial disparities. He summarized in his paper that the centre should come forward in a big way in providing infrastructural facilities to enable North Eastern states, to reap the benefit of economic reforms.

Khare and Yadav (2001) conducted a study based on the data provided in the annual survey of industries. The variables – number of registered factories, number of workers, capital investment, value added, population, geographical area etc. Simple statistical tools of mean, standard deviation and co-efficient of variation of different ratios have been used. The study concluded that both internal and external factors determine the process of regional industrial development. Regional disparity in industrial development has widened in the process of industrial development.

Somra S. S. (2002) attempted to explore the uneven spatial development in India in a post liberalization period. According to the study, there has been a steady increase in disparity in terms of per capital state domestic product. This shows a steady increase in NSDP during 90's but the gains of prosperity were distributed unevenly. Developed states gained much while poor state become poorer. He used co-efficient of variation as a statistical tool. His analysis shows that in post liberalization period disparities among the states increased with a larger gap. According to him, reforms have benefited those states that are already industrialized. This can be seen in the list of forthcoming industrial investment proposals. As in the past, the lion's share has gone to the industrially developed states like Maharastra, Gujarat, Tamil Nadu and Karnataka.

Sridhar (2003) in his paper, attempted to examine the impact of growth centers on firms in India. His study is based on primary data collected from several growth centers. According to him, it is a not incentive that attracts industries in the region but it is the infrastructural facilities that attracts industries in a particular region. The impact of incentives on industrial location is quite significant only when infrastructures are provided. Out of 68 growth centers spread all over India, he surveyed Hassan district of Karnataka, Bawal district of Haryana, as well as Sathari, and Shajanwa districts of Uttar Pradesh. He concluded that there is a strong relationship between growth centre infrastructure and tax incentives on firm's location decision.

Chakravarty (2003) tried to find out what factors drive the industrial location decision in post reform period in India. To find out the took five sectors, that is heavy industries, chemicals and petroleum, textiles, agro-business and utilities. He used regression as a methodology to prove his findings. According to him, one of the most significant factors that influences industrial location in a region in post liberalization period in India are the existence and size of new investment from pre-reform period and existence as well as the size of new investment, in the neighboring districts. That means, districts that were successful earlier continue to receive new investment but degree of post success is not the best indicator of the degree of current success. According to him, the situation in India in the post liberalization period is one of "concentration with dispersal" or "concentrated decentralization" where the new growth centers are in advanced region rather than in periphery.

Desai (2003), in his paper discussed the role of information technology in industrial development of the region. He found that the reform of 1990's had led to the faster development of more advanced states, leaving other backward states even more backward, thus causing greater regional imbalance. According to his paper, information technology for industries needs some specific infrastructure support, supply of IT skilled workers and desired policy decision. If the state wants to raise per capita income and standard of living of the people, they have to link I. T. with their industrial sector. The states that have achieved I. T. industrial sector linkage collaboration have witnessed the growth of industries at a faster rate.

Thomas (2003) explains that the regional disparities in India's industrial growth arise due to economics of scale, technical progress and reflection on cumulative growth differences. He considered a period from 1959 to 1998, used correlation as a methodology. He observed that during the study period two major states from the Western India – Maharastra and Gujarat have continued to dominate Indian industry, whereas the eastern states of West Bengal, Bihar and Assam have continually losing their prominence. According to him, with the economics of scale there is a possibility that productivity grows fast and unit cost declines as production expands to the larger scale. There are certain states: Maharastra, Gujarat, Madhya Pradesh, Rajasthan, Andhra Pradesh, Tamil Nadu and Karnataka that have realized economics of scale in industries where potential economics of scale exists. TFP has been faster in these states. He concluded that, it is the realization of economics of scale, which causes regional disparities in India's industrial growth

Lall and Chakravarty (2004), in their study focused on understanding the process of spatial industrial variation – identifying the spatial factors that have cost implications for firms and the factors that influence the location decision of new industrial unit. They tried to analyze the impact of industrial location on spatial inequality; here they attempted to understand spatial inequality in terms of industrialization and industrial location proposed the argument that geographical variation in industrialization is the primary cause of geographical variation in average income in developing regions. They focused on how recent policy changes have led to increasing spatial industrial inequality and therefore spatial income inequality. According to them, new industries will locate where other industries already exist, this is due to in order to have productivity advantages in existing industrial regions. With the increasing dominance of private sector industrialization, industries will be more spatially concentrated in leading industrial regions, which will lead to higher levels of spatial inequality so under the regime of liberalization and structural reforms, the role of the state as on industrial location regulator has been reduced. They used several statistical and econometric models. Empirical evidences from Indian firms show that the cost saving is the most significant factor among firms of all sizes, as well as in sectors of manufacturing industry, because private industry seek profit maximizing location. However, the policies that encourage the creation and growth of mixed industrial districts are likely to be more successful than single industry concentration. They concluded that liberalization and structural reforms have led to higher levels of spatial inequality in industrialization in India.

Singh V. S. (2004), in his paper focused on how regional industrial disparities in the state of Uttar Pradesh can be reduced. Within the state, there are wide inter-district disparities in the level of development. The state government is now more concerned about reducing inter-district industrial disparities, since 1982-83; where the government introduced decentralized planning process, to raise the economy of relatively less develop districts. According to him, less developed districts may possess much more potential than that of the developed once. What is therefore needed is to identify these potentialities and measures for their maximum exploitation. Some industries related to availability of the resources in the backward districts can increase per capita income of these districts.

Katharia and George (2005) in their study, attempted to analyze the factors influencing the agglomeration, in the context of 21 major states of India. The process of agglomeration or cluster formation concentrates many firms into industrial region or zones. The agglomeration takes place because these firms realize the monetary benefits from sharing specialized input factors. The idea of a "cluster" depends largely on the inter-firm relation that lowers the cost of production through the reduction of transaction cost faced by the firms. According to this study, the issue of agglomeration is pertinent particularly for developing countries as they have relatively lower levels of over all investment and the economic activity is concentrated in one of few growth centres. In India there is severe agglomeration of industries. In India, government in some region is trying to disperse industries by introducing certain policies such as incentives, taxes, subsidies, licenses etc, but success has been illusive. According to them, cluster formation in India at a number of places was an outcome of the existing clusters rather than an effect of infrastructural facilities made available by the respective state governments. The analysis finds. that extractive industries like those that iron and steel and cement, lime and plaster are highly agglomerated and are found in those states where the raw material is in abundance. On the other hand, the industries like textiles and wearing apparel are mostly clustered in Tamil Nadu, Pharmaceuticals firms are located mainly in Maharastra and Gujarat, and the rubber products industry is located mainly in Kerala and Delhi. They concluded that agglomeration industries are mostly located in few states like Tamil Nadu, Maharastra, Gujarat and Andhra Pradesh, so the efforts made by the government, to disperse the industries between the regions have failed.

Bagchi et al (2005), in this paper they tried to focus on the growth and structural changes taken place between 1970 and 2000 in Gujarat. As per this paper, the economy of Gujarat grew in an unbalanced and volatile fashion, during the study period. The economic growth of the state is maintained at higher level by secondary and tertiary sectors, where government neglected primary sector, particularly agricultural sector, even though in the state it provided major source of employment. In 1990's, there was more concentration of factory sector in the state of Gujarat than any other state of India. This sector has enhanced imbalanced development in the state, at the same time has also led to regional imbalance, both in the state as well as in the country.

Majumdar (2005), in her paper tried to establish connectivity between regional development levels and regional infrastructural levels. She took the study period 1971 to 2001. She observed that in the first two decades regional disparity has narrowed down, but in the last decade, it has increased in transport, education and health infrastructure. This paper projects a strong association found between development indicators and contemporary infrastructural facilities and the association found to be stronger for industrial development and for physical infrastructure. According to her, regional inequalities in India can be narrowed down by focusing on development of the lagging and for which infrastructural development programme will have to play a leading role.

Sabyasachi and Sakthivel (2007), tried to measure the impact of economic reforms on regional inequality in India. They took a study period from 1980-81 to 1999-2000. They have divided study into two phases: Pre-Reform (1980-81 to 1990) and Post-Reform (1990-91 to 2000). According to them, in pre-reform period, the regional industrial inequality existed there, but remained stagnant; this is because of the role of public sector in maintaining regional parity in India by directing resources to backward areas. While in the post reform period inequality has increased because reforms have given greater freedom to private sector, which always found attracted towards relatively more developed regions, because of relatively developed infrastructure. They concluded that in the post reform period the rise in regional inequality is due to regional industrial inequality.

Dholakia R. (2007), in his paper focused on the sources of growth in the state of Gujarat. For his study he compared pre and post liberalization period. According to him, liberalization has benefited Gujarat more than any other state of India. According to his paper, in order to achieve regional development or to reduce regional disparity, certain sectors and sub-sectors can be the source of growth for Gujarat. He emphasized more in industrialization as a source of growth, which can reduce regional inequality in the state of Gujarat.

Ramaswamy (2007), as per study, the inter-state disparity is due to degree of changes in diversification adopted by the states. More diversified states have attracted more investment in manufacturing sector particularly private organized sector, as a result employment and productivity in manufacturing sector has increased. As Andhra Pradesh, Karnataka and Gujarat have benefited more due to diversification in sectoral composition. His study pronounces that disparity has increased during the study period 1993 to 2005.

Kumnoor (2007), in his study analysed the pattern of industrial development in the backward region of the state of Karnataka. According to the study, a wide spread industrial disparity prevails in Karnataka state. Bangalore alone contributing 50 percent of registered factories and 60 percent of the factory employment where as Gulbarga, one of the most backward districts of Karnataka contributed only 9 percent of registered factories and 8 percent of the factory employment. However, the fiscal and financial concession led to increase in the share of backward districts in industrial units and employment over the period of time. He concluded that this fiscal and financial support given to backward region, led to reduce regional disparity.

Gurubasappa (2008), in his work ,investigated how the small scale industries play an important role in reducing regional imbalance, also ensuring development in backward regions. He took Bidar and Dharwad districts of the state Karnataka as the loci case study. According to him, among the factors influencing location decisions of entrepreneurs, incentives and concession have proved to be most important factor. Since natural location factors like availability of raw materials, availability of labour, location of similar industries, transport facility etc. has a very marginal influence on the location decision of most of the industries located in Dharwad and Bidar districts. According to his work, small scale industries have developed only in these two backward district of Karnataka and generated employment therein.

CONCLUSION:

Many studies on industrialization and territorial development as well as the nature and trend of territorial disparities was carried out in India and abroad since the middle of previous century.

A brief review of theoretical approaches to the theory of industrial location shows that from partial cost analysis, the theories have now moved ahead to take account of demand, profit and institutional as well as non-institutional factors in location analysis. In the earlier approaches, transport costs as well as labour costs assumed importance, later on demand became a noteworthy factor. The integrated approach emphasizes that profit maximization is the basic motive of choice of location rather then cost minimization or revenue maximization. In practice, location, in addition to cost and demand factors, also influenced by personal factors and government policies.

The above discussed the theories of regional development does not provide guidelines for the formulation of government policies. Nevertheless, the theories have a spatial place in regional analysis as they have been either explicitly or implicitly used for formulation of government policies.

Regarding the study of industrialization and territorial development, several studies have been conducted on India level but very few studies are on the state of Gujarat. Further, at the district level also in the state of Gujarat, very few studies have been undertaken so far. To the best of my knowledge no study has been conducted on taluka level industrial disparities in the state of Gujarat.[11] Thus this study is an attempt to fill in the gap in research. The present study is focused on, industrialization and territorial development in various districts of the state of Gujarat, with comparison between industrially developed and industrially backward territory. The comparative analysis is done between Vadodara a district, which is one of the most industrially developed districts, with Amreli district which is industrially backward district. It is against this backdrop that the next chapter looks into the government policies towards industrialisation in India.

[11] In fact as per the editorial note in Indian Economic Journal, there is a dearth of taluka level studies pertaining to India. See IEJ (2006), Volume 54, No-2

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