Chapter - II

INDUSTRIALISATION AND REGIONAL DISPARITIES - A CONCEPTUAL FRAMEWORK
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- A CONCEPTUAL FRAMEWORK

II.1 NEED FOR INDUSTRIALISATION:

Industrialisation plays a crucial role in the economic development. Industrialisation has been defined by Sutcliffe as a process which has invariably been the outcome or accompaniment of economic development, a set of policies which more than any other set of policies, is seen as a means towards economic development.¹ Planners and policy makers have considered industrialisation as the most acceptable instrument to achieve dynamism in growth process. It has been argued that in an underdeveloped country with a backward agriculture and vast population there is little choice but to give priority to the development of industries. The establishment of a new kind of society (industrial) is easier than reformation of old.² It is also viewed that "in the very long run, greater wealth and better living standards under any political system are closely connected with industrialisation".³ It is hoped that industrialisation would bring social transformation, social equality, higher levels of employment, more equitable distribution of income and well balanced regional development.⁴

Rosenstein Rodan has opined that "Industrialisation is the way of achieving a more equal distribution of income between different areas of the world by raising income in depressed areas at a higher rate than in rich areas".\(^5\)

Recognising the need for public investment in the industrial sector, Kurihara opines "Agriculture rather than industry will be responsive to private incentives resulting from expanded demand for its product, consequently public investment should be concentrated in the less responsive, that is the industrial sector".\(^6\)

Hirschman contends that "industrial investment is more inter-complementary than agricultural investment.\(^7\) He contends that, at all levels of the production process other than the final demand level, industrial investments will tend to have more forward and backward linkages with other industries than investments in agriculture.

Development of industries in the backward regions is accepted as a means to reduce regional disparities as it is dynamic, flexible and has better potentiality for generating employment directly and indirectly through their backward and forward linkages with other sectors of the economy. Industrial development would create an impact on income levels and pull the region out of its backwardness and promote regionally balanced development.


Decentralisation of industries is necessary for balanced regional development in a country with several backward areas, some of them having rich mineral potential or rich forest resources, to augment the percapita income of the poor people. The tendency to set up industries in developed areas is encouraging exodus of rural population, resulting in concentration of urban growth and environmental pollution, which needs to be dissipated for creation of new urban centres in underdeveloped areas with a view to achieving better socio economic growth.8

The disparities in the development of industries between regions leading to the emergence of developed and backward regions have become the major problem in the process of industrialisation. Hence government intervention is required not only to achieve greater regional equality but also to counteract the tendencies towards inequality.9

In this chapter the relationship between industrial growth and regional disparities, theories of industrial location, Regional growth related theories, region and regional development, regional disparities, need for government intervention, strategy of industrial location policy, etc., are analysed. Besides, some empirical studies are reviewed.

II.2 INDUSTRIAL GROWTH AND REGIONAL DISPARITIES:

It is observed that the industrial development which is the major cause of economic development gets concentrated in

some regions and economic development which is led by industrialisation takes place in the surrounding regions.

According to Myrdal "if things were left to market forces unhampered by any policy interferences, industrial production, commerce, banking, insurance and indeed, almost all those economic activities which in a developing economy tend to give a bigger than average return would cluster in certain localities and regions, leaving the rest of the country more or less in a backwater".  

A centre has its origin mainly in the historical accident, that something was once started there and that start met with success. Thereafter the ever increasing internal and external economies, for instance - a working population trained in various crafts, easy communications, the feeling of growth and spirit of new enterprise - fortified and sustained their continuous growth at the expense of other localities and regions where instead relative stagnation or regression became the pattern.  

Therefore, the disparities have cropped up between the regions of a country, while some regions have developed industrially others remained backward. These backward regions have fallen behind the competitive struggle of modern industries and are characterised by low level of employment and income as compared to the other regions of the country. In these regions, not only manufacturing industry and

other non-agricultural pursuits but agriculture itself shows a much lower level of productivity than in the richer regions. 13

As industrialisation is a dynamic force in the development, it is almost tautological to state that the poorer remain mainly agricultural and market conditions tend to frustrate earlier beginnings of industrial diversification in agricultural regions. 14

Discussing the problem of early industrialisation in the transitional societies, Friedman and Alonso observe "in the transitional societies the regional problem thrusts itself on policy makers during the period of early industrialisation when, for a variety of reasons, activities come to be concentrated in one or few centres" 15. These centres not only grow so rapidly as to create problems of an entirely new order, but they also act as suction pumps, pulling in the more dynamic elements from the more static regions. The remainder of the country is thus relegated to a second class peripheral position. It is placed in a quasi-colonial relationship to the centre experiencing net outflows of people, capital and resources, most of which rebound to the advantage of the centre where economic growth will tend to be rapid, sustained and cumulative. As a result, income differences between centre and periphery tend to widen. Thus disparities in development among regions are intensified by differences in the industrial growth.

The pattern of industrial development, observed from the historical experience, shows that it gets concentrated in some urban centres intensifying the problem of regional disparity in development, making some regions developed, other remained either backward or depressed. These backward regions are characterised by low level of employment and income as compared to other regions of a country.

The backward regions are found in developed as well as in developing countries. The concept of backward region was first developed in the U.K. to solve the problem of distressed regions and was also the first country to take some effective steps to develop the backward regions through dispersal of industries from congested regions to the backward regions. However, the problem of backward regions has become the concern of other developed countries like the USA, France, Italy, etc.

The problem of industrially backward regions and the need for their development became the concern of not only the developed countries but also of the developing countries. Regional inequalities are much wider in the poorer countries than in the richer ones, and while the regional inequalities have been diminishing in the richer countries of Western Europe, the tendency has been the opposite in the poorer ones. Developing countries like India also have recognised the growing problem of regional disparities and the need for development of industries in these regions inorder to achieve balanced development. However, there is a striking difference between the backward regions in a developed and in a developing

country. While in developed countries like the U.K., these backward regions are either depressed or distressed and are lagging behind because of decline in growth of industry, backward regions in a developing country like India, are rural in character and have not experienced any industrial development. Thus, the disparity in developing country can be called the disparity in development between 'rural' and 'urban' areas, which Lipton has called Rural Urban dichotomy. This has resulted from the urban biased strategy of development. Development of economic activities particularly industrial activities in urban areas contribute to their prosperity while rural areas remain stagnant and economically backward. In a developing economy like India these 'Urban' centres are very limited in number. One can say that the problem in a developing country like India is one of the developed industrial 'pockets' or 'developed enclaves' surrounded by agrarian backward regions characterised by chronic unemployment, underemployment and lack of industrial development.

In the developing countries which are now grappling with the problem of distributional and developmental disparities of income and opportunity between people and places, the primary aim of regional development efforts lies in stimulating the economies of depressed regions.

The regional disparity in the development of industries and other related economic activities arises due to

some factors such as natural factors as well as historical process of development. Some regions are endowed with more natural resources and once the process of development starts, they will attract more industries than other regions. Thus disparity in the endowment of natural resources or geographical concentration of natural resources causes regional disparity in the industrial development.

Historically the developing countries under colonial rule were used as markets by the ruler countries, for the products of their own manufacturing industries. The capital, enterprise, skilled labour etc., tended to concentrate in the city of the administrative interest of colonial rulers. In India the development of Calcutta, Bombay, Madras, Kanpur etc., was only on this line. Colonialism while preventing the development of any industrial base in these countries strengthen all the forces in the markets which anyhow were working towards internal and international inequality. Indian handicrafts and cottage industries were destroyed by these forces and thereby restricted their growth.

Before independence the pattern of industrial development in Indian was marked by a heavy concentration of industries in a few regions. Even after independence, when industrialisation was accepted as a means of economic development, industrial investment started to flow towards the existing cities with industrial infrastructure. Thus industrialisation tend to concentrate in a region with

industrial infrastructure. While backward regions of the country continued to lag behind, industries continued to be concentrated in and around the developed regions, by concentrating capital, employment and income. As a result backward regions were not only deprived of industrial investment but also lost their skilled manpower and capital.

The concentration of industries in some regions increases the regional imbalance, and the burden of the national exchequer in terms of increased social cost. In the beginning, the concentration of industries produces economies of agglomeration in the form of reduction in costs and increase in economic opportunities. Locations in large urban areas enable firms to take advantage of external economies in obtaining credit, in drawing upon a trained pool of skilled manpower, and in the provision of electricity and other utilities. In addition, firms in larger urban areas have better access to government offices, both for obtaining information and technical assistance and for lobbying for legislation, regulations and policies favourable to them. Finally, large urban centres offer a wide range of cultural amenities and a network of professional contacts that rural areas cannot offer. These factors attract the new entrepreneurs to the urban regions. Significantly consumers are benefitted by easy accessibility of goods and services. But, in due course, the economies of degglomeration tend to operate which will raise the cost of land, labour and other services.

Although this concentration of industrial activity results from rational profit maximising decisions by private firms, it has social costs in the form of widening regional income differentials and a variety of social problems in the large urban centres receiving heavy streams of migrants from rural areas and smaller cities. Thus the Government has to incur 'social cost' in the form of high investment in public infrastructure. This social cost can be defined as the negative consequences which the community sustains as a result of production process and for which private entrepreneurs or individual organisations are not held responsible.

II.3 REVIEW OF THEORIES OF INDUSTRIAL LOCATION:

The uneven distribution of industrial investment, industrial employment and the concentration of industries in a few developed regions cause the problem of regional imbalance. Therefore the problem of regional disparities can be considered as a problem of industrial location. This problem of regional imbalance in the development of industries can easily be overcome only when there is a control over the location where the industries are established and this would be achieved by offering incentives to the entrepreneurs. It is necessary to understand the economic forces behind industrial location while solving the twin problems of promoting industries in backward regions and the dispersion of industries from congested regions.

Locational theories are developed to examine the relative importance of locational factors in decision making by

23. Ibid., p.262.
the managers and the entrepreneur. The study of locational theories therefore helps us to understand the necessary conditions which are considered to be important and essential for a firm/entrepreneur to locate its/his plant in any location.

In the recent years Location theory is being used for the regional development planning. Williams Alonso says, "Increasingly the question of the location of a factory is being considered as a 'project' by a Government agency rather than as a profit making venture by a private corporation.... In this sense, theory of location of the firm extends to project planning but antecedes regional and national planning". Thus industrial location can be considered as an important aspect of induced industrial development in a backward region. Therefore some of the important theories of location are briefly discussed. However, the review of the theories is done to have a theoretical framework. So neither a critical analysis of the theories nor a chronological development of the same is maintained.

Location theories have a relatively long history and originally developed to examine the underlying logic of the location decision of the firms and thus sought to explain the relative influences of the factors on the choice of a particular location of a firm. In economic literature, it began essentially as a part of the more encompassing theory of

location and space-economy within the framework of general equilibrium analysis, with the spatial dimension being largely neglected in most of its early formulations which were though conceived in a manner, pregnant with spatial implications. The explicit consideration of the spatial dimension in the theory is attributed to Von Thunen, Launhardt, Weber, Losch, and others.

The major location theories can be structured around three approaches as follows:

1. Least cost approach;
2. Market area approach; and
3. Profit maximisation approach.

II.3.1 Least Cost Approach:

The origin of the theory of location may be attributed to three Germans: Launhardt, Von Thunen and Weber. Launhardt explained the location of industry as the decision resulting from two variables, differences in cost and demand at alternative locations. He attempted to arrive at the optimum location in a simple situation with two alternative sources of raw material and a market. These were represented by the corners of a triangle. The three points of the triangle are the market and two sources of supply of raw materials. The firm will find optimum location at a place where the various distances are minimised.

in the theory of Von Thunen the cost of transportation and rent of land are the two main factors. The location decision rests upon the differences in the cost of a given crop (commodity) at alternative sites, locational cost differences in turn, being due to the land rent and transportation expense.

The birth of modern industrial location theory is generally dated at 1909 when Alfred Weber published his book entitled, Uber den standert den Industries. The theoretical approach of three economists namely, Alfred Weber and two of his illustrious predecessors in the field - Launhardt and Von Thunen is commonly known as the least cost approach.

In the least cost approach of Alfred Weber three factors influence industrial location. These are the two general regional factors of transport and labour costs and the local factor of agglomerative or degglomerative forces. Weber assumed perfect competition and believed that the plants at the lowest cost location will achieve highest profit. It is clear that an industry will be drawn to those locations which have the lowest costs of transportation, having regard both for the place of consumption and the place of the deposits of materials. Minimum transport cost will be at that point where the total costs of moving raw materials and finished products will be least. Weber asserts that cheap labour can divert a

factory from the least transport cost location. According to Weber, industries will tend to locate at that place where savings in terms of labour cost will be larger than additional transport cost. Weber also opined that industries will tend to locate where extra labour costs/Transport costs are equal to savings in terms of economies of scale achieved through agglomeration. He however considers this as a less prominent type of orientation.

The basic limitation of Weber theory is that it is more concerned with costs and neglects the demand aspect of location. Greenhut emphasises the following limitations of the least cost approach.  

a) The site selection involves substitution among not only the cost but also the demand factors of location at alternative places;

b) The market demand (and the utility gained by the individual) is a variable, significantly affected by, and affecting;

c) The locational interdependence of firms (and people).

Thus in these early theories, location is seen largely as a product of spatial cost differences, with variation from place to place in sales potential virtually ignored.

II.3.2 Market Area Approach:

Least cost approach has over emphasised the cost aspect neglecting the output or demand factor which is a major

determinant of industrial location. Losch rejects the least cost approach of Weber and his follower, and the alternative of seeking the location at which revenue is greatest. The right approach he says, is to find the place of maximum profits, where total revenue exceeds total cost by the greatest amount. August Losch has pointed out that Weber's assumption of constant demand is not realistic. On the other hand demand varies from place to place and market for the product is scattered. Through a large scale of products sufficient profit can be generated to mutualise high cost of transport. Thus demand may influence as well as be influenced by the location of industry in every instance. Therefore, accessibility to maximum market, or demand for the products is a decisive factor in industrial location.

August Losch attempted to determine the market area for an entrepreneur on the basis of the assumption that:

I. there is no spatial variation in distribution of inputs over a homogenous plane.

II. density of population is uniform and taste is constant.

III. there is no locational interdependence between firms.

On the basis of the above assumptions Losch developed his "demand cone". The base of the cone represents market areas and if production is profitable then all the firms will develop

their own market areas which will finally adjust into a series of hexagonal market area covering the entire plane. 39

Thus Losch attempts to incorporate demand factor into the theory of location by considering optimum size of the market. "We are thus reduced to determine separately for every one of a number of virtual factory locations the total attainable demand, and for similar reasons the best volume of the production as a function of factory price (market and cost analysis). The greatest profit attainable at each of these point can be determined from the cost and demand curves, and from this place of greatest money profits, the optimum location can be found". 40

The Losch theory has been criticised on many points. Losch neglects spatial costs variations and demand is considered to be the sole determinant of the location of the producers. Transport cost has the effect of only limiting the size of the market areas. Losch’s theory has been criticised being the other side of the Weber model and equally one sided. Losch by neglecting the spatial variation in supply of inputs and the variation in costs, has ignored the supply side.

II.3.3 Profit Maximisation Approach:

The first significant attempt to integrate least cost and market area approach was made by Melvin Greenhut 41 in 1956, in his profit maximisation approach.

40. Quoted in Smith David, M., op.cit.p.131.
The inclusion of cost and demand factors in one model points out the need for a broader statement of the determinants of plant location than one which concludes that firms seek the location of least cost, or one which holds that firms seek the location offering the largest market area. Greenhut believes that transportation cost will be the determining factor in industrial location if it constitutes the major portion of costs. In this case production will be located near the raw material sources. If the demand for the product is elastic then production will be more dispersed. Thus nature of the product can also be a factor in deciding location. The size of the unit is also of relevance. He asserts that small firms tend to move over a longer distance more easily than large firms. Greenhut aims at maximisation of total profits rather than minimisation of costs or maximisation of revenues. Greenhut concludes that each firm entering the competition scene will see that site from which it sells to a given number of buyers at a lowest total cost.

These location theories especially, least cost theory of location considered to be urban oriented and felt that industries are to be concentrated due to scale of economy out of agglomeration advantage. In a backward region of an underdeveloped country like ours, location theories developed in the West, do not fully serve our social needs of regional distribution of industrial development.

Two main location factors considered by this school are labour and transport. No doubt, labour is one of the

important location factors, and here it is not the quantity alone that counts but also the quality of labour. The backward regions in India have abundant labour but mostly unskilled. Hence only availability of labour is not very strong factor for industrial location in backward regions where labour is mostly illiterate and unskilled. 43

Though transportation is another important location factor, it is gradually losing its strength due to faster growth of 'footloose' industries i.e., industries which are not rooted in their source of raw materials or tied to their markets. These industries have freedom of choice of location and can be established anywhere with minimum necessary infrastructure. However in India, transport cost still occupies an important position in the location decision. Distant backward areas will be avoided by the industries, due to higher transport cost among other things.

Market is another important factor considered by the location economists. In a backward region demand is very low due to lower level of economic activity and lower per capita income. Lack of demand cannot create sufficient inducement for industries to go to backward regions.

Thus on the basis of the above discussion, one can conclude that, if location decision of the entrepreneurs are left free, industries will be automatically concentrated in the developed urban regions with high level infrastructure as there are necessary facilities. This surely would increase the gap between highly developed regions and the poor backward regions.

43. Sadhak, H., op.cit., p.15.
II.4 LOCATION THEORIES AND REGIONAL GROWTH RELATED THEORIES:

When free market forces are not able to remove regional disparities, regionally directed government intervention is required to correct the imbalances in industrial development.

The review of the location theories indicates that the industries in a free market economy get "spatially" concentrated in some urban areas due to better transport system, industrial and cultural infrastructure and external economies. But the rural areas as they do not have these facilities remain virtually backward industrially. There is therefore the spatial difference in the development of industries, leading to the problem of backward regions.

In an economy governed by market forces location and consequent regional economic growth depend upon factors like market costs, transport inputs, size economies, technology, personal factors etc. It is necessary to study various theories like Growth Pole theory, theory of central places, Industrial complex, etc., to understand the process of regional development.

II.4.1 Growth Pole Theory:

The Growth theory as evolved by Frances Perrox, is derived inductively from observations of the actual process of economic development. It recognises that "development does not appear everywhere and all at once, it appears in points or development poles with variable intensities; it spreads along diverse channels and has varying terminal effects for the whole
of economy". The term 'growth pole' is synonymous with 'growth area' and 'core region' which refers to national polarisation while the term 'growth centre' used along side the term 'growth point' refers to the process of regional polarisation.

These growth poles are defined as a set of expanding industries located in an urban area having further prospects of development of economic activities through its zone of influence.

Perrox considered the process of economic development as essentially polarised and it inevitably resulted in clusters of economic activity and growth. According to Perrox, entrepreneurial innovations are the prime causal factors behind economic progress..... Inter-industry linkages and the theory of industrial interdependence play a major role in the development of pole theory.

According to Hermansen, an industrial complex would constitute a development pole in industrial space only if the propulsive industries constituting its core also belonged to the category of leading industries. These industries are called the propulsive or propellent industries and they form the nucleus of development pole. These industries must be relatively large in order to assume that they will generate sufficient direct and potentially indirect effects to have a

significant impact on the economy; it must be a relatively fast growing and the quantity and intensity of its interrelations with other sectors should be important so that a large number of induced effects will in fact be transmitted. 47

The development pole theory has attracted a great deal of attention in several countries and it is believed that the theory can be worked successfully in different economic and socio-political environments. It has the advantage of focusing attention on certain promising areas or industries and this is of special significance in developing countries with the constraints on capital, technical manpower and administrative and managerial skills, etc. 48

This approach has become very popular due to its emphasis on the concentration of resources to certain key locations rather than dispersing the same to all the regions. Since regional policy heavily depends on the incentives and subsidy, resources can be diverted to a limited space at a time and optimal allocation of resources can be done by creating growth points/poles/centres.

According to this theory urban industrial growth will be diffused to the backward regions of a developing country through concentration of infrastructure and productive investment in selected points or regions. Therefore, one of the basic conditions of the Growth Pole concept is that the growth points, centres and poles should be developed simultaneously to

form a balanced centre of hierarchy. The growth centre is considered to be a powerful tool of development of backward regions and an easy instrument at the hands of Government to remove the disparity between developed and backward region.  

This approach is adopted in India to achieve regional balance in development.

II.4.2 Concept of Industrial Complexes:

An industrial complex has been defined as 'a remified chain of a functionally inter connected industries'. An industrial complex, in a very wide sense, is an ensemble of technically and economically inter connected industrial units usually located on a given territory. Such a complex is normally a 'planned' one, based on physical infrastructure and developed around one major industry which forms the core or focal point of the complex. The core often appears to be a heavy industry.... the concept of industrial complexes is basically functional.

This can promote functional specialisation, lead to co-ordinated exploitation of natural resources, give rise to promotion of industries based on forward and backward linkages, etc. This industrial complex has been experimented in India during the plan periods through extensive central investments in basic industries in the backward regions but with little success. States like M.P., Bihar, Orissa where huge investment is made in basic industries could not produce any significant success.

progress in industrial development. Analysing the reasons for limited success a representative of the Ministry of Industry has stated before the Estimates Committee of Parliament; "it is a fact that despite large central investment, the industrial development of some of the states had not taken place. It appears to be a fact that the type of industries which have been taken up in the central sector have necessarily been of the kind which did not have the forward and backward linkages, like steel or coal or some of the heavy fertilizer projects are". In the absence of these major projects, backward areas would even have deteriorated. But it could not realise the expected rate of development. Some of the large projects have remained islands in the midst of large backward areas. This has been partly due to inadequate advance planning for such industrial complexes, lack of minimum infrastructure, non-availability of skilled manpower etc. If these requirements are fulfilled and proper types of propulsive industries chosen, the industrial complex may prove to be an important tool for greater regional balance in industrial and economic growth.

II.4.3 Hirschman's Theory of Geographical Incidence and Transmission of Economic Development:

Hirschman attempted synthesise the theories of geographical incidence of growth with the mechanism for the geographical transmission of development impulses. Hirschman argued that 'there can be little doubt that an economy to lift
itself to higher income levels must and will first develop within itself one or several centres of economic strength. In the geographical sense, growth is necessarily unbalanced. This is based on his theory of economic development which is propagated through chains of disequilibria.

Despite space preferences of economic operators, development occurring in geographical growth points will nevertheless set in motion forces which will induce development in the backward hinterland through 'trickling down' forces. These trickling down forces work particularly through interregional trade and transfer of capital and migration of labour to the backward regions. The tendency of polarisation forces to be stronger than the trickling down forces was the main conclusion of Myrdal. His 'spread' and 'backwash' effects coincide with Hirschman's 'trickling down' and 'polarisation' effects. Myrdal bases his view on the possibilities for spontaneous spread of development in space on his theory of circular causation.

Hirschman considers the emergence of growing points and therefore, of differences in development between regions as inevitable and a precondition of further growth anywhere. Myrdal and Hirschman agree that development makes for more efficient spread effects. However, while Hirschman argues in favour of the need for initial geographic imbalance through the creation of development centres, Myrdal takes the opposite

stand and argues that the mechanisms for spread effect, should be strengthened from the outset.  

A brief review of evolution of theoretical approaches to industrial location shows that from the partial cost analysis, the theoretical models have moved forward to cover a variety of institutional factors. In the beginning, cost of transport and labour were considered significant. Later, demand factor was given importance. Market area for a product or industry was sought to be limited both from the point of view of the producers and buyers. It was argued that in this process, production location would emerge benefitting the buyers and sellers. The integrated approach emphasises the maximisation of profit objective. Later theories have provided some interesting insights into the aspects of geographical transmission of growth impulses.

II.5 REGION AND REGIONAL DEVELOPMENT:

A review of location theories indicate that the industries in a free market economy get 'spatially' concentrated. Discussing the problem of economic development Friedman and Alonso observed, "In transitional societies the regional problem thrusts itself on policy makers during the period of early industrialisation when, for a variety of reasons, activities come to be concentrated in, one or few centres. These centres grow so rapidly as to create problems of an entirely new order". Thus some regions with conducive

57. Ibid., pp.42-43.
industrial climate will achieve rapid industrial development while other areas lacking facilities will remain virtually out of touch of modern industries. Thus there is the spatial differences in the development of industries. This concept of space is a natural space of geographers but, we are concerned with region- a term used by economists.

The term region can be referred to a village, a group of villages or a Taluk, a district, a group of districts or a state, a group of states or even some times to a country, or a group of countries. In regional science, a region has been defined as an area in which all parts have as far as possible similar economic structure and therefore similar problems and interests.

Boudeville classified regions into three categories as I) homogeneous regions which are close to natural regions of geographers. II) polarised regions which represent polarisation in terms of population density, and III) planning region which represent administrative area.

The regions are categorised into three by Smith. They are I) the underdeveloped region, II) the depressed region, and III) the congested region. The term underdeveloped region refers to an area that is yet to be fully developed. This region is industrially backward. The depressed region is one that has already achieved a high level of industrial development but, now has an unsatisfactory economic performance.

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when compared with other region. The congested region is one in which economic development has reached a scale at which diseconomies can be detected.

The present study is related with an underdeveloped or backward region. In the backward regions the manufacturing industries are far behind agricultural sector and the agricultural sector shows a much lower level of productivity than that in the richer region.  

II.6 REGIONAL DISPARITIES: CIRCULAR AND CUMULATIVE CAUSATION THEORY:

Disaggregation of country's total area into different regions reveals the existence of disparities. Discussing the problem of economic development in the transitional societies, Friedman and Alonso observes "...in the few years that nations have sought economic development as an explicit goal it has become clear that the arithmetic of macro economics has need of and is made more powerful by the geometry of regional considerations". David Keeble has observed that these disparities exist not just in terms of absolute levels of population, economic activity or related social infrastructure, but with respect to relational indices such as unemployment or activity rate, income per head or rate of employment growth. Divergent process of development leads to the disparities between different regions. According to this divergent school, the regional disparities will be widened in the course of time.

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63. Friedman and Alonso : op.cit. p.3.
and this divergence may not be self-righting. The most cited example of this school is the theory of circular and cumulative causation of Myrdal, which focussed attention on the spatial inequalities.

Myrdal believed that play of forces in the market normally tends to increase rather than to decrease the inequalities between regions. Spatial interchanges between growing and lagging regions of a nation are the main factors responsible for different regional growth. Expansion in one locality has backwash effects in other localities. Migration, capital movements and trade are the media through which the cumulative process evolves-upwards in the lucky regions and downwards in the unlucky ones. In general, if they have positive results for the former, their effect on the later are negative. The regions where economic activity is expanding will attract net immigration from other parts of the country. Capital movement tends to have a similar effect of increasing inequality. Thus, once the development has started- the growing regions will attract labour, capital and commodities from lagging regions by offering higher returns which will lead the further growth of these regions. If left to themselves, those regions which had to touched by the expansionary momentum will increase their competitive disadvantages. All the frustrating effects of poverty are interlocked in circular causation, and all with the biases to in the working of migration, capital movements and trade. The opposite effect of rising economic levels in the centres of expansion are also interconnected in a

circular causation, continuously sustaining further expansion in a cumulative fashion.

The other fact of Myrdal's model is that of spread effects. Against the backwash effect there are also certain centrifugal 'spread effects' of expansionary momentum from the centres of economic expansion to other regions. It is natural that the whole region around a nodal centre of expansion should gain from the increasing outlets of agricultural products and be stimulated that technical advance all along the line favourable conditions exist for producing raw materials for growing industries in the centre.

The spread effects of momentum from a centre of industrial expansion to other regions, operating through increased demands for their products and in many other ways, weave themselves into the cumulative social process by circular causation in the same fashion as the backwash effects in opposition to which they set up countervailing changes. But this spread effect of expansionary momentum will work once a country has reached a high average level of economic development.

In a developing country like India, therefore, we find weak 'spread effect' and strong 'backwash effect'. Myrdal's prescription is therefore that the government should intervene in distribution of economic activity to induce stronger 'spread effect' for the removal of regional disparities.

68. Myrdal G. op.cit. p.32.
69. Sadhak H. op.cit. p.20.
II.7 NEED FOR GOVERNMENT INTERVENTION:

Government action to reduce regional disparities is justified in attaining regional balance in the distribution of income, employment and social benefits. Datta Amalan opines "the overcoming of regional disparities calls for a different principles of central assistance. Backward regions have to be given aid for no better reasons than that they are relatively backward and a more uniform regional development is desirable".

Excessive concentration has resulted mainly from the unregulated freedom enjoyed by private sector industrialists in promoting manufacturing in large urban areas. State control of industrial location is necessary as a counteractive measure and to ensure sufficient development in backward areas.  

The extremely localised character of industrial activity presents a serious stumbling block to the smooth performance of a national plan. If industrial development in the country is to proceed rapidly and in a balanced manner, increasingly greater attention will have to be paid to the development of those states and regions which have so far remained backward. 

The lopsided industrial growth will adversely influence income distribution and relative standards of living.

of the people in different parts of the country. In particular, it introduces wide disparity of income between the industrial areas and underdeveloped regions. In 1950, the per capita income of mining and factory sector in India was Rs. 840 per annum as against Rs. 200 per agricultural labour. This disparity is aggravated by the variations in the relative prices of agricultural and non-agricultural goods.

As a result of the extensive concentration of industries, the population of Bombay and Calcutta recorded a phenomenal increase of 118% and 121% respectively between 1931 and 1951 against 77% for all urban areas. The density of population in these two cities has assumed alarming proportion, intensifying the already grave housing problem. The congested living conditions have produced ill health, lowered the physical and mental capacity of the working people and reduced their efficiency. 73

In the beginning, the concentration of industries produces economies of agglomeration. But, in due course, the economies of deglomeration which will raise the cost of land, labour and other services. The government has to incur 'social cost' in the form of high investment in public infrastructure. This social cost can be defined as the negative consequences which the community sustains as a result of production process and for which private entrepreneurs or industrial organisations are not held responsible. 74 Firms location decisions involve some costs which are not borne by individual firms but are borne by the society.

74. Sadhak H. op.cit. p.9.
In the words of Lewis, "...new industries causing a town to expand do not pay the full extra costs they impose by way of extra schools, hospitals and so on...". The government intervention is justified when social costs are considered as the most preferred private location may not be the most advantageous from the economics point of view.

Government intervention is also justified from the efficiency criterion of industrial units in different regions. Nicholson, in his study found that the footloose industries can function economically in any location and footloose activities had been the subject of government location policy.

Location decision is not always rational. Picton, in his study proved that location decisions often appear to be unsystematic and sometimes casual. According to him "firms do not seem to look for the best site but for a site that is satisfactory. Decisions to locate in one place rather than another seem rarely to be based on detailed calculations of the cost of operating at different sites involved." Richardson pointed out, "location may be chosen out of habit rather than reasons".

The above factors justify the government intervention in industrial location decisions. Government actions to reduce regional disparities is justified in attaining regional balance.

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in distribution of income, employment and social benefits. Regional disparities in development especially in industrial development cannot be removed unless the government intervenes in the distribution of industrial activities by influencing location decisions of industries. In the absence of government intervention, free market forces increase further inequality in industrial development and economic growth.

II.8 THE STRATEGY OF INDUSTRIAL LOCATION POLICY:

Industrial location policy which aims at attracting industrial investment in backward regions is based on the combination of two approaches i.e., incentives and control.

In order to attract industries to a backward region through planned development, the efforts should make an impact on cost structure of locations in backward regions. Private industries will be located in the backward regions if location cost is acceptable to them and ensures the competitive position relative to the producers of the identical commodity in other regions. According to Richardson, locational cost is that part of the average costs over space which is to be incurred for factors of production over the basic premium or the additional costs to be incurred in bringing such factors as raw materials to the factory location. The location costs have an important role to play in the entrepreneurs' location decision because ultimately the location cost would effect the profitability of entrepreneurs.

80. Richardson, H.W. op.cit. p.60.
81. Sadhak, H. op.cit. p.27.
Since backward regions suffer from several disadvantages locational costs in normal course would be higher than that of other areas. If the normal average cost of production is more it will not encourage the entrepreneurs to locate their plants in the backward regions. Therefore, efforts should be made to offset this higher average cost with a view to enhance the favourability of the backward regions to entrepreneurs.

Provision of infrastructural facilities and financial incentives are the two most important measures used to attract entrepreneurs in the backward regions. Direct public investment in social overhead capital is made in the backward regions with a view to provide essential facilities like electricity, transport facility, housing and other services which will help to establish conditions favourably to private investors and to set in motion a self-sustaining process of regional growth. Provision of infrastructural facilities will attract local entrepreneurs as well as outside entrepreneurs to set up industrial units in the backward region.

Only investment in infrastructure may not be a very attractive proposition for attracting industries. Additional direct financial incentives are required. Incentives in the form of capital subsidy, grants, loan at cheaper rate, income tax rebate, sales tax exemption etc reduce the cost of capital and directly affect the profitability of industrial units.

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Thus it is assumed that incentives would reduce production costs and would increase profitability of industries. So such incentives not only make the backward region location more attractive but also encourage local entrepreneurs to set up new units.

These incentives are considered as "pull factors" and are also known as 'direct inducement' for the industries to invest in the backward regions. These are inducements for the development of the entrepreneurship in the backward regions. But these incentives should be sufficiently strong to counter the 'backwash effect' released by the developed industrial centres. Therefore the financial incentives should be supported by 'disincentives' or 'location controls' over the location of new industries in the already developed regions. But these subsidies and incentives are enough to attract right type of industries to provide enough jobs. William Tabb has cautioned against indiscriminate use of this tool. He says, 'location incentives should not be offered indiscriminately... a locational incentive programme might subsidise sweetshops with their dead end offerings or induce the location of highly capital intensive plants creating few jobs at a high subsidy cost to the government per job', a warning which is worth noting.

II.9 REVIEW OF IMPORTANT STUDIES:

rationality in the location decision is limited. He also denied the influence of transport and labour cost. He found only 4% differences in transport and communication cost, between different locations in the case of footloose industries.

Picton, in his study on British manufacturing industry pointed out that there was no detailed calculation of the cost in the location decision.

David Smith has opined that success of incentive policy of British in moving industries from congested regions to the depressed regions and creating additional employment in depressed region are not small achievement. Melaughlin and Robock investigated with reference to the cotton belt of the United States and found that the determination of location zone was influenced to the extent of 45% by market factor, 30% by raw materials and 25% by labour.

A study by the U.S. Department of Commerce Clearly revealed the cost and demand forces of location, which describes the location of newsprints mills. The growth of the newsprint industry around the areas of raw material supply stresses the influence of the cost factors of location. Emphasis on man made conditions focusses attention on the demand factors of location.

A study of the locations of eight small firms in Alabama showed that personal consideration influences the location.

Clark in his study stressed the importance of transport and labour cost in the location decision. To him, footloose industries could afford the transport either their raw materials or their products over a considerable distance because their location in different areas gave only minor differences in production and distribution costs. Regarding the labour, Clark opined that cheap labour would attract industry to a region.

Fuch's study revealed that market was not the primary determinant of locational change. A rapid natural rate of increase of population in an area, would expand the supply of labour as to attract labour intensive industries. In the case, the lower wage rate and the absence of unions were the determining factors.

Allan Rodgers studied the policy of the Italian Government, aimed at reducing disparities in industrial development between the North and South by inducing industries in South. The Italian Government mainly depended on incentive measures. Huge Government investment was made in the South. As a result, as Rodgers has pointed out, the industrial employment between 1951-57 in South has increased by 200000 to 774000 but

89. Ibid., p.277.
the growth rate of industrial employment in South was relatively low. Rodgers has pointed out that in the absence of true locational policy, market forces produce concentration of investment in a remarkably limited number of industrial zones. Thus a self selection process of the state and private firms concentrate rather than disperse their resources.

Finger N.\(^9\) studied the efforts of Israel Government to encourage industrial investment in the backward regions and reduce the burden of major urban centres. In order to encourage the industrial investment in the backward regions, the entire country was divided into priority and other areas. Priority areas were further divided on the basis of level of backwardness. To encourage industrial investment in Israel in general and in backward areas in particular number of grants and subsidies were introduced. The incentive programmes had good impact on relocating industries in priority regions.

These important foreign studies in general indicate that the Governments' Policy of incentives help to promote industries in the designated backward areas.

Menon\(^9\) in his study discussed the various subsidies and incentives in India. No serious attempt was made to examine the impact of incentives either on macro level or micro level development of industries and its spread effects.

Godbole examined the effectiveness of Maharashtra Government Industrial location policy to disperse industries from Bombay to backward districts in the state. Godbole has selected a random sample of 69 units and a control sample of 30 units in similar industries was also chosen. He found that the units in the developing area compared to developed area did not suffer from any intrinsic disadvantages. Along with financial incentives, he also argued for physical and infrastructural facilities to attract industries in the backward areas. He recommended negative policy for backward regional development.

Godbole studied about the location cost in the backward and developed regions. But the impact of incentives on industrial development of a backward region has not been discussed.

Sandesara discussed the efficacy of incentives to promote small scale industries. He has primarily studied the impact of long term financial assistance from SFCs on the growth of small scale industries in four developed cities—Bombay, Bangalore, Hyderabad and Jaipur.

Tata Consultancy Services conducted a study in relation to the efficiency of industrial location Policy of the Maharashtra Government. This study examined the effects of the location policy on the dispersal of industries from Bombay to three growth centres in Maharashtra.

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Uday Sekhar attempted to study industrial location policy of India and suggested that compared to financial incentives, infrastructural incentives would be desirable for the development of backward region. Fafale studied the extent of utilisation of various incentives, difficulty in availing incentives and the main reason for non-utilisation. Of the 98 units surveyed 35 units or 36% of the units availed more than one incentive. Ignorance and time consuming procedure and corruption were responsible for non-utilisation of the incentives. Study revealed no relation between education or locality or age of the entrepreneur and use of incentives. It also revealed that larger proportion of units belonging to the industrial estates used incentives compared to non-industrial estate units. This study has not analysed the impact of incentives on the development of industries in the backward areas.

Sreenivsulu Naidu attempted to examine the relevance of location theories and impact of central and State Governments' Industrial Dispersal Policies in the backward area of Kurnool district in Andra Pradesh by taking 206 small scale industrial units. He found that availability of raw materials, cheap local labour, banking facilities are considered to be the

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vital factors in motivating entrepreneurs in the location of small industrial units. Market, power and transport received secondary importance in the industrial location. The least important factors are tax and duty exemption and industrial estates. This study also revealed that the limited spatial horizon of small entrepreneurs and due to the strong influence of native place small units have been located in and around their native places.

Nagaiya D. 101 studied the effectiveness of infrastructure programme of Maharashtra in the Marathawada region, a backward region. This study examined the effectiveness of the programme of the industrial estates and the industrial areas from the angle of realisation of expectations of the sponsoring organisation and beneficiaries and the socio economic impact of the programme assessed through spread effects. Industrial estates proved to be highly profitable in the absolute sense irrespective of their location. However, it is noticed that estates in less developed areas were socially remunerative than the estates in developed areas. Factors which make estates/areas in rural locations or least developed regions socially remunerative are higher capacity for generation of savings, spread effects and linkages, locational aspects and types of units promoted, whereas in the developed centres the use of sophisticated technology and the high requirement of foreign exchange make those estates/areas less remunerative.

Study of Rajgopal showed that the regional demand for the product and financial support were the prime decisive factors. The government influence was more predominant in the policies of sales tax and entry tax with respect to marketing segment of the units.

Some organisation commissioned by the Industrial Development Bank of India studied the impact of industrialisation in general and IDBI assistance in particular, on the development of backward districts. It was found that the incentives were influencing the location decision at considerable level.

Jyotsna Paranjape studied the factors influencing location in the industrially backward regions in Maharashtra and Gujarat. Though these states were industrially developed, they were suffering from intra-state imbalance. The study indicated that the government support in the form of industrial estates, subsidies or loans on concessional terms, is not enough to induce location of industries in very backward areas which can offer no other advantages. On the contrary, the government assistance is likely to be successful in inducing industrial development only in areas where incentives are available in conjunction with other facilities. The study

suggests to assess the potentiality of each region and regions responding quickly to promotional efforts need to be selected for special assistance. The study highlighted that a combination of factors is necessary to induce industrial development in a region.

The study of Thangamuttu and Palanivel\(^{105}\) pointed out that incentives offered to entrepreneurs for setting up of industries in Pudukkottai, a backward district in Tamilnadu were availed by them. But after availing the incentives the entrepreneurs located their units in towns and border areas to enjoy the external economies, creating further inequality between interior areas and towns.

Devendra Babu and Thippaiah\(^{106}\) analysed the impact of government policy in the Bidar district, a centrally identified 'Zero Industry District' in the Karnataka State. The study revealed lopsided industrial development in Bidar where industries were setup in Bidar town alone neglecting other taluks in the district. It also highlighted that concessions and facilities available have not stimulated the local entrepreneurs.

Sadhak\(^{107}\) examines that the efficacy of the incentives and subsidies to promote industries in the backward regions of India. His study was based on the sample survey of 54 industrial units receiving incentives in Aurangabad.

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district, a noted backward district in Maharashtra State and a limited control sample of 11 units from Ahmadnagar, a non-backward district. The incentive schemes have attracted a sizeable number of industries in the backward regions and made significant change in the structure of industries in the district. The study revealed that the concessional finance from IDBI, IFCI, ICICI etc has not been able to induce the resource based and small scale industries. The financial incentives were the most important factors in the location decision of the sample units. The study has recommended to improve the geographical centrality of the growth centres by improving transport and communication system, redesignate the backward districts and to introduce central employment subsidy. Sadhak has strongly advocated for a basket of incentives to achieve industrial development in a backward region.

Krishnamoorthy examines the regional disparities, particularly in industrial development in Andhra Pradesh and the impact of various incentive measures in bringing about regional development. The study revealed that though the scheme of capital investment subsidy is effective in attracting industries in the backward areas, it has a tendency to encourage capital intensive industries and further the development has mainly gone to districts, which, in fact could have developed even without such support. This study advocates for selective approach in granting subsidy and a graded rates of subsidy.

Bharathan\textsuperscript{109} studied the impact of financial incentives on the industrial development by taking a sample of 57 units in the backward region and 22 units in the non-backward region. Two location factors viz, government incentives and availability of raw materials had mostly influenced the location decision. The study shows that by and large, the scheme of financial incentives for backward region is reasonable and useful to accelerate industrial development in the region. This study also revealed that the industries are concentrated in town and border areas and not in interior area of backward region.

Khanka\textsuperscript{110} in his study of Kumaun region of Uttar Pradesh strongly pleaded for providing graded incentives for encouraging industries in the hilly region. He opined that the existing concessions overlook regional peculiarities. Incentives and concessions will attract entrepreneurs to move towards hilly regions provided minimum level of infrastructure is created.

Basavaraju\textsuperscript{111} analysed the impact of incentives and facilities on the growth of small scale industries in the Mysore district of Karnataka state. This study mainly concentrated on the contribution of institutional facilities.


and incentives in the growth of SSI's in the state in general and in the backward areas of the state in particular. It also focussed on the problems faced by the SSIs in Karnataka.

II.10 CONCLUSION:

The theories and empirical studies discussed above, show that the location decision of a firm can be influenced by cost, market and profit. It also reveals that government intervention can influence the location decision and in the development of entrepreneurship. Thus, to promote industries in backward region a scheme of government incentives will be more useful.