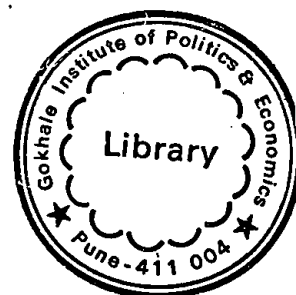


GROWTH CENTRES IN REGIONAL DEVELOPMENT

**(A Review of Literature With Special Reference to Rural
Development in India)**

**A DISSERTATION SUBMITTED TO THE
UNIVERSITY OF POONA
IN PARTIAL FULFILMENT OF THE REQUIREMENT
FOR THE DEGREE OF
MASTER OF PHILOSOPHY
(IN ECONOMICS)**



By

CHARANAJEET SINGH

**GOKHALE INSTITUTE OF POLITICS AND ECONOMICS
PUNE 411 004**

NOVEMBER 1989

ACKNOWLEDGEMENTS

The present study was undertaken under the supervision of Dr. C. S. Gajarajan. I am highly grateful to him for his valuable suggestions, constant encouragement, keen interest and patience which enabled me to complete this study.

I am particularly grateful to my father Capt. S.B. Singh (Retd.) for his unfailing encouragement to help me accomplish my task fruitfully.

My thanks are due to all the library staff of the Servants of India Society for their sincere help.

I am thankful to Shri S.S. Ambardekar for his timely and neat typing.

Gokhale Institute of
Politics & Economics,
Pune 411 004

November 1989

CHARANAJEET SINGH

C O N T E N T S

		<u>Page</u>
ACKNOWLEDGEMENTS		(i)
<u>CHAPTER</u>		
I	INTRODUCTION	1
II	CONCEPTUAL DEVELOPMENT OF GROWTH CENTRES	11
III	CENTRAL PLACE THEORY	40
IV	GROWTH CENTRE APPROACH TO REGIONAL RURAL DEVELOPMENT IN INDIA	48
V	EVALUATION OF PROGRESS IN INDIAN CONTEXT	70
VI	SUMMARY AND CONCLUSION	83
BIBLIOGRAPHY		91

CHAPTER I

INTRODUCTION

Many countries today have aregional policy. Despite the special features of each country's situation one finds a great similarity between the objective of these policies. The aim is usually to develop backward regions and reduce, or at least combat, the growing inequality often found between regions or areas; to inhibit concentration in a small number of areas and favour decentralisation; and to secure a harmonious territorial balance of activities and functions through appropriate grouping or dispersal.

The basic idea of the growth centre theory is quite simple. Growth does not appear everywhere and all at once; it appears in points or growth poles with varying intensity, it spreads along various channels and has varying terminal effects for the whole economy. It is an effect, an empirical establishment of faith relating to the inequality of economic development in its spatial dimension. In recent years many general measures taken at national level have, whether or not used these terms, been guided by these concepts, which shows that they are definitely accepted.

Some of the regional problems are universal to all

developed countries it puts this concept to test both theoretically as well as practically. For example in all countries the original aim of the regional policy was to combat unemployment in selected areas by means of specific measures and was essentially motivated by social welfare considerations while such considerations remain important. The economic factor in many countries become the main driving force behind regional policy. A major objective is therefore to balance regional and local claims to resources and to give the executive authorities the possibility of making long term plans on the basis of reliable estimates of available means.

Creation of a well knit system of growth foci leads to generative urbanisation which in turn leads to rapid modernisation. Production and dissemination of knowledge are the twin inter-dependent and inter supporting processes. It is only accumulated knowledge which leads to new discoveries and inventions. Thus what would lead to rapid dissemination of knowledge would also, other factors remaining constant; lead to the generation of new knowledge. Contrarily if dissemination is inadequate or absent, the generation of new knowledge will also be inadequate or absent. We can then hypothesize that one of the reasons, perhaps the most important one being why the developing societies are getting modernized only slowly

is due to inadequate dissemination or diffusion of available knowledge to a majority of people. We can further hypothesize that the process of diffusion of knowledge is slow or stunted because of the absence or inadequacy of the organisational frame - social and spatial necessary for the purpose.

For example the inadequacy of urbanisation and urban growth centres, together with their maldistribution in India obstruct modernisation. As the urban and rural societies are not integrated into a common whole they are almost mutually exclusive. To modernise these societies the rural areas have to be brought close to urban centres, and the existing urban centres have to be more generative and more equitably distributed spatially.

In brief it can be concluded that the process of modernisation works partly through the settlement hierarchy of a region or a country. In order that this process can run smoothly the settlement, hierarchy should be studied and the gaps therein filled. Furthermore, each central place in the settlement hierarchy should be able to play its role in the process of modernisation effectively. This has to be achieved by promoting the functions which help modernisation but are lacking or weak and by linking each central place with an appropriate, net work of communication lines.

A growth pole implies the presence of mechanisms governing the growth of income and structural changes. The growth of income results from the double action of two phenomena multiplication and economies of scale. Multiplication is connected with the flow of investments and with the distribution of income for the integrated activities in the growth centre. The importance of the economics of scale increases in the same measure in which the activities are integrated thus making possible to minimize the relative disadvantages of the production limits of the zone over those situated in the regions.

This is an important phenomenon, because it causes the appearance of relative advantages which in strong zones are often decisive, which in turn tends to hamper the growth of other parts of the area and accounts largely for the cumulative character of growth in certain parts of the geographic area. Moreover, these relative advantages show a tendency to enlarge the zone of influence and the attractive force of pole. The cumulative increase in the productions of pole, the attractions exercised on the population, the size of production units all the factors which make it possible for the pole to supply larger and larger areas and which force it to set its supplies from more and more distant resources. On the whole the pole is a spring of growth which can be located

at different points. According to the nature and diversity of its activities, the realized investments influence the distribution of income on the spot of aboard, the local producers being or not being able to cope with the increased demand for consumer's goods created by higher incomes.

On the other hand, the growth pole determines structural changes in the region where it is located. Very often one can see major changes, in the demographic situation and in the distribution of working population; there is strong tendency to migrate towards the region. Moreover the share of various activities in the total product is unevenly balanced in favour of the most productive activities. The development of the infrastructures contributes to creating a milieu conducive to economic and technical progress. Finally, more understanding for innovations as educational, vocational and information facilities are created and the efficiency and profitability of progress is demonstrated. The psychological, almost mythical attractiveness of strong zone induces labour to flock into, zone and enterprises to establish themselves there on account of advantages which are sometimes real, but sometimes the illusory. The attractiveness of urban areas in underdeveloped countries or of the industrial cities in the 19th century are examples for this effect which does not seem to be justified in the face of the misery and the disastrous unemployment, resulting from it.

The second group of consequences does not always occur in this case the pole is a growth pole without being a pole of development. This is a very delicate distinction, in so far as the growth amount automatically implies structural changes. The difference emerges on the level of the activities which are not directly integrated into the pole - geographically as well as technically. If then structure and the behaviour of their productive agents changes it is justified to speak of poles of development. If, on the contrary, the effects on the structures are only local and the behaviour in the relatively independent activities is not directly influenced, the term growth poles should be used. The analysis made so far is of a general in nature and cannot be easily be applied to complex and various realities. Polarization seems to play a major part in the process of development, but the extent of the polarization effect and their modalities depend largely on the reactions of the milieu. The rigidity or the adaptability of the milieu determines the importance of the pole's effects. The milieu, however, is extremely variable.

The backward area in a well developed country is contrary to appearances, often very handicapped. It suffers from the fact that the enterprises situated in the strong zones occupy the market. Since those enterprises

profit from important external economies and since they are on the spot already, it is relatively easy for them to ensure that the entry into the sector is limited. If, on the other hand, one wants to stimulate a zone by new activities, it is important to keep only modern industries, at a high technical level. Only young industries will be able to secure outlets, and stimulate the traditional local structures. But these activities are to a very high degree capital intensive. Their impact on the local employment may in this case be limited, either because they do not require labour forces, or because there is a lack of highly qualified labour at the local level. These young industries which have a progressing rate of growth may have important effects on the region. It is necessary, however, to point out that, in general, these are not basic activities but industries appealing to production of a great number of other, very specialized sectors. Thus often makes decentralisation difficult, the under-developed or depressed region may thus experience great difficulties in obtaining the growth industry or industries liable to stimulate its economy.

In an under-developed country the situation is usually different the lack of capital, the abundance of labour, the possibility of satisfying national needs by the national production, all lead to a preference for

capital saving and labour intensive industries. It is possible, in particular, to retain, the 'mature' industries, such as textiles or food industries, which would find out less compensating former imports. It remains, but a deeply entrenched myth, which makes of basic industries, such as metallurgy, the starting point for all real development. The difficulties in financing a big size industrial enterprise with the most modern technical equipment, the shortage of outlets with a strong purchasing power, make these choices haphazard. Experiences show that, on the contrary, the utilizing of outwork equipment in developed economies, which has been purchased at a very low price, may bring about a major industrial upswing, provided the price of labour stays sufficiently low. The example of Japan in the 19th century is rather significant in this respect.

Difficulties in the choice of growth activities are therefore very often and due to the shortage of qualified labour and to the lack of certain local resources. The first obstacle results in considerable rise of costs, when it becomes necessary to resort to foreign labour, the second may lead to a postponement in the exploitation of certain resources which could have played a great part in the development, e.g. the exploitation of the resources by lack of proper infrastructure. Major works would have to be carried out which would influence the cost of

operations and the span of time needed to complete them.

In under-developed economies, agriculture remains the main activity, but one may ask if it could serve as a sufficient source of supplies for the growth industries.

Hence the purpose of the study intended in this dissertation is to bring out the concept of growth centre as a means to acquire the objective to remove regional inequality through a national system of growth foci. It has relevance in the sense that services and industries can be brought up simultaneously without disturbing the process of development.

The second chapter describes the development of the concept and its relevance to the developed countries.

The third chapter relates to the central place theory which provides some guiding framework for the formulation of the growth foci system. But it cannot be considered as whole because growth foci is itself formulated according to the requirements of the region.

The fourth chapter deals with the role of growth centre in India, its uses and implications. Also various systems of growth foci and services to be included as suggested by various economists of regional development.

The fifth chapter includes the criticisms levelled against the growth centre projects in India, and reply to those criticisms.

The sixth chapter includes summary and conclusion.

CHAPTER II

CONCEPTUAL DEVELOPMENT OF GROWTH CENTRES

A given situation within a region of a country is considered less than optimal in that levels of living are unusually depressed, the region's resources are not being developed as they might be, or the region is not adequately integrated into the nation's economy. The socio economic system of the region is thought to be producing poor results. An effort is made, therefore, to transform the system both from within, by such measures as building up new institutions and infrastructure to encourage higher agricultural production and a higher level of literacy, and from outside, by for example, offering special incentives to encourage investment in the region. Specific objectives are set out by the government to suggest the directions of the desired transformation.¹

Regional development efforts can be described, therefore, as attempts to forge powerful new linkages. The tools are the establishment or encouragement of directly productive - job creating and income increasing investment

¹ Design for a world wide study of regional development, By Resources for the future staff study, p. 7.

flows; infrastructure investment flows which look toward the development of natural resources, the improvement of human resources and the extension of the transportation and communication links, as well as other essential social and economic overhead; and the encouragement of migration when this is essential to the achievement of some reasonable relationship between population and productive opportunities when the movements of population are not by themselves adequately equilibrating. National economic growth does not take place on the head of a pin. The system of specialised activities emerges in space. Its special form is dictated in part by the distribution of natural resources and of human skills and in part by the requirements for more elaborate communication and organisation growing out of activity of specialization. Activity clusters with strong complementary links come into being as a result.

Economic theory has often argued that in order to increase over all product it was necessary to leave the factors of production free to combine in their own way, and let the remuneration of the social classes be determined by the scarcity of their talents or resources, regardless of the inequality that might result; the mobility of the factors of production could be relied upon to correct the worst features of the system. It is now

accepted that considerations of social equity, as well as long term productivity compel the community to intervene in market mechanisms so as to ensure a steadier rate of growth and better sharing of income.

Policies of deliberately channelling growth to certain favoured places in order to achieve wider regional or national goals are now advocated or practised in a variety of countries, at different stages of development with different political and economic systems. These favoured places have been variously termed growth poles, centres, points, areas, axes or nuclei. Attention to problems on a regional scale provides a means of counter-acting centripetal forces inherent in economic and technological development which tend to widen the existing disparities between one part of a country and another, between cities and rural areas, and within cities themselves, creating distress and tensions.² Negative factors such as the lack of natural resources unfavourable climatic and geographic features have always placed some regions at a disadvantage in relation to other regions in same country; initial disadvantages of this kind have led such as inadequate social services and infrastructure and the absence of employment opportunities. The positive factor constituted by rapid economic

² The Regional factor in economic development, By organisation for economic co-operation and development (OECD), p. 9.

and technological development in a given country may tend to accentuate regional inequalities.

One of the main reasons for differences in prosperity among the various regions of a country is their inequality in natural resources in relation to the prevailing type of technology, which makes these resources unusable. Although there are a number of other considerations but regional inequalities have a component that is much more natural than the components of inequalities due to social class or to cyclical ups and downs.³

✓The theory of polarized development maintains that it is best for efforts to be concentrated at a few promising points, or growth centres, within the region, which will thus become a polarized one. The term "Growth Centre" denotes places of various sizes, not just towns and cities, in which social and economic services can "best" be located to promote development in the hinterland areas which these centres serve. Thus growth centres are service centres which must be planned to meet the basic needs for which most village people have to go outside their own village. An important growth concept is that many social and economic services can be provided most

3 Torcuato Di Tella, The Concept of Polarized Development in Regional Planning - A Sociological Interpretation, in Kuklinski and Petrella (ed.) (1972), Growth Poles and Regional Policies, p. 65.

effectively when they are clustered in space, so as to take advantage of their interdependent functions and uses.

This suggests that (a) different clusters of services and facilities are provided at different levels of a hierarchy of service centres, (b) some services and facilities tend to cluster "naturally" at different levels of the hierarchy on the basis of their interdependent functions and similarities in the areas and populations they serve, and (c) that the centres at different levels of the hierarchy can be distinguished on the basis of their population size, distance from and access to surrounding settlements, degree and type of institutional development, and amount of movement to and fro from the centre.

Thus the growth centre and growth pole theory place heavy emphasis on the concepts of dynamic disequilibrium and intersectoral linkages which help to explain process of structural change. The term structural change refers to shifts in the composition of total output as well as to shifts in the general technological requirements for production.) The nature of these disequilibrium forces and the spatial and temporal characteristics of their impacts are highly important elements in these theories of development "lead" sectors are assumed to play a central role in stimulating and transmitting development effects, and it is further assumed that at any given point of time

in a particular region there may be several lead sectors. The impacts of "stimuli" from a lead sector on output and income in various structural components linked with a growth centre are also assumed to be of central importance to understanding the process of structural change.

Growth pole theory further assumes that lead sectors have rapidly growing levels of demand, above average levels of productivity, improvement and innovative activity, and relatively important multiplier impacts. The growth centre model additionally assumes that these impacts are felt locally, and that lead firms in lead sectors are dominantly important in the economics of the regions in which they are located. However, it should be noted in a regional context that important impacts on economic structure and output could occur due to rapid demand expansion in any sector which has significant linkages with the regional economy.

The growth pole hypothesis was first outlined by Perroux in an attempt to understand the mechanism whereby developmental impulses are transmitted throughout a whole economy. In 1955, in his first paper on growth poles, Perroux began his argument by describing Gustav Cassell's stationary circuit and J.A. Schumpeter's use of it, as a classification device to select out the fluctuations and development changes occurring in real economic life. Then,

following Schumpeter's main line, Perroux succinctly stated the essence of the structural or developmental change which takes an economy away from the stationary circuit. To him the basic cause is Schumpeter's innovations. They result in more desirable products which replace previous ones. Development, in other words, means to Perroux the birth of new and death of old industries; it means the continuous differentiation of the rates of growth of the new and old products and respective industries away from the equal growth rates of the stationary circuit model. Development proceeds by the direct and indirect effects of innovations.

Highly income elastic new products replace the low income elastic old ones and call for smaller scale innovations in the products related to them. The adjustments in the products linked to products old and new ones, both through forward and backward linkages, are caused both by the "expectations" produced by the new product and by their "realised" impacts, through prices and income channels. These impacts result in cumulative deviations from stationary equilibria (sectoral and geographical). Newer industries (and the cities where they are located) in which the developmental innovations take place, grow at faster pace than old industries and cities. Around the new industries and their locations, sectorally and geographically, the activities linked to the leading ones also

grow faster than their counterparts elsewhere. Development, therefore, implies cumulative sectoral and spatial clustering of activities around the leading activities, and their faster growth than the result.

In brief the net contribution of Perroux to the basic Schumpeterian argument was that he took Schumpeter's tool box of concepts and hypothesis from its original sectoral - temporal setting and applied it to a sectoral - temporal geographical universe. Perroux's inability to derive a clear analytical apparatus to describe the growth pole dynamics, can clearly be attributed to his desire to make immediate use of growth pole concept in planning. This led him to formulate the basic definitions and hypothesis using available quantitative methodological instruments. Eventually the purpose became self defeating, worse still, as not all these methodological instruments are consistent with the growth pole concept, the concept itself had become a source of confusion in regional economics.

It is unfortunate that the usefulness of the growth pole concept is still to be realised. Its potential is high. The concept better than any other brings forward as relevant analytical questions whether national development implies polarizations over the different topological spaces, and which, if any, are the inter relations between

these spaces. In consequence, it extends the potential policy use of economics. Before Perroux introduced the notion of topological space, it was difficult to conceptualise that a phenomenon that was observed in sectoral space could be a subject to a policy of geographical dimensions, and vice-versa. His notion clearly implies that when a goal, represented in a topological space, cannot be attained by means of policies pertaining to that space, it can still be pursued by other policies in other topological spaces. The French school of space economics, which has striven to develop the growth pole concept has failed to exploit its potential due to special bias that has characterised its research. The French and Belgian authors of the Perroux school have later produced a considerable amount of research along the lines indicated by Perroux in his major second paper. The works can be classified in two major groups : (1) descriptive and (2) planning oriented. The works of Perroux on the Ruhr, Banchet and Lorraine and Derwa on Liege belong to the first. Those of Boudeville on Minas, Gerais, Davin on Liege, Rosenfeld on Turin and Paelink on Venezuela, to the second.

The distinguishing traits of all those works is a very restricted way of formalising and measuring the concept of leading or dominant industries and that of a

changing polarized system of industries. Reviewing the field N.M. Hansen has developed the same points, namely that their exclusive use of input-output model analysis:

- (1) reduced the usefulness of the growth pole concept
- (2) unduly restricted the concept of leading or dominant sector to large industries with large matrix multiplier effects.

Some additional points are worth making concern the causes and the results of the French school bias. First, while Perroux deserves the credit for the richness of the growth pole concept and for the notion of topological economic space on which it is based, he is responsible for schools path. Second, the research limitations of the French school of space economics cannot be attributed wholly to the limitations of the input-output analysis their basic method. In a larger part, it is the result of a lack of sophistication in the use of analysis. Yet, the highest cost that the French school has paid, by restricting its analysis to the inter-industry technique is that it has derived the growth pole concept of its original temporal and dynamic meaning and recharged it with a static and/or comparative static content.

The heavy use of the input-output technique has shifted the schools attention away from Perroux's original translation to Schumpeterian development. They have failed

to develop the point that the activity creating growth poles was essentially a sectoral and a geographical disturbance not because of its larger than average size, nor because of its higher multiplier, but because it was an innovation. The other characteristics of the leading activity explained exclusively the amount and direction of the spread effects of the innovation. In consequence they have not been able to profit from Perroux's notion of topological space in the understanding of today's development process. Further they have not been concerned with testing, reformulating and completing Perroux's hypothesis on growth pole dynamics in the context of recent economic development.

Essentially growth centre thinking is based on the readily observed facts that in the past, manufacturing industry has tended to agglomerate at particular locations because of the economies to be gained by so doing. A key element in growth centre policy has been the idea that once the industrial base of the selected centres has passed a certain threshold level, sufficient urbanisation economies will have been generated to ensure self-sustaining growth through the automatic attraction of further industries without the need of special inducements, and indeed much attention has been devoted to establishing with this minimum threshold might be.⁴

⁴ Breathnach, P. The demise of growth centre policy: The Case of Ireland by Hudson, R., Jewis J.R. ed. in Regional Planning in Europe, p. 36.

A variety of supplementary advantages have been attributed to growth centres case as a regional planning device, including the more efficient use of public funds for infrastructure investment; the creation of a diversified social interaction milieu amenable to innovation; the interception of migratory flows from surrounding areas; the more efficient utilisation of those public services which are subject to scale economies; and the ability of growth centres to generate spread effects in their hinterlands.

The centre chosen to receive special assistance may be among the largest in the country, with diversified activities and extensive influences but they may sometimes also be dynamic industrial centres whose prosperity is linked to large-scale investment in industry and which have not yet exerted an influence over a wide area. Turkey is one such example. The regional planning measures undertaken in that country in 1962-1963 were intend to define and promote certain regions which could become well integrated development poles around a centre with a promising future. In Spain, an act of 1963 provided that regional development would aim to create "poles of industrial development" and "poles of progress" as well as industrial complexes.

The aim, in the case of these large poles, is

usually to develop an industrial base of such a size and type that it may be expected to produce the indirect and induced effects mentioned earlier, which will benefit other industries and in the long run, the development of the whole region. But attention may be given not only to industrial development but also to the "higher" functions of the tertiary. An increasing number of countries are reaching the stage at which the growth of industrial employment is exceeded by that of services, and at which services are directly linked to overall economic expansion; when this happens, the attention devoted to them in the promotion of large centres is bound to increase.

This need may especially be felt in countries where the administration, business activities and social structures are highly centralized and call for corrective measures. But, as urbanisation spreads, the need to pay more attention to services becomes general. The use of so-called "metropolitan" method, which assumes that in the urban centres and the extensive area that they dominate, development is not exclusively tied to industrialisation but also to the improvement of urban resources such as transport facilities, communications, housing and the whole range of social services. The revitalizing of adjacent areas and maximization of employment with a view to eliminating social and economic wastage; these requirements

are recognized today in countries as different from each other as India and the United States of America.

These centres should provide the surrounding areas with a number of services, particularly administrative services and sometimes also industrial activities which may be connected, for example, with the processing of local produce, as well as restaurant services to meet local needs. Any new investment in the area should be preferably in these centres, which may be referred to by such names as rural centres or central villages, local centres, markets, services centres, etc.

It may also happen that these centres are selected not only as preferred points for the regrouping and expansion of services but also for the regrouping of the agricultural population. Efforts have been made on those lines, as witness the term "agricultural city", and these have been attempts to introduce industrial activities in the agricultural centres.⁵

Everywhere the face of the countryside is changing. In the advanced countries, the number of people engaged in agriculture is decreasing, while the size of farms is increasing. In collective farming a similar trend may

⁵ Halperin, H. Agrindus, Integration of Agriculture and Industries, in Impact of Science on Society (UNESCO), 1967, No. 4.

also be observed. In general, the artisan population of villages is decreasing and one finds a concentration of commerce and services in the towns; this change has of course been made possible by better communications. In highly populated areas, the non-agricultural community becomes relatively larger. In the less advanced countries where population growth is rapid, the numbers engaged in agriculture may still be increasing but rural depopulation is nevertheless very considerable and the small town's low power of attraction normally makes the problem all the more difficult to solve.

It is in this context that the importance of developing small centres capable of exerting an influence on the surrounding area and of acting as centres for the provision of employment and services clearly emerges. Such a policy would help to slow down or even halt rural depopulation, which in many cases is extremely rapid and has perhaps already gone beyond the optimal point.

The first phase is normally the selection of small centres and of the areas which they serve. This, of course, may require much research and discussion; in fact, every selection is necessarily arbitrary, since the existing pattern is not so much a network of centres of equal importance as a hierarchy of centres which is "never completely homogeneous and includes both the largest and

the smallest centres. Moreover, even if the centres already exist, the boundaries of the area which they serve will necessary be unclear; the definition of rigid boundaries may be no more than a harmless intellectual exercise, but it can turn out to be dangerous. It may also be worth considering whether the selection should always be based on the assumption that the hierarchy is perfect and whether it should not tend towards a system of complementary centres, each having a different functions, which is often the case in practice.

The second stage in applying such a policy is to decide what infrastructure and services the various centres selected should have. It may be very useful to have suitable standards in which case it is necessary first to decide what standards, to adopt at the national level for the different services (schools, hospital, etc.) These standards are then applied to a given situation, taking into account population density, ease of communications and actual possibilities of grouping services.

In highly populated countries such as West Germany, the promotion of small rural centres can also be a characteristic feature of the policy, although in that country the main problem is the dispersion of the industrial activities and provision of suitable equipment for the

centres.⁶

The importance which rural development programmes could assume has often been emphasized in Latin America. Excessive dispersal of the population and a correlative lack of any community organization; seem to be general. Moreover, the towns tend to be no more than nuclei of local public office holders or agglomerations of marginal rural workers who have nowhere else to go. In these circumstances, it has been advocated that action should be taken at two levels, first, at the level of groups of between ten and 200 families and secondly, at the level of the community composed of 5,000 to 50,000 people, sometimes around a town. Nuclei providing services should be located at points accessible to the greatest possible number of rural families. This would encourage increased clustering of settlement, giving numerous advantages. "A higher degree of clustering of rural settlement, with secure, tenure and a strengthening of neighbourhood ties, is undoubtedly a prerequisite for faster progress in housing improvement through self-help".⁷

6 Newman, J. The Urban Rural Relationship, in Planning in Ireland.

7 Economic Bulletin for Latin America, Rural Settlement Patterns and Social Change in Latin America : Notes for a strategy of rural development, March, 1965.

In most countries, of course, the geographical distribution and the size of the centres will differ considerably from the regular hierarchial system, which, according to the classical theory of centres (as expounded by W. Christaller and A. Losch) should give hexagonal market areas. This result is due to the irregularity of the distribution of that part of population which is not engaged in service industries (because of topographical conditions, agricultural development patterns, extractive and other industries and access to existing resources); it is also due to the influence of stochastic factors.

The special distribution to the centres indicates the existence of dispersion models which imply the influence of systematic forces other than the mere distribution of natural resources. It is this which forms the subject of the theory of centres. This theory is based on the idea that activities to provide services to a given population vary considerably according to the minimum population figure, the minimum purchasing power and the minimum threshold necessary to justify these activities. A centre at the lowest level appears when it is capable of meeting these basic requirements, namely, of dominating a hinterland whose population is not below the necessary minimum. Nevertheless the actual distribution of town in a given region is the result of a long and complex interaction of

forces; however regular this may be it never corresponds to a systematic model. The 'threshold values' hypothesis, in particular, according to which a service centre will appear in a given place if the demand for it exceeds a certain value, is far from proven in practice. The centres system is never completely adopted to the existing circumstances.

It may be argued that the centres theory, like every economic law, the expression of a rationalization and that therefore it describes not only that which tends to exist but also that ought to exist. Its function, a normative one, is to evaluate "that" which given an ordered set of functions, corresponds to the most effective division of space". Experience shows, however that the centres theory does not give the expected answer. As G. Ollson pointed out in his commentary on the observations by J.P. Thijsse, (who submitted centre models for the newly reclaimed lands in the Netherlands) the theoretically perfect system did not work. A large number of centres are losing population to the towns while others are stagnating. The pattern of the development of the centres on the reclaimed lands has greatly exceeded the planners predictions; and the new model is very different from that which exists in other parts of the country.

In 1962, J.P. Thijsse presented a rural pattern for

the future of Netherlands; in this paper he pointed out that, in the Zyderzee reclamation operations carried out after 1930, too many villages, had been established.⁸ But in 1967, he was obliged to note that the developments had followed a pattern different from the one he had presented and it was necessary to adopt a more refined model. This can, of course, be explained by the fact that means of transport and ways of life altered more rapidly than had been effected. In a relatively short space of time, bicycles had been replaced by motor cycles and cars and the basic zones of attraction tended to cover a greater area than had been forecast.

One of the criticism recently levelled against the theory of growth poles is that it is concerned essentially with point development rather than with regional systems. Space may be considered as a system of regions, each having its centre and periphery; the important thing, however, is to explain the historic transformation process connected with various periods of time and also to establish link between the theory of social change and that of territorial organisation. The theory of polarized development "attempts to solve this question. It

⁸ Thijssse, J.P. A Rural Pattern for the Future in the Netherlands, Regional Science Association Papers, Vol. 7, 1963.

reveals the existence of a fascinating type of dialectic process. Development, regarded as a process of innovation, has its origin in a relatively small number of poles of change which are situated at points of strong potential interaction within a communications field; development tends to radiate out from these poles towards areas in which the interaction potential is slighter. The periphery fights for a decent standard of achievement and for the development of new areas which would themselves be centres of attraction. The various regional systems at different development, levels also tend to conflict.⁹

The effect of these theories in decision making is not clear. It may be thought desirable to encourage the appearances of new regions and of new attraction in these regions, in other words, to encourage the polarization process, but only if such a movement is successful.

Measures to rectify an imbalance in the urban structure cannot be applied in any rigid manner. The steps taken to this end must be adapted to local needs and must take account of the conclusions of work in various fields - sociology, demography, geography, economics and economic history. Efforts must be made to avoid

⁹ Fried Man J. A General Theory of Polarized Development, Ford Foundation, Santiago, Chile, August, 1967.

giving new incentives to "parasitism" and to avoid an approach running counter to a reasonable pattern which is emerging or one that is too much in conflict with existing trends. If efforts are made to rectify the imbalance of a structure of centres, attention should be paid not only to the effects of such an imbalance but also to the factors which may be its root cause.

Even, if in most cases, the hierarchial structure of towns and centres is slow to change such change does, nevertheless, occur over the years, there can be a very marked change in the relationship between a town and the area over which it exerts its power of attraction. It is accepted that there are two types of region. The first reflects the concept of homogeneity. It combines areas which differ from one another to a minimum extent. The geographical agricultural regions are homogeneous in nature. The second type is the economic, nodal or polarized region. It combines parts which may differ considerably from one another but which are complementary. The polarized region may be defined as the Locus of points which have stronger relationships with the local centre than with any other external centre of attraction.

A judicious selection of centres can facilitate the implementation of the desired economic and social changes. It can also make it possible for changes which will occur

in any case to do so satisfactorily, for the convenience of both the inhabitants, as consumers and producers alike, and business circles, in this respect, the selection is a factor in productivity. A wise selection of the centres will likewise also contribute to the maintenance of growth.

A programme of research on regional development was implemented during the years 1967 to 1971 in UNRISD. This programme was closely related to the United Nations Research Training Programme in Regional Development (Economic and Social Council Resolution 1086 C).

The aim of the programme was to promote a new approach to the strategy of regional development designed to integrate social, economic and administrative aspects within the framework of multilevel (national-regional-local) planning. The programme consisted mainly of the following projects.

- A worldwide study of regional development; experiences and prospects.
- The role of growth poles and growth centres in regional development.
- Information system for regional development.
- Regional sociology.
- Regional disaggregation of national policies and plans.

The aim of this project was to fill a major gap in both international reports and academic publications. Upto now, publications on regional development have been concerned mainly with two types of study :

- (a) General studies
- (b) Case studies.

The first type of study usually contains sweeping generalizations of presumed universal validity : basic differences in regional activities in countries of different economic and social systems, levels of development, size and density of population are overlooked. In the second type, the generalizations are restricted to one country or one region, reducing the comparative perspective.

It was, therefore, felt that a third type of study was necessary which would be sufficiently general and at the same time, sufficiently specific to serve research training and planning purposes. This task could be performed by continental or sub-continental studies of regional development which would give a worldwide assessment and yet take account of differential conditions. The proposal for such a study was approved and supported by an Advisory Meeting which took place in Geneva in December 1967. This project was implemented in the years

1968 to 1970 and the following studies have been prepared.

1. South and South East Asia, by L. Lefebvre and M. Datta Chowdhary.
2. South West Asia under the Auspices of the UN Economic and Social Office in Beirut.
3. Africa, by Von Gersdorff.
4. Latin America, by Wstohr with the assistance of Ford Foundation.
5. United States, by John H. Comberland.
6. Canada, by T.M. Brewis.
7. Eastern Europe, by K. Mihailovic.
8. Western Europe, under the Auspices of Mensen Ruimte, Vol. 2, W. Brussels.

The Institute's approach to the study of growth poles and growth centres is to view them as instruments for comprehensive development in a spatial setting. The effective integration of industry, agriculture and social services, as well as of urban and rural aspects of development, can usually be conceived in more concrete and manageable terms at the regional than at the national level, and growth poles and growth centres are major instruments of such concerted development at that level.

This has been the second major project in the Institute's Regional Development Programme. A comprehensive

set of theoretical and empirical studies in this field was initiated. The results of these studies were discussed at two international seminars : The first, organized jointly with the European Coordination Centre for Research and Documentation in the Social Sciences, took place in Geneva in 1969; the second was organized in Madrid in 1970 in the framework of a joint research project on Growth Pole, Hypothesis and Policies, carried out during 1970 and 1971 by UNRISD and the Nueva Universidad Autonoma de Madrid. As a result of these activities four publications were printed.

1. Growth Poles and Growth Centres in Regional Planning as Vol. V in the UNRISD/Mouton Regional Planning Series;
2. Growth Poles and Growth Centres as instruments of modernization in developing countries, as Vol. IX in the UNRISD/Mouton Regional Planning Series;
3. Growth Poles and Regional Policies, papers of a seminar jointly sponsored by UNRISD and the European Co-ordination Centre, as Vol. III and in the CEUCORS/MOUTON Publication Series;

The United Nations Research Institute for Social Development started work in 1964 as an autonomous United Nations activity with the purpose of conducting research into problems and policies of social development and relationships between various types of social development and economic development during phases of economic growth, UNRISD Research Notes No.1 Geneva, June, 1968.

4. Growth Pole Hypothesis and Policies in the Developed Countries, a Volume jointly sponsored by UNRISD and the Nueva Universiad Autonoma de Madrid.

Thomas has set forward a tripartite classifications scheme for industrial systems which induce structural change. He speaks "propulsive" "Lateral induced" and "Capital goods" systems, which are inter-related and inter-dependent as described in growth pole theory.

The propulsive system described by Thomas consists of the technological linkage which is focussed upon a propulsive or lead sector. The structure and operation of this technological linkage system is quite suggestive of the inter-industry linkage system of a Leontief Model - input-output model. However, Thomas conceives of the operation of this system in a dynamic context in which inter-industry structures may change over time. One casual sequence in which this type of change can occur may be described as follows. If the output of the lead sector expands, scale economies may result in lower average cost in the lead sector, which may in turn allow price reductions if the lead sector engages in competitive pricing. Such price reductions will lower costs to purchasers of the lead sectors output and could further

stimulate output of the lead sector if demand is price elastic. Such lead sector output expansions may also affect backward linked sectors which are subject to scale economies, so that further rounds of price-cost impact may occur.

These changes may be continuous and occurring in many sectors simultaneously, resulting in factor and product substitutions which could continuously alter inter-industry structural relationships. Other forces, such as external technological change, import substitution, and changing regional and inter-regional trading patterns may also lead to changes in regional inter-industry structure. Of course, price changes alone would be sufficient to change inter-industry structural relationships. As a result of change in the nature of the regional inter-industry structure and changing levels of demand for regional products, the levels and mix of regional industrial output will also change, and it can be anticipated that employment and income impacts will occur.

The technological linkage system within the growth centre was found to be relatively weak, while strong inter-regional technological linkage were quite common. Regional backward linkages were found to be strongest with value-added and indirectly strong ties were found to exist with personal consumption expenditures. Forward linkages with other regions also tended to be relatively

strong. This degree of openness in the technical interdependence system, and the relative strength of the lateral induced system, needs to be verified by data for other growth centres.

In particular, the growth inducing role of the increases in income associated with lead sector expansion needs more to be fully articulated in spatial and regional terms.

CHAPTER III

CENTRAL PLACE THEORY

The central place theory relates to the size of cities, the functions they perform and their arrangements. It has wide applicability. It can be applied to study the size, number and distribution of settlements with a view for explaining these or for identifying and classifying settlements on the basis of certain attributes. Therefore, for example, big and small settlements, commercial and/or industrial towns, seats of administration and so on, each with its own social-economic significance. The central place theory can also be used as a framework for the allocation of investment on urban functions and urban infrastructure in settlements and regions; or for the location of manufacturing and processing industries and territorial activity.¹

Two different approaches have been adopted in studying central place hierarchies. In one case, as with Christaller, the approach is from higher to lower order central places. In the other case, as with Losch, it is from lower to higher - order central places. There

1 Central Place Theory, V.L.S. Prakash Rao, Readings in Micro Level Planning and Rural Growth Centre.

are certain assumptions underlying the theory. These are : (i) uniformity of the physical and cultural landscapes in the region, (ii) unbounded unit area, (iii) equal accessibility in all directions, and (iv) rational consumer behaviour.

The crystallisation of mass around a nucleus, which we may call a town, is the focal point for its surrounding area; the town may be said to be the service centre of its hinterland. The service centre and the hinterland exist for each other; their relationship is complementary and not competitive. Also, there are different degrees of crystallisation; in other words, there are towns of different orders. The higher the order, the greater the functional specialisation of the town and, hence, greater is centrality. There is also a universal principle which should be mentioned in this connection: the sum of distances which the consumers travel in the hinterland must be the smallest conceivable sums. Economy of movement is, then, a destructive mark of an ideal spatial/hierarchical arrangement.

Central-place models are concerned with explaining the horizontal (spatial) and vertical (functional) distribution of settlements in a region and their inter-relationships (hierarchies). The locale of activity is assumed to be an unbounded, homogeneous plain, where uniform

distribution of population resources, producers and consumers, etc., is the rule, movement in every direction is unimpeded and involves equal unit cost.²

In its most comprehensive enunciation, the central place being would provide a complete framework for the study of the formal and functional attributes of the settlement regions, the types and patterns of linkages between them and their dynamics. But neither the construction of Christaller nor that of Losch - the two pioneering and elaborated models of the central place concept - are comprehensive enough to fulfil this role.

There is a definite connection between the consumption of central goods and the development of central places. The development of those central places the inhabitants of which live by the sale of central goods becomes more pronounced if many central goods are consumed than it does if few central goods are consumed.³ The most decisive factor in the development of central places is not the consumption of central goods, but the receipts from the sale of the central goods, i.e., the net income (equal to the gross income minus the production and other costs)

2 Conceptual and Methodological Dimensions in Central Place Theory : Sidhiv Wanmali and Waheaduddin Khan, Readings on Micro Level Planners and Rural Growth Centres.

3 Central Places of Southern Germany, by Walter Christaller, Translated by Carlisle W. Baskin.

which the inhabitants of central places earn. If this sum is high, then many individuals can live on it, for everyone is economically well off, and the central places flourish. If it is small, however, then only a few individuals find a modest living, and the central place is badly developed or declining.

The basic postulate of the central place theory are that the distribution of human settlements in any settled area is not disorderly and there are distinct relationships among the number, distribution and size of settlements. Christaller's theory and its empirical testing was confined initially to the tertiary sector of the economy.⁴ Salient features of central place theory can be stated as follows.

(a) The Central Place the central good and complementary region are the three important contents of the theory.

A central place is defined as that settlement which by virtue of the availability of certain facilities and services (defined as central good or services) is able to attract people from smaller, settlements around it.

The intensity of influence would depend upon the distance and the cost at which those facilities could be obtained.

The assumption is that the consumer would buy the goods

⁴ Indian Statistical Institute, Central Place Hierarchy for a Developing Agricultural Region, January, 1974.

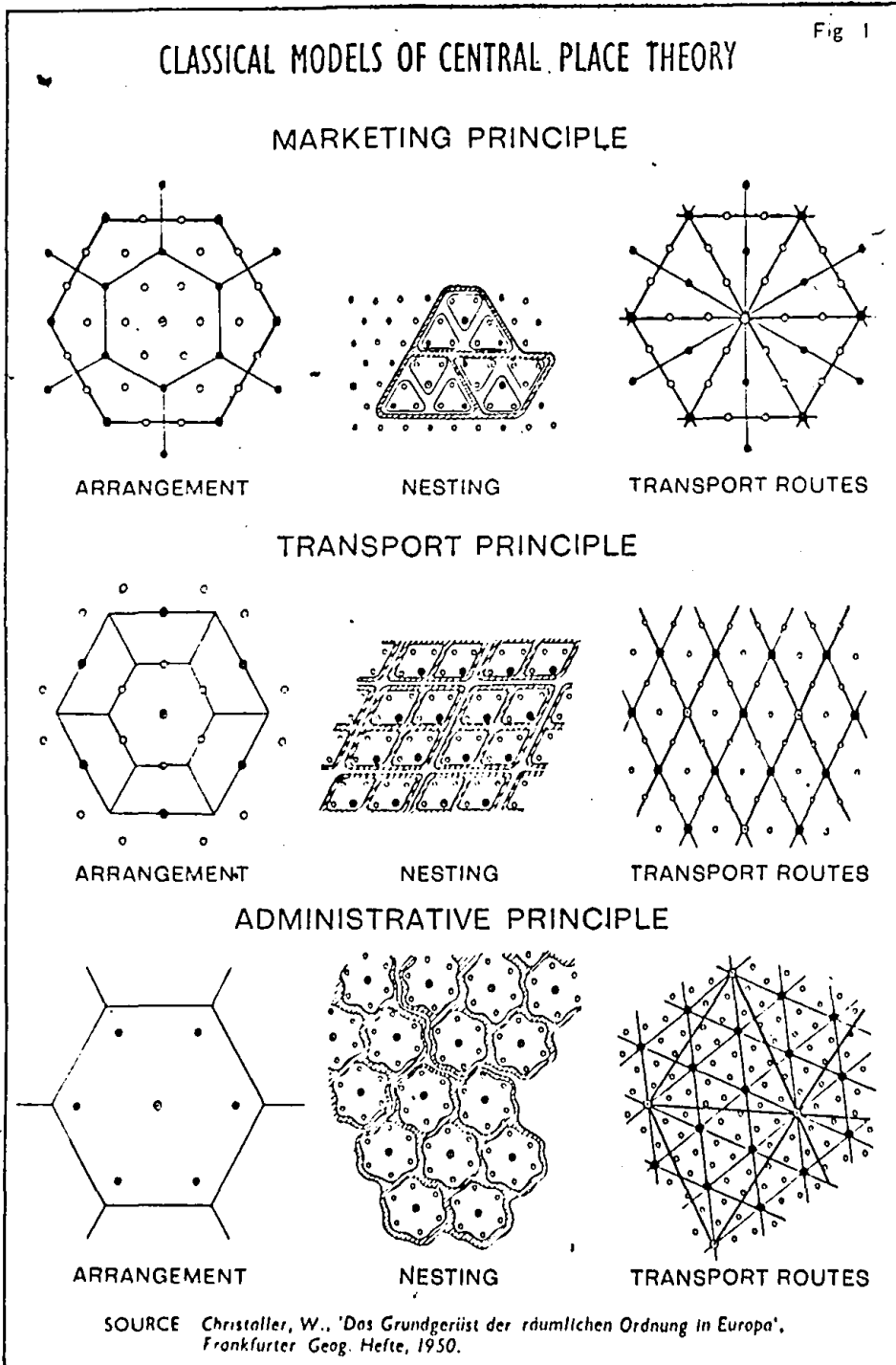
from the closest place. There would also be an upper and lower limit of distances within which those goods or services would be bought by the people. The number of goods sold or the facilities available in a place would depend upon the population of the place. The concept of threshold population is introduced in this context.⁵

(b) The theory assumes homogeneous distribution of the settlements and purchasing power of the people.

(c) According to the above conditions the market areas for those central functions would be hexagonal and an overlapping sets of hexagons would result in a 'nested' manner in which the larger hexagonal market areas - divided into smaller hexagons according to the levels of functions. This implies a hierarchic arrangements of central places and their complementary regions. Transportation routes serving these settlements would be also of different levels or hierarchy.

(d) The system of central places and their complementary regions could be governed by a alternative principles. The marketing principle is based on the assumption that all the areas could be served by system of three settlements in such a way, that each settlements serves its own hinterland

⁵ Threshold populations the minimum level of population required for providing a function efficiently.



and an area or population equivalent to two other settlements in addition ($K = 3$ principle). The pattern of settlement hierarchy according to transport principle would be such that many settlements would lie on the main transport routes connecting the higher order, centres ($K = 4$). According to the administrative principle the efficient administrative control of settlements would result in the evolution of distinct complementary regions in which case a complete hexagonal system is postulated ($K = 7$).

The disappointing feature of the central place theory is its inability to describe actual urban systems, particularly with regard to frequency of centres of different size classes of hierarchial level. This may be attributed to the fact that in a urban system which is sufficiently complex, the central place theory is inadequate to describe the settlement system, as this does not conform closely to the assumptions and requirements of the theory. It is strictly applicable to one category of urban places, essentially market or service centres.⁶

"AUGUST LOSCH" used a similar hexagonal framework for his theoretical landscape but improved and extended on Christaller form by showing how a complete economic

⁶ Jaymala Didee, Central Places in Western India. published by S.P. Bhonsale, Registrar, University of Poona, August 1984, p. 7.

landscape can be created based on general concept of hierarchies. Losch evolved the framework of an economic landscape in which the number of centres and functions performed at each level of hierarchy could be flexible. This means that all places having similar population size need not have same level of functions. Loschian Model thus seems to be more realistic though the existence of discrete steps or breaks in hierarchy or continuity in sequence is still questioned.

The Central Place Theory and its modified framework do provide a basis to understand and interpret the pattern of functional organisation particularly of agricultural regions. The geometrical patterns may be distorted and yet it has been found that functional hierarchy and spatial regularity of settlements is relevant even without the constraint of uniformity or homogeneity of the physical landscape and resource base or uniformity in purchasing power. It has a predictive quality also if one considers the flexible pattern and uses the norms of distance and interaction of settlements in a given situation.

CHAPTER IV

GROWTH CENTRE APPROACH TO REGIONAL RURAL DEVELOPMENT IN INDIA

The emphasis on regional development in the context of national planning came in almost from the beginning of the Five Year Plans of development in India. The first five year plans mentions that it is often desirable to prepare development programmes in terms of regions, determined by physical, economic and administrative considerations. The needs and priorities of different regions as well as their potentials for short term and long term development should be taken into account in drawing up and continually reviewing their development programmes. District Plans are always essential, but they may gain in value if they are also part of well considered regional plans.¹

The second five year plan stated that one of the objectives of national planning is to even out regional disparities. The second five year plan indicated that a District Plan would include programmes prepared on territorial basis...". If these territorial plans were intended to be comprehensive and integrated regional

¹ Government of India, Planning Commission, First Five Year Plan, 1952, p. 157.

plans, it must be said that such plans have yet to be prepared.²

The third five year plan dealt with regional disparities in some details by devoting one full chapter on balanced regional development.³

The fourth five year plan does recognize regional imbalances in development as one of the issues to be dealt with and has stated in general, the approach to correcting regional imbalances during the fourth five year plan. In this connection, it is also recognized that balanced regional development and dispersal of economic activities are closely inter-related and these should be reflected in the formula for investment allocation.

The identification and evaluation of the physical resource base and population reveals a realistic special or regional pattern, distinct from the inter-state patterns. Without the analysis of locational advantages of different economic activities in relation to the resource base it is difficult to evolve any objective criteria or policy for investment allocation as related to regional development and dispersal of economic activities. Moreover, because of the large size of the country and the federal structure

2 Prakash Rao, V.L.S., Regional Planning, p. 31.

3 Government of India, 1961, Third Five Year Plan, pp. 142-51

in which the plan operates, there is a need for simultaneous analysis of the problems in regional development and location of economic activities at the national and state level according to the relative importance of resources and activities. All this is however related only to one aspect of regional planning i.e. the disaggregation of national plan downwards through the different ladders of administrative hierarchy. With the introduction of the process of 'planning from below' there is an equal emphasis on physical planning below the state level particularly for District and Development Blocks. Obviously the framework of a physical plan has to be prepared from the regional angle to facilitate aggregation of the possible production and investment requirements through a process of integration of these plans in the physical space. Thus, regional economic planning in national context and national physical planning in relation to the development plans of the Blocks, Districts and the states are two distinct but related dimensions of regional planning in India.⁴

Even though in a macro level schematic budgeting and sectoral allocation plan framework prior to the IV plan we have given importance to rural development through community development programme, the micro level approach intends to plan from grass root level. Indian planning

⁴ Bhat, L.S., Regional Planning in India, p. 2.

has accepted the growth centre concept as the strategy for local planning for identifying special and functional units of planning.

(The concept of growth centre provides a methodology for a balanced programme for rural development. Based on the past concentric growth of Indian urban areas, the need for decentralisation was felt among Indian Planners and accordingly they laid their shoulder to the growth centre concept as a decentralising strategy.

Largely drawn from Moseley (1974), Jaya Appal Raju and Micheal Safier have specified the form of polarised development as a single complex phenomenon involving six inter-related conditions in incorporating both growth pole and growth centre concept.

1. The presence of specific production, distribution and trade activities which are established at some minimum scale of operation and which have a rapid and sustained growth.

2. The establishment of direct and indirect linkages between the production and distribution activities with other activities.

3. The growth potential of economic activities to propel new economic productive forces and transforms the structure of production involving adoption of successive innovation and specialisation.

4. The evolution of organisation of activities within a district concentration.
5. The growth or initial establishments of locations to realise externalities and infrastructural viability.
6. The ability of concentration of activities to induce socio economic development of surrounding settlements.⁵

In order to become an instrument of transformation of a region, a growth centre should possess certain characteristics. The geographic agglomeration of the industrial complex is the result, basically, of complementarities and external economics. Factors other than natural resources also play an important part in the formation of growth modes or industrial complex. Industrial complexes cannot be explained merely in terms of industry input-output relations, many institutional. Micro and Macro economic factors also play an important role.⁶

"The essence of planning is to calculate prospectively available but limited resources and to assign them among competing elements in a balanced system so as to ensure that a desired result is produced at the lowest possible cost."⁷ Programmes such as the growth centre projects offer

5 Arthvikas, E. Narayan Nair, 1978, Growth Centre Concept and Development Planning, p. 65.

6 Industrial Development Bank of India, Seminar on Industrial Development of Backward Areas, Taj Mahal Hotel, Bombay, May 16-17, 1980, p. 22.

7 Tobias George, "Manpower Journal, 1968.

opportunities to utilise local foresight and management skill. Without these, works programmes become almost purely relief measures. They may well be necessary though expensive but there should be no confusion about the accounting of the cost.⁸

A pilot research project in growth centres was implemented as a centrally sponsored scheme during the fourth plan period. The scheme envisaged the setting up of a total 20 research and investigation cells to evolve techniques and methodology for the development of emerging and potential growth centres by providing social and economic overheads in delineated areas in terms of a carefully prepared inventory of local needs.

All the 20 areas identified have been approved and one research and investigation cell at each of these approved areas has been established. Reports have been completed for all the 20 projects.

It is envisaged that based on the findings of these surveys and reports it would be possible to lay down some guidelines for selecting potential centres for growth without lengthy and elaborate investigations so that they can be followed by planning the infrastructure facilities in different areas.

⁸ Andrade Preseton, Urban and Regional Planning in India in the Seventies, February, 1970, p. 45.

It may however, be observed that the progress on their scheme has been rather tardy. The objective that on the basis of these studies, the locational decisions for rural infrastructure would be rationalised, had yet to be realised.

The fourth-five year plan has given importance to planning at the district level and to experimental studies on growth centres for evolving a planning strategy at the grass roots level. The primary needs in our rural areas are many. Aside from the needs for service facilities such as health and education, the recent upsurge in agriculture has created demands for efficient distribution of agricultural inputs, for marketing and for processing of products. If the current tempo in agricultural activities has to^{be} maintained, all these have to be provided without delay. Along with the strengthening of the agricultural sector, a planned strategy for decentralising industrial efforts in the rural areas has also become imperative. Mere urban renewal does not solve the problem unless the flow of migrants from rural areas is checked. The only way to do this is to develop centres in the rural areas with potentialities for employment. If the existing hierarchy of settlements in a particular region is utilised for formulating a developmental plan, then areas far away from the important centres of economic

activity may remain permanently underdeveloped. Some inducement for growth is, therefore, necessary in backward areas in the form of overheads and infrastructures in selective locations.

The decentralisation and the actual location of functions need to be done within the framework of a region to encompass both urban and rural sectors. In the past, the development of these two sectors has been kept separate and the towns could not be utilised for the development of rural areas. It is needless to say that the separation of the urban from the rural is arbitrary and harmful from the point of view of development of a region.

Two considerations need to enter into micro-planning at the district level. First, the funds available under the various subjects are very limited and it is not possible to give individual attention to each village. It is necessary, therefore, to be selective in allocating funds over a large area. Second, even if funds were available for developing each village separately, it is doubtful whether it would be an economically viable proposition to put higher order functions in smaller villages. For example, not all villages will be able to make use of a hospital, a high school or a rice mill.

Creation of a well-knit system of growth leads to

a generative urbanization which in turn leads to rapid modernisation. (The inadequacy of urbanisation and urban centres together with their maldistribution in the developing countries obstruct modernisation. The urban and rural societies in these countries are not integrated in a common whole. They are almost mutually exclusive. To modernise these societies the rural areas have to be brought closer to urban centres, and the existing urban centres have to be made generative and more equitably distributed spatially. R.P. Mishra and K.V. Sundaram have suggested a new system of generative urban centres, collectively called 'growth foci' for future development. This system envisages the development of :

- (a) Central villages at the local level;
- (b) Service centres at the inter-local level;
- (c) Growth points at the micro-regional levels;
- (d) Growth centres at the meso-regional level; and
- (e) Growth poles at the macro-regional level.

(a) Central Villages

A central village will serve a rural population of 5000-6000 inhabitants. It will primary school (standard) and other basic social services including a market place, community hall, sports ground, postal and primary banking services, etc.

(b) Service Centres ✓

The service centre will be the next higher level of activity serving a population of 30,000 persons dispersed in a number of central and other villages and hamlets. These centres will have general stores, repair facilities, restaurants, primary and junior high schools, a sub-post office, specialized cooperatives, banks, community centres and other basic social facilities. It will also be the headquarters of the local extension service and other public offices. f .

A long term objective of a service centre will be to create channels through which modernisation can penetrate the remotest part of the country. The service centres should provide opportunities for local tenant to start small scale agro-industries based on local resources. The location of the service centre should be so selected that the community to be served by the centre would focus its social, cultural, economic and political activities on it.

(c) Growth Points ✓

The next level in the hierarchy of growth foci will constitute the growth points.

A growth point will serve about five service centres and a rural population of about 150,000. The size of a growth point in terms of population will be about 10,000. At present, there are about 2,000 market towns in India which are potentially capable of development in growth points. Each of these towns serves about 300 villages spread over hundreds of square miles of times of difficult terrains with very dispersed population. The links between the market towns and the villages in their hinterlands are very feeble and invariably break-down during the monsoon season. Most of these towns are parasitic in nature and function as local centres for the exploitation of village products and labour to serve a few large towns at the apex of the urban system of the country.

India needs about 4,000 growth points. The important activities at the growth points will be the production handling and processing of agricultural and dairy products.

(d) Growth Centres ✓

The third level in the hierarchy of growth foci constitutes the growth centre which should be about 500 in number in India as a whole. The population of each of these centres will be of the order of about 200,000 depending upon the stage of development of the regional

economy. It is not, however, the size of population which is crucial, although there must be a minimum to support the urban-industrial infrastructure; it is rather the functional characteristics which are more important and which well distinguish these centres from the growth points.

Growth centres will have from five to ten growth points within the area of their influence. They will also be innovative and propulsive centres but the types and levels of their functions would be different. They will be marked by a preponderance of secondary activities. The growth centres will be consumers of the finished and semi-finished products produced at the growth points as well as of the agricultural products produced and offered by the lower level growth foci.) They will also function as shock absorbers in the migration process and will provide jobs for the surplus labour force which the growth points cannot absorb. One of the chief roles of the growth centres will be to function as counter-magnets to the large urban centres of India such as Calcutta, Madras, Bombay, Delhi, etc. Each of these, urban centres will have satellite growth centres around them.

(e) Growth Poles ✓

At the apex of the hierarchy will be the growth poles

which may have a population of about 2,000,000. Some of these poles are already in existence in most of the countries of the world including India. From a functional view point, growth poles will have tertiary functions predominating over the secondary and primary functions. They will function as the heart of the meagre regions of the country sending out, financial, technological, research and industrial impulses to all centres and points within the area of their command.

(f) National System of Growth Foci

A national system of growth foci to be developed in India during the next 25 years. This system might consist of about 100,000 central villages, 20,000 service centres; 4,000 growth points, 500 growth centres, and 30 growth poles. All these together could accommodate all urban population of about 300 million. They will serve a rural population of about 600 million. It is assumed hereby that by the year 2,000 A.D. India will have a population of about 900 million people, one-third of whom will be living in urban areas.

(g) Rationale

This is a somewhat different approach as advocated in his core periphery concept of the development pole concept. The concept of growth foci offers a clear way

for decentralized concentration cutting across both the cases and peripheries. The cores are decentralized and the peripheries brought within the fold of the national and regional economy.

The hierarchial system of growth foci is potentially able to generate change with stability which is necessary for modernization. It would provide opportunities for even those living in the remotest village to come in contact with a next higher level of society in terms of value orientations, institutional infrastructure and behavioural pattern in general. The strategy of decentralized concentration using growth foci in instruments of modernization in general and development in particular permits a simultaneous effort at distributive justice.

Identification of cluster of villages with a focal point constitute a viable unit for implementation, monitoring and controlling the direction of developmental programmes. Formulating a micro level planning at the grass root level is, henceforth, required to evolve appropriate strategy for development.

In order to evolve such strategies a basic theoretical framework with a conceptual and operational model in relation to policy objectives is essential. As regional planning at the base level needs identification of cluster

Number and Size of the Growth Foci and the Urban and Rural Population Served by Each by the Year 2000 A.D.

Sr. Growth No. Foci	Number	Urban Population in each	Total urban population of India living in various levels of growth foci	Rural population to be served by each average	Total rural population to be served by all
1. Central Village	100,000	-	-	6,000	600,000,000
2. Service Centre	20,000	5,000	100,000,000	30,000	600,000,000
3. Growth Point	4,000	10,000	40,000,000	150,000	600,000,000
4. Growth Centre	500	200,000	100,000,000	1,200,000	600,000,000
5. Growth Pole	30	2,000,000	60,000,000	20,000,000	600,000,000

- a. The total urban population at various levels of growth foci will be 300 million. All these growth foci will serve 600 million people living in rural areas. We assume that the total population of India to be 900 millions by, the turn of this century provided that the existing population policy is fairly successful.
- b. At present there are about 1033 class V and VI towns which are more or less functioning as service centres : 1746 class II to IV towns which may deemed to equivalent to growth points; and 142 towns above one lakh population (class I) acting as growth centre and growth poles.

of villages, central place theory of Christaller is considered to be more appropriate in the present study of block level planning.

In this part an attempt has been made to investigate whether any pattern of hierarchy of settlement emerges by adopting the method of ranking of settlements basing on the centrality of functions in the study area.

This part deals with :

- (1) Operational definitions of the functions under study.
- (2) Details regarding the level of functional hierarchy,
and
- (3) The centrality scores of settlements and the identification of settlement hierarchy.

All the functions are broadly classified (3.1) into three different levels (First, Second, and Third) associated with the functions are 16, 13 and 16 respectively based on the weightages given for each function as computed by their relative importance : (3.2).

Table 3.1 : Levels of functional hierarchy and its associated functions.

First Level

1. Primary school.
2. Auxiliary nurse mid-wife and basic health worker.
3. Maternity and child health/registered medical practitioner.

4. Branch Post Office.
5. Request Bus Stop.
6. Primary agricultural cooperative society.
7. Surface water facility for drinking.
8. Black Smith.
9. Gold Smith.
10. Carpentry.
11. Barber.
12. Retail Kirana Store.
13. Tailor.
14. Coffee and Tea Stall.
15. Agricultural Implements Repair Centre.
16. Animal Husbandry First-Aid Veterinary Centre.

Second Level

1. Middle School.
2. High School.
3. Rural Dispensary/Pvt. MBBS.
4. Family Planning Sub-Centre.
5. Sub Post Office.
6. Regular Bus Stop.
7. Bus Station/Railway Station.
8. Grameena Bank.
9. Minor Veterinary Dispensary/Rural Livestock Unit.
10. Pesticides and Fertilizer Depot.
11. General Provision Stores.

12. Ground Water Supply for Drinking Purpose.
13. Village Development Officer's Headquarters.

Third Level

1. Junior College.
2. Family Planning Centre.
3. Head Post Office and Telegraph Office.
4. Primary Health Centre and Hospitalization.
5. Bus Terminus.
6. Scheduled Commercial Bank.
7. Veterinary Hospital/Livestock Supervisory Unit.
8. Samithi Office.
9. Taluk Office.
10. Protected Water Supply.
11. Restaurant.
12. Chemist and Drug Shop.
13. Wholesale Regulated Market.
14. Cloth Stores.
15. Hardware Shops.
16. Glassware and Fancy Shops.

Table 3.2 : Weightages of different functions

<u>Functional category</u>	<u>Weightage</u>
(a) <u>Education</u>	
1. Primary School	1

<u>Functional category</u>	<u>Weightage</u>
2. Middle School	2
3. Secondary/Technical School	3
4. Junior College	4
<u>(b) Health</u>	
1. Auxiliary Nurse Mid-Wife/ Basic Health Worker	1
2. Maternity and Child Health/ RM Practitioner	2
3. Rural Dispensary/Pvt. Clinic	3
4. Family Planning Sub-Centre	4
5. Family Planning Centre	5
6. Primary Health Centre/Hospital	6
<u>(c) Communication</u>	
1. Branch Post Office/Public Call Office	1
2. Sub-Post Office/Telephone Exchange	2
3. Post and Telegraph Office	3
<u>(d) Transport</u>	
1. Request Bus Stop	1
2. Regular Bus Stop	2
3. Bus Station/Railway Station	3
4. Bus Terminus	4
<u>(e) Financial Institutions</u>	
1. Cooperative Society	1
2. Cooperative Bank/Gramin Bank	2

3. Scheduled Commercial Bank/ Land Mortgage Bank	3
(f) <u>Trade and Commerce</u>	
1. Shops between 1 and 4	1
2. Shops between 5 and 14	2
3. Shops more than 15/ Wholesale Market	3
(g) <u>Administration</u>	
1. Office of B.D.O.	1
2. Samithi Office	2
3. Taluka Office	3
(h) <u>Extension</u>	
1. Animal Husbandry First-Aid Veterinary Aid	1
2. Minor Veterinary Dispensary/ Rural Livestock Unit	2
3. Veterinary Hospital/Animal Husbandry Supervisory Unit	3
(i) <u>Drinking Water Facility</u>	
1. Well/Tank Surface Water	1
2. Bore Well (Ground Water)	2
3. Protected Water Supply	3

Total Dependent Settlements

The settlements which are supposed to rely on any one of the settlements for less than 50 per cent of the total functions are categorized under first-level hierarchy are classified as totally dependent settlements.

Partially Dependent Settlements

Any one of the settlements that depend upon the other settlements (for more than 25 per cent) between 25 and 50 per cent of the total identified functions is termed as partially dependent settlement.

Intermediary Settlements

The status of intermediary settlements is given to those settlements which rely on the other settlements for not less than 10 per cent and more than 25 per cent of the total functions.

Central Place (Service-Settlement)

A settlement has been identified as central place one where it satisfies the condition of possessing 75 per cent of the functions in addition to extending services to not less than one village.

Self-sufficient Centre

Self-sufficient centres being settlements which have 75 per cent of the total functions and do not serve any other village, are categorized as self-sufficient centres.

Pilot Study on Growth Centres

As a part of studies on area planning, a centrally sponsored scheme of Pilot Research Project in growth centres is being launched. The aim of the pilot project will be to evolve a broad research methodology and patterns for identifying emerging growth centres, and to indicate how the growth potential of these centres could be promoted through comprehensive and scientific study of the overall development needs, and how these centres could be meaningfully woven into the framework of district plans and thus help in the process and thus help the process of planning from below.

The scheme will thus bring under close study action strategies relevant to the actual integrated area development around potential growth centres. A number of projects will be set up in different areas in the states and union territories. A few projects would be located in institutions working and planning methodology. To facilitate integration with district planning, the growth centres will, to the extent possible, be located in districts for which detailed plans in terms of guidelines and norms provided by the Planning Commission are already being drawn up.⁹

⁹ Planning Commission, Government of India, Fourth-Five Year Plan, 1969-74, p. 229.

CHAPTER V

EVALUATION OF PROGRESS IN INDIAN CONTEXT

Punekar, S.D. in his study on Growth Centres has observed that India, predominantly rural and even more than 80 per cent of population residing in villages out of our working population 69 per cent consists of agricultural labour. Hence, economic and social development has no meaning, so long as the rural masses remain backward. This was admitted when the community development programme initiated on Gandhi Films birth (2nd October, 1957) was started for rural reconstruction and development. This programme was conceived "to promote better living for the whole community was the initiative of the community.

However, its working for the first few years has some how failed to enthuse the local people for active participation on their rural development programmes. To remedy this defect, the study team for community projects and natural extension service (the Balwantraj Mehta Committee), 1957 recommended the construction of Panchayati Raj System; to supplement the community development programme. But both these movement have

not achieved the success they deserved probably because our expectations about these were high and actual achievements fell far short of them. The wide gap between the expectations and the achievements led to frustration and in a few states even the CD programme was discontinued.

In this atmosphere of failure and consequent frustration, the Ford Foundation came out with a research-cum-action project on "Rural Growth Centres".

The main accent of the project was on research which was conducted for preparing the necessary grounds for undertaking action programmes for the development of the Block, with its important towns and villages (potential growth centres).

There are 4,894 community development blocks in India of these 20 blocks in 18 states were selected in 1970 for intensive investigation. In Maharashtra two blocks were selected - Selo in Wardha district (Vidarbha) and Basmath Nagar in Parbhani district (Marathwada).

The Selo project was entrusted to the Institute of Regional Development Planning at Wardha while the Research and Investigation Cell at Government of Maharashtra was in charge of the Basmath Projects both the projects aimed at the integrated programme of area development. The State Government appointed an informal Task Force to

analyse the data collected by the research and investigation cells and to formulate programmes flowing from such an analysis for the optimum development of the block.

The purpose of each research cell was :

(a) to identify existing and potential growth and service centres together with their associate areas in terms of an economic base and a range of population.

(b) to investigate the suitability of a population range of 10 to 25 thousand in a cluster of 20 villages for purpose of viable community.

(c) to locate other relevant criteria for such identification.

(d) to study inhabiting social factors and anomalies;

(e) to determine norms for viable village community in terms of economic investments and social amenities and effectiveness of community institutions like Panchayati, Cooperatives and other local institutions, and

(f) to suggest eventually as may be necessary lines of possible change in the structure and base unit of planning and administration.

The selection of the blocks for detailed surveys was determined by such factors as extent of modernization

in agriculture (judged by hybridisation, fertilizers, implements etc.) irrigation facilities, transport and communication, cooperations, people's participation through Panchayats, trade and credit provisions, small industries and social area structure.

The actual survey comprised broadly five main categories.

Survey of the Block

Details through a schedule were collected about habitations (hamlets, village towns) land use for crop pattern, innovation, investor industries, labour markets, cold storages, warehouses, education, health, credit societies, political, political parties Panchayats, etc.

The information collected related to social, economic, cultural aspects of the block as whole. It also included the physical characteristic of blocks, the demographic aspect decimal differences in the population transport and communications. The second stage comprised of surveys of all villages and towns and blocks towns in the block and also of about 150 households selected at random from 8 to 10 villages.

The household schedule collected information regarding nature and composition of family relevant data, (sex

education, income, employment, etc.) about family member, land owned, family income and expenditure, savings or indebtedness.

From this information, inter family economic and social relations and also to relationship with transport and communication could be found.

The third stage consisted of collecting data regarding industries investment, raw materials, use of power, employment earnings, trade (sales and purchases, consumer characteristics) and towns (their administration machinery mercantile industrial and educational characteristic).

The fourth stage conferred itself to spatial aspects, the distances between habitations and the means of link transport.

The last stage was the preparation of draft plans (a) general settlement plans, (b) sectoral plans, (c) general linkage plans, and (d) an integrated plan with functional, spatial and organizational coordination.

Chauhan, R.S. and Krishna, P.V. in their study of growth centres in India have outrightly rejected the implementation method of the projects. They state that planners have suggested growth centres as a strategy for rural development. Accepting the idea a pilot research project for 20 such growth centres in different parts of

the country was launched during the fourth plan.

The project envisages the evolvement of a suitable methodology for an optimum location of economic and social activities in a given geographic area. These may broadly include transport and communications, schools, colleges, and vocational institutions, health and recreation, credit and financial institutions, supply of power and water, industries markets and other functions needed for modernization and betterment of rural life. The project also aims at collecting socio-economic data at district, block village and household level through specially designed questionnaires. The next step would be to plan the necessary socio-economic activities and infrastructural facilities for the development of the area.

As far as the organization of the economic activity, the centre has recommended the establishment of sugar factory in the area. According to the theory, the location of our economic activity is generally guided by the availability of raw materials, power, market, labour, etc. In the case of sugar factory at Talala, the availability of raw materials does not seem promising. The area under sugarcane is only 560 hectares as against 19,637 hectares under groundnut. Since there is no organized mill for processing the groundnut and the small oil processing

units have shown a decline in the region, why should not priority have been given to this rather than to establishment of a sugar mill?

The pilot research project for growth centre is a research-cum-action experiment. It aims to develop a methodology for optimum allocation of economic and social activities in a given area. The research part of the project is concerned with carrying out surveys through especially designed schedules which have been designed by the central research cell, New Delhi. This by and large reduces the status of the growth centre to that of a mere data collecting agency.

For development the economic theory suggests setting of goals of development of related programmes. There is no controversy on the need ^{to} eliminate rural poverty through activities that would ensure a sustained increase in per capita income, services and products. The approach of area development should get real goals, prepare action programmes and execute them by exploiting the available resources and enlisting local participation. Any action programme, to thrive well presupposes the existence of certain infrastructure. In the view of spread of infrastructure in terms of institutions and the availability of suitable and technical personnel we do not find the growth centre strategy as persuasive. Moreover, there

is nothing new in the strategy of the growth centre our development plans have not neglected spatial factor on the basis of which the strategy of growth centre have been advocated. Wherever the regions have developed, the location of functions and services has followed according to local needs and the level of development. However, three years have passed, but there has been no substantial contribution from these centres in this regard.

We need to consolidate our efforts rather than duplicating them by setting up new institutions on the basis of our analysis, we feel there is an immediate need for a comprehensive and critical evaluation of the growth projects so that a further utilization of the resources might properly be geared.

Shah, S.M. in his defence of the criticism of the projects has put forward his own analysis and reply. Growth centre is a powerful tool, a complex tool and calls for special expertise to administer it. Research institutions in the country are not equipped to undertake the difficult task of preparing locational points for various activities and services. On account of these limitations, when the growth centre project was started in April, 1970, the entire team consisting of project director, research officer and investigators recruited in 20 community blocks was given intensive training for a

duration of 8 months at the National Institute of Community Development, Hyderabad and the Indian Institute of Public Administration, New Delhi in the basic concept of growth centre, central place theory, planning techniques, rural development and mapping. The projects staff was further employed to discuss in a series of three planning seminars convened by the Department of Community Development. The project team as a whole participated in these sessions and presented their reports along with their recommendations which was critically examined by the participants and experts present at these seminars.

It is wrong to say that most of data collected under the growth centre project was available in secondary sources.

In replies to Messrs Chauhan and Krishna hold that for operational purposes there should not be any difficulty for identifying a region. (2) our development plans have not neglected spatial factor on the basis of which the strategy of the growth centre has been advocated. (3) What the growth centre is doing is only the duplication of work. (4) a thorough analysis of the work under the growth centre project does not lend support to these being anything substantially new in it. (5) the creation of separate organisation for Taluk project has not been guided by technical and economic considerations. (6) a

large part of data collected under Talala project was secondary. (7) there is nothing worth^{while} which in the recommendations regarding the development of agriculture in the project report. The priority should have been given to the establishment. (8) Priority should have been given to the establishment of ground nut processing industry rather than establishing a cooperative sugar factory. (9) Cooperatives have generally failed to achieve their objectives. (10) The low incomes in Talala will tend to be a bad investment.

As the growth centre 'block Talala' as the largest of the above mentioned questionnaires.

The concept of growth centres is of recent origin. India can take pride in extending the applicability of this concept to rural development on a scale not attempted elsewhere in the world.

To say that for operational purposes there should not be any difficulty in identifying a region is rather surprising. Further, to say that our development plans have not neglected spatial factor on which the growth centre strategy has been advocated shows a lack of acquaintance with our development plans or spatial factors. Economic planners throughout the world have neglected the spatial factor the economic space. India is no exception.

Conscious location decisions based on spatial integration are yet to evolve in the field of planning through the world.

The scheme pilot research project in growth centres was conducted as a centrally sponsored scheme by the department of community development. Earlier efforts in community development work in India missed the important aspect of rural urban integration. The exclusion of urban centres from the rural did not lead to the development of an integrated rural community. The growth centre exercise was a step forward in this direction and offered a new strategy for rural development since it envisaged the integration of the lower order settlements (villages) with the higher order settlements (towns) in an organic manner.

The whole programme of a system of "cities" can be developed through the growth centre concept. The French Plan is nothing but the development of such linkages through the existing and potential growth centres. The entire programme of CADP (Comprehensive Area Development Programme) in West Bengal is based on growth centre concept. Tamilnadu has already prepared regional plans for Salem and Cuddalore. Growth centres have been identified and listed. The national capital region has proposed growth centres around Delhi. Similarly, the regional

study of Goa, has indicated several possible growth centres. Even the Draft Fifth Plan 1974-79 mentions the potentiality of growth centre concept and has in fact advocated it.

One could differ at Messrs. Chauhan and Krishna have done in making a specific proposals. But the strong point of the growth centre project was to evolve and demonstrate a method suitable for an accelerated rural development in the community development blocks. This the project has achieved in an ample measure. The utility of the growth centre concept as a tool of economic development is thus firmly established.

Dr. B.D. Sharma has pointed out following defects.

The concept of growth centre does not take into account the time dimension. It presents a sharp view of the socio-economic situation. Unless the time dimension is fully taken into account, the prescriptions are likely to be unrealistic or may even be disadvantageous to the local community. Since the emphasis is very often on what is existing without appreciating the socio-economic processes in the past, the snap view at any particular point of time may result in promoting developmental activity in these points which may have ubiquitous distribution.

The concept of growth centre does not take into

account the economic landscape of a pre-monetised sector. This landscape is not very clear to a casual observer. The functions may so be performed that the details of its relief may escape the analytical tools designed for a different situation. In many cases, the functions may be recorded completely disproportionate to their real significance. For example, a trader may be doing only a small fraction of his total transactions at the place of his residence or shop, most of the transactions may be taking place in villages through the network of smaller middlemen. In a formal analysis, only the transactions at his shop will be reflected and a wrong perspective of the economic activity may emerge. In this way, the analysis may tend to find something, which has not yet emerged. Some isolated economic activity may find prominent place in the formal analysis which may have no relationship with the totality of the economic activity in the state.

The scheme of pilot research projects in Growth Centres has made very little progress so far. During the first year of the plan, only preparatory work was completed. During 1970-71 all the 20, base areas have been identified for setting up of research and investigation cells. It is, however, expected that scheme would gather momentum in the remaining years of the plan has been the views stated in the mid term appraisal of the Fourth Five Year Plan.

CHAPTER VI

SUMMARY AND CONCLUSION

The basic idea of the growth centre theory is quite simple. Growth does not appear everywhere and all at once; it appears in points or growth poles with varying intensity, it spreads along various channels and has varying terminal effects for the whole economy. It is an effect, an empirical establishment of faith relating to the inequality of economic development in its spatial dimension.

The term "Growth Centre" denotes places of various sizes, not just towns and cities, in which social and economic services can "best" be located to promote development in the hinterland areas which these centres serve. Thus growth centres are service centres which must be planned to meet the basic needs for which most village people have to go outside their own village. These centres should provide the surrounding areas with a number of services, particularly administrative services and sometimes also industrial activities which may be connected, for example, with the processing of local produce, as well as restaurant services to meet local needs. Any new investment in the area should be preferably in these centres.

which may be referred to by such names as rural centres, a central villages, local centres, markets, services centres, etc.

The central place theory can be applied to study the size, number and distribution of settlements, with a view for explaining these or for identifying and classifying settlements on the bases of certain attributes. The basic postulate of the central place theory are that the distribution of human settlements in any settled area is not disorderly and there are distinct relationship among the number, distribution and size of settlements.

A pilot research project in growth centres was implemented as a centrally sponsored scheme during the Fourth Plan period in India. The scheme envisaged the setting up of a total number of 20 research and investigation cells to evolve techniques and methodology for the development of emerging and potential growth centres by providing social and economic overheads in delineated areas in terms of a carefully prepared inventory of local needs.

In order to evolve such strategies a basic theoretical framework with a conceptional and operational model in relation to policy objectives is essential. Various attempts have been made to investigate whether any pattern

of hierarchy of settlement emerges by adopting the method of ranking of settlements based on the centrality of functions in the study areas.

Various criticisms have been levelled against the growth centre concept. But the concept of growth centres is of recent origin. India can take pride in extending the applicability of this concept to rural development on a scale not attempted elsewhere in the world.

Good information on the real world is the base on which sound planning rests since it is not possible to have perfect, or complete information on a living organism skill so required in recognising, selecting and gathering the data which are most pertinent to the achievement of the goals of the work. Developing and formalising this part of the whole process is the one of the objectives of the growth centre pilot projects.

Another is the development of analytical processes for the comparison and choice of optimal actions from a number of possible alternatives. This problem has fairly straight forward solutions where all the elements can be quantified and where they all are directed to a single goal. For example, the choice between two cities of similar size and not very far apart from a new school building. Differences in land and improvement costs

created by different soil conditions, etc., can be calculated and compared.

At the level of the district and below most of the urgent questions will be related to programme for which the inter-sectoral trade off decisions have already been taken at a higher level. For example, national policy has been established with regard to the round numbers of rural branch banks to be set up each year. Thus, the planners' recommendations need be concerned with decisions on location and advice on probable service populations, income and area rather than allocation of resources between bank expansion and, say, more schools or roads.

The problem of an underdeveloped region so often boils down mainly to the problem of backwardness of its people. The problem of backwardness of people in its turn is problem of their poverty. Regional imbalance is, therefore, a dimension of this problem of poverty. It needs to be noted that as in developed regions there are some poor people, so in underdeveloped regions there are some rich people. A general impression is that in the latter regions there is more economic inequality than in the former. An extreme inequality of ownership of assets results in an extreme inequality of incomes. Add to this the social and institutional framework and we get a

picture where majority is deprived of any opportunity to participate in development efforts and the minority develops a vested interest in keeping the majority backward.

Regional development programmes need to be comprehensive and concerned with the development of infrastructure, housing and social welfare as well as productive sectors of the economy. These various aspects should ideally be integrated into regional policies and should work within the framework of national economic policies so as to take full account of the availability of financial and other resources.

An understanding of the true causes of regional imbalances would help devising an appropriate mechanism to rectify that imbalance. Exploitation of natural resources, available in region, should take into account the growth interests of the region in resource development process to prevent proliferation and strengthening of the islands of growth of modern industry with little consideration for the development of the surrounding regions. Huge investments should therefore, not remain confined to those areas only which directly benefit the project but see that the development of resources confers positive gains upon the areas around it and is integrated physically, socially and economically with the surrounding region.

Two opposite conclusions might, it seems, be drawn from this study. The first would be that, the concept of growth centres has no major contribution to the regional development on the one hand, the theory is rather nebulous, on the other; so far as it exists, it has not motivated any clearly defined action. To take first the case of what has been termed industrial growth pole or centres there is nothing to assert that the promotion of such centres has been one of the actual objectives of the policies pursued. More particularly, the major growth poles, on which attention sometimes tends to be focussed, have been the subject of systematic policy decisions; those which can be said to exist have been accepted or tolerated rather than desired, and the effects attributed to these seems to have decided from the original intentions.

✍ The growth centre study in India never proved a failure. It is nothing wrong in the theory but the way of analysing the objectives and assessing the national resources. The pilot research projects in growth centres have been initiated because of the recognition by the government of the need to act positively to accelerate and guide rural development in new ways to build a social, economic and physical infrastructure in rural India to support the confirmed modernization of agriculture, to diversify economic opportunities and to improve

social progress and the quality of life for all rural people as well as to seek new and more suitable pattern of urbanization for the nation.

⚡ Achievement of these aims is expected to improve the quality of rural life and reduce the pressures of migration on the larger cities by distributing the beneficial aspects of urbanization among a large number of communities so located that they are accessible to very large number of the rural populations. This is, in effect, to change the old subsistence based settlement pattern of much of India to a more modern market-oriented system in which there is a hierarchy of rationally distributed settlements and linkages with social and economic functions defined by the optimal use of regional resources and recognition of local needs.

⚡ The term growth centre has been applied to settlement of various sizes and at various levels, and is not specific but this programme is most concerned with the lower levels and smaller centres. It is through the development of these and the linkages which unite them with their dependent population and places that it approaches the comprehensive development planning process. Systematic development of underdeveloped regions requires suitable planning strategies since there is a spatial dimension to the problem of development. The location of

various infrastructure facilities leaves significant impact on the area in which they are located, therefore, it becomes necessary to identify basic planning units for optimum spatial distribution of certain infrastructural facilities, which are required to support developmental activities.

The process of modernization works partly through the settlement hierarchy of a region or country. In order that this process can run smoothly, the settlement hierarchy should be studied and the gaps there in filled. Furthermore, each central place in the settlement hierarchy should be strengthened to enable it to play its role in modernization effectively. This has to be done by promotion the functions which help modernization but are lacking or weak and by linking each central place with an appropriate net work to communication lines.

This approach rests on a strategy of selective development giving simultaneous attention to the locational mix and to sectoral mix of investments. Such a strategy is indispensable for developing countries like India, where investment resources are scarce and limited so that their impact has to be maximized by concentrating them in particular sectors of the economy as well as a geographical space.

BIBLIOGRAPHY

- Allen, K., and Hermansen, T. Economic Growth, Regional Problems and Growth Centres, in EFTA, 1968.
- Alonso, W., and Medricii, E. Spontaneous Growth Centres in Twentieth Century, American Urbanization, in Hansen, 1972-a.
- Andrade, Preseton. Urban and Regional Planning in India in the Seventies, February, 1970.
- August, Losch. The Economics of Location, Translated by W.H. Woglom and Wolfgang, F. Stopler.
- Basheer Ahmed Khan (ed.). Regional Planning and Economic Development, published by Pointer Publishers, Jaipur, 1988.
- Beg, M.A.A. Regional Growth Points in Economic Development (with special reference to West Virginia), Economic Development Series No. 8, West Virginia University, 1965.
- Berry, B.J.L. Hierarchical Diffusion : The Basis of Developmental Filtering and Spread in a System of Cities in Hansen, 1972-a.
- Bernard, Philippe. Growth Poles and Growth Centres in Regional Development, Vol. 3. Report No. 70.14, UNRISD, Geneva, 1970.
- Beyers, W.B. On Geographical Properties of Growth Centre Linkage System, Economic Geography, July, 1974.

- Bharadwaj, P. Strategy of Development, Economic Times, 31st December 1970 - 1st January 1971.
- Bhat, L.S. Regional Planning in India, by Statistical Publishing Society, Calcutta, 1972.
- Bhatt, Tushar. Village of Our Dreams, Economic Times, 9th March, 1970.
- Black, W. and Simpson, J.V. Growth Centres in Ireland, Irish Banking Review, September, 1968.
- Butler, Friedrich. A Growth Pole Theory and Economic Development.
- Cameron, G.C. Growth Areas, Growth Centres and Regional Conversion, in Scottish Journal of Political Economy, February, 1970.
- Campbell, J. A Note on Growth Pole, in Growth Change, April, 1974.
- Caset, E. kina. The Formalization and Testing of Concepts of Growth Poles in Spatial Context, in Environment and Planning, Vol. 3, 1971.
- Chandrasekhara, C.S. and Sundaram, K.V. Role of Growth Foci in Regional Development Strategy, in Urban Systems and Rural Development : A Seminar, Part I, Institute of Development Studies, Mysore, 1972.
- Chauhan, R.S., Krishana, P.V.K. Rural Growth Centres, in Economic Times, 6th and 7th June, 1974.
- Christaller, W. Central Places in Southern Germany, Translated by Baskin, C.W.

- Collirga, J.K. On the Size and Spacing of Growth Centre, in Growth Change, October, 1973.
- Darwent, D.F. Growth Poles and Growth Centres in Regional Planning : A Review, "Environment and Planning", 1969, pp. 5-32.
- Dean, Robert, D., Leahy, William H. and McKee, David L. ed. Spatial Economic Theory.
- Domeci, V.F. An Optimisation Model for Hierarchical Spatial System, in Journal of Regional Science, December, 1973
- Economic Bulletin for Latin America - Rural. Settlement Patterns and Social Change in Latin America : Notes for a Strategy of Rural Development, March, 1965.
- EFTA. Regional Policy in EFTA : An Examination of the Growth Centre Idea, Oliver and Boyd, Edinburg, 1968.
- of
- Fox, C. The Role/Growth Centres in Regional Economic Development, Department of Economics, State University of Science and Technology, Ames, Iowa, 1966.
- Friedman, J. A General Theory of Polarized Development, Ford Foundation, Santiago, Chile, August, 1967.
- Government of India, Planning Commission, First Five Year Plan, 1952.
- _____ . Planning Commission, Third Five Year Plan, 1961.

Government of India, Planning Commission, Fourth Five Year Plan, 1969-74.

_____. Planning Commission, Fourth Plan : Draft.

_____. Planning Commission, Fourth Plan - Mid Term Appraisal.

_____. Planning Commission, Fourth Plan - Revised Outlay.

_____. Planning Commission, Fourth Plan - Revised Outlay.

Hale, C.W. Growth Centres Regional Spread Effects and National Income Growth, in Journal of Economic Business, Fall, 1973.

Halperin, H. Agrindus. Integration of Agriculture and Industries, in Impact of Science on Society (UNESCO), No. 4, 1967.

Hansen, M. Growth Centres in Regional Economic Development, 1972.

Hermansen, T. A Review of the Concepts and Theories of Growth Poles and Growth Centres, Geneva-UNRISD Programme 4 - Regional Development, 1970.

_____. Development Poles and Related Theories : A Synoptic Review, in Hansen, 1972-a.

_____. Spatial Organization and Economic Development.

_____. Development Poles and Development Centres in National and Regional Development Elements of a Theoretical Framework in Kuklishki, 1972.

- Higgins, B. From Growth Poles to System of Interaction in Growth and Change 14(4), 1983.
- Hoyle, B.S. (ed.). Spatial Aspects of Development, Published by John Wiley and Sons, London, 1974.
- Hudson, R., Lewis, J.R. The Demise of Growth Centre Policy, by P. Breathnack, in Regional Planning in Europe, PION Limited, London, 1982.
- Hudson, J.C. Diffusion in a Central Place System, Geographical Analysis, 1, 45-58, 1969.
- Indian Statistical Institute, Central Place Hierarchy for a Developing Agricultural Region, January, 1974.
- Industrial Development Bank of India. Seminar on Industrial Development of Backward Areas, Bombay, May 16-17, 1980.
- Institute of Regional Development Planning, Wardha - A Report, 1970-71. Pilot Research Projects in Growth Centres.
- James, B.G.S. The Uncompatibility of Industrial and Trading Cultures : A Critical Appraisal of the Growth Point Concept. Journal of Industrial Economics, 13, 90-94, 1964.
- Jaymala, DIDEE. Central Places in Western India, University of Poona, 1984.

- Kuehn, J.A. and Bender, C.D. An Empirical Identification of Growth Centres in Land Economics, May, 1969.
- Kuklinski (ed.). Regional Policies in Nigeria, India and Brazil (UNRISD). Mouton Publishers, The Hague, Paris, New York, 1978.
- _____. Polarized Development and Regional Policies, UNRISD, Vol. 11, Mouton Publishers, The Hague, Paris, New York, 1981.
- Kuklinski, and Petrella, A.R. (ed.). Growth Poles and Regional Policies, UNRISD, Mouton, Paris and The Hague, 1972.
- Lalit K. Sen (ed.). Readings on Micro-level Planning and Rural Growth Centres.
- Lasuen, J.R. On Growth Poles, Urban Studies, June, 1969.
- Lewis, J.C. and Prescott, J.R. Urban Regional Development and Growth Centres and Econometric Study, in Journal of Regional Science, 1972.
- Malcolm, J. Moseley. Growth Centres in Spatial Planning (Urban and Regional Planning Series, Vol. 9) Pergamon Press, 1974.
- Misra, R.P. Growth Poles and Growth Centres in the Context of India's Urban and Regional Development Problems, in Kuklinski, 1972.
- Morill, R.L. On Size and Spacing of Growth Centres in Growth Change, April, 1973.

- Morrisson, P.A. A Demographic Assessment of New Cities and Growth Centres as Population Redistribution Strategy, in Public Policy Summer, 1973.
- Nagabhusan, E. Rao. Strategy for Integrated Rural Development, B.R. Publishing Corporation, New Delhi, 1986.
- Newmen, J. The Urban Rural Relationship, in Planning in Ireland.
- Nichols, V. Growth Poles : An Evaluation of their Propulsive Effect, by Environment and Planning, 1969 (1)(2), pp. 193-208.
- North, D.C. Locational Theory and Regional Economic Growth in Journal of Political Economy, 63, 1955.
- OECD. The Regional Factor in Economic Development, Paris, 1970.
- Parr, J.B. Growth Poles, Central Place Analysis and Regional Development. Paper on the Twelfth European Congress of the Regional Science Association, Rotterdam, September, 1972-b.
- Perroux, F. Economic Space, Theory and Application, Quarterly Journal of Economics, 64, 90-97, 1950.
- Pilot Research Project in Growth Centres, Prepared by the Research and Investigation Cell, Government of Maharashtra, Parbhani, February, 1974.
- Prasad, C.M. Growth Points in Bihar, in Economic Times, 5 January, 1970.

- Prakash, Rao. Regional Planning, published by Asia Publishing House and Statistical Publishing Society, Calcutta, 1963.
- Prabhakar, Rao P. and Sundaram, K.V. South East Resource Regional Development Plan - A Preliminary Report, ECAFE Manual on Regional Planning.
- Punekar, E.N. Need for Rural Growth Centres, in Economic Times, 29 August, 1974.
- Regulski, J. Development Poles Theory and Its Application in Poland, in Kuklinski, 1972.
- Resources for Future Staff Study. A Design for Worldwide Regional Development (A Report to the United Nations on a proposed Research Training Programme) 1966.
- Richardson, H.W. Regional Economics, Wiedenfeld and Nicolson, London, 1969.
- _____. Regional Growth Theory, Macmillan, London, 1973-a.
- Robinson, E.A.G. Backward Areas in Advanced Countries.
- Rogers, Everett. Diffusion of Innovation, Glencoe, III, The Free Press, 1962.
- Ryan, B. The Criteria for Selecting Growth Centres in Appalachia Proceedings Association of American Geographers, 2, 118-23, 1970.
- Sharma, B.D. (Dr.). Growth Centres in Tribal Areas, in Occasional Papers on Tribal Development by Government of India, Ministry of Home Affairs.

- Sen, L.K., Tripathi, H.N., Mishra, G.K. Thana L. Abdul.
Growth Centres in Raichur.
- Shah, S.M. Growth Centres and Rural Development, Economic
Times, 7 November 1974.
- Sen, L.K. (ed.). Readings in Micro Level Planning and
Rural Growth Centres.
- Thijssse, J. P.A Rural Pattern for the Future in the
Netherlands, in Regional Science Association
Papers, Vol. 7, 1963.
- Thomas, M.D. The Regional Problem, Structural Change and
Growth Pole Theory, in Kuklinski, 1972.
- Thomas. Properties of Growth Centre Linkage Systems, in
Economic Geography, 1974.
- Tobias, George. Manpower Journal, 1968.
- Tolosa, H. and Reiniert. The Economic Programming of a
System of Planned Poles, Economic Geography, 40,
449-57, 1970.
- Torcuato Di Tella. Growth Poles and Regional Policies
in Kuklinski and Petrella (ed.), UNRISD, Mouton,
Paris and The Hague, 1972.