REGIONAL DEVELOPMENT -CONCEPTS AND MEASUREMENT

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Terms like region, development and backwardness have evaded precise definitions so far. Lack of clarity has also made the task of classifying and measuring regions and their development more difficult.

Therefore in this paper an attempt is made to get a clear conceptual framework and to evolve proper measures of development with the following objectives:
1. To define the concept of a region.
2. To identify backward regions on their levels of development.
3. To arrive at the proper measure of regional development.

This paper is a narrative one with a descriptive method. It discusses the efficacy of monetary indicators, partial and physical indicators. It examines the use of the composite index of development and factor analysis. It emphasises scientific distinction between structural and development indicators.

Concept of a region

An understanding of the concept of a region is the first requirement of any regional analysis. The term region, in general, has been used to mean a geographical area or space. But, in the field of regional economics, this term has been used with a specific focus. Eminent scholars such as J R Boudeville and Walter lsard have given specific meaning to the term region with the following three criteria. On the basis of homogeneity criterion, there are regions with homogeneous spatial and economic characteristics. Secondly, the nodality criterion analyses polarisation around an urban or a market centre within a given region. Finally, there are regions with the system of interrelated administrative and political missionary based on the programming criterion.

As far as the term backward region is concerned, there have been some attempts to define it, but they are quite vague, evasive and have failed to give a clear-cut picture of what exactly constitutes such a region. Scholars have tried to define the term backward region with reference to the typical problems encountered by such regions, their potential for development, the efficacy of regional plans and factor endowments. Generally, the issue of regional development has been widely discussed in relation to a developed area and development at an aggregate level rather than focussing attention exclusively on the backward regions.

A major study to classify the regions according to their problems was produced by the Organisation for Economic Cooperation and Development (OECD) in 1970. Based on a comprehensive study of 15 industrialised countries, it classified regions into four types. They are under-developed, un-developed, reconversion and congestion regions. Out of the four types, the first is highly relevant in the present context, This is because it has many features such as limited

industrialisation, declining source of income from the primary sector and out-migration, which characteristically belong to a backward region.

R P Mishra attempted to study the problems of some backward regions, which were located in between growth centres. These regions were in the process of transition with increased outflow of men and material. He cited the examples of mining regions in the United States of America as evidence for this type of region

Keeping the twin criteria of levels of income and potential for development, Stefan. H. Robock has come out with a three-fold classification of regions. They are depressed areas, lagging areas and under-developed pioneer frontier areas. While the force of retrogression is quite evident in the first type, comparatively lower progress and natural obstruction could be seen in the cases of the second and third types.

The European Economic Community has also attempted an operational classification of backward regions. It comprises, first, regions situated near one or more large industrial centres. This is composed of zones of old industrialisation, zones of transmission industries and agricultural zones. Secondly, there are regions where agriculture is dominant and the population is dense. Finally, there are regions where agriculture is dominant and the population is scattered.

There are several empirical studies, which have tried to classify regions on the basis of their potential for future development. Some of these regions possess natural advantages such as good quality soil and adequate rainfall, which give them immediate growth potential. At the same time, there are other regions without such advantages and thus remain backward. Their problems are further compounded by the absence of good infrastructure and easy accessibility. But these regions may also possess certain advantages such as a good climate, which can be quite favourable for their future development. Against these regions with some potentiality, there are other regions also which remain backwards mainly on account of technical factors. These regions are mainly agriculture-oriented without substantial improvement in production technologies. Naturally, the productivity level of these regions is quite low.

Apart from factor endowments, the distance factor also plays an important part in determining the level of development of a region. Generally, it is observed that the frontier or peripheral region, which lies at a distance either from a city or urban core. tends to be comparatively under-developed. Several studies have proved the fact that the greater the distance, the lower is the rate of development.

Related to the productive sectors, McCrone has made two broad classifications of backward regions. The first type of region consists of agricultural areas untouched by industrialisation and the second, industrial areas facing the problem of industrial stagnation

In addition, some scholars have also tried to classify regions on the basis of certain problems faced by them. The National Committee on the Development of Backward Areas has listed six types of backward regions facing various adverse physical problems. They include chronically drought-prone areas, desert areas, tribal areas, hilly areas, chronically flood-affected areas and coastal areas affected by salinity. The committee regards these six categories as six types of fundamental backwardness.

Allan and Hermansen have classified some regions as backward on the basis of specific problems. First of all, there are sparsely populated regions with a labour force widely scattered in small village settlements engaged in primary activities. Secondly, There are regions where modern

developments have not yet begun and finally, there are industrially depressed regions with a high proportion of declining traditional industries.

Identification of backward regions

After evolving an exact concept of a region and different types of backward regions, the next step is to adopt a method for the proper identification of backward regions. Further, it is necessary that one should have a clear conception of the principle's rationale guiding the selection of these regions and they should be objective. In a federal setup, the identification of backward provinces becomes extremely important for two main reasons. First of all, it facilitates the determination of the transfer of resources from the federal government to the backward provinces. Secondly, it becomes necessary to assess the competing claims for additional federal assistance and investment. In the absence of proper identification, each province may set its own standard to identify backward regions within themselves.

To prevent such a situation from happening, a common standard needs to be evolved to identify backward regions by operationalizing the concept of backwardness on the basis of consensus on the subject. Two ways have been suggested by NCDBA to operationalise the concept of backwardness. The first is to rely on some overall index for ranking regions and treat those regions, which are below some cutoff point as backward. The second is to identify problem regions under different categories by specifying the constraints on development that can be mitigated by special measures.

In addition, a number of statistical techniques are being used to determine development or backwardness of selected regions. A set of monetary and partial indicators have been used with application of specific techniques such as cluster analysis, factor analysis and preparation of the composite index.

Making use of these theoretical tools several committees and scholars have tried to identify backward regions in India in a scientific way. It is of immense value to refer here the views of the Committee on Dispersal of Industries appointed by the Small Scale Industries Board in 1960, study groups appointed by Planning Commission of India, Pande Committee, Wanchoo Committee, Chakravarthy Committee, Sivaraman Committee and works of scholars such as Ashok Mitra and Hemlata Rao.

Causes for economic backwardness of regions

Once certain regions are identified and classified as backward the next step is to find out the root causes of backwardness. The factors that are responsible for the relative backwardness of a region are many. The roots of uneven development lie in both natural deficiencies and improper or inadequate human intervention.

Certain historical events have contributed greatly to either development or backwardness of different regions. R.P.Mishra and B S Bhooshan have opined that the world economy during the past two or three centuries was organised in such a way that it had inevitably led to the creation of pockets of poverty. During this period, there emerged a dichotomy between the rural and urban areas due to the colonial powers and their policies of self-perpetuation. These colonies have seen a situation where the urban economy has dominated over the rural with their inter-relationship moulded on the exploitative tendencies. Due to such tendencies, the urban centres have become, what the authors call as suction points, draining agricultural surpluses into large urban agglomeration. These agglomerations, capitalising on their economies of scale have become growth centres leaving the rest of the region backward.

Apart from historical events, a number of geophysical factors have hindered the progress of certain regions. Unfavourable topography, poor qualities of soil, inadequate rainfall, harsh climatic conditions have an adverse impact on the productive capacity of these regions.

The problems of backwardness in some regions are further aggravated by adverse economic factors such as inefficient primary sector, low per capita income, adverse terms of trade and poor quality of infrastructure. In addition, the low quality of human capital manifested in terms of deficient health and education has created an unattractive base for any productive ventures. These factors have also paved the way for weak political arid business leadership. However, one should note that some of these economic factors are overlapping and their cause and consequential relationship have to be distinguished for a proper understanding of the problem of backwardness.

As pointed out by Jim Taylor, possession of a favourable industrial mix is of the fundamental requirement for the development of any region. Those regions, which have more number of what he calls it as nationally fast growing industries, can prosper with faster output and higher employment growth than regions which have a higher proportion of nationally slow growing industries. They observed that some regions might be a more fertile breeding ground for new firms than other regions. According to him, factors such as the presence of incubator firms, occupational structure, educational qualification, access to capital, industry mix, market demands and push factors were extremely important for the entry of new firms into the region.

Free play of market forces has also been cited as a major factor responsible for the backwardness of some regions. Such forces, as claimed by Myrdal, bring about the clustering of economic activities in few centres. The backwash effect in this process reduces the competitive advantage of backward regions. Likewise. Hirschmann cites stronger polarisation effects and weaker trickling down effects for the co-existence of developed centres and backward regions in a free enterprise economy.

Demographic factors are also responsible for the backwardness of some regions. There is a general tendency of rural communities to increase more rapidly in size than that in urban regions. This is in spite of comparatively restricted economic opportunities in the rural regions. This would result in a high rate of migration from these regions to better-prospecting regions, leaving the former relatively backward.

Social factors are also a major contributor to the problem of the overall backwardness of some regions. These factors manifested in the form of access to land and income derived from it, caste segregation, ethnic origin have Icd to the domination of the social scene by a minority over the majority.

Thus, numerous historical, natural, economic, demographic and institutional factors are behind the problem of inter-regional and intra-regional disparities. In this context, it is necessary to point out for the sake of conceptual clarity the distinction between two vital issues, regional diversity and regional disparity. The former is the result of natural factors whereas the latter is mainly the product of human factors. Both the factors are responsible in their own ways for differential levels of development of regions across a given space. Once these factors are identified and we get a clear idea of the backwardness of some regions, we can proceed to tackle the next problem pertaining to the measurement of development or backwardness of a given region.

Measures and indicators of development

In the field of development economics, the concept of development has evaded precise definitions. Development in its narrow sense implies material improvement and in its broad sense, it could be understood as changes in institutions, attitudes and better quality of life. This concept is generally identified with per capita real income, resource utilization, stages of economic growth and levels of welfare. All these connotations represent directly or indirectly an improvement in material facets. Keeping all these aspects in mind, the term development has been used in the present study to imply material well being of the people residing in a region.

A major problem that arises in this context is how to measure the material well being of the people? Hemlata Rao, in her study, has examined the relative merits and demerits of such measures of development under two classifications, namely, (a) Monetary and (b) Physica

Per capita income is a widely used monetary measure to judge the extent of development of a selected region, which is regarded as objective and easily questionable. Users of this measure assume a direct relationship between the level of per capita income and economic development.

However, one encounters many practical problems while using this measure. Quite often, ranking of regions on the basis of per capita income alone does not reflect their real status. For example, the district of Kodagu is ranked at the top and placed above Bangalore Urban district. This is not realistic, as Kodagu does lag behind Bangalore urban in many sectors. This inconsistency, according to Hemlata Rao, is because income as an aggregative concept does not indicate structural and distributional aspects. Moreover, this measure does not cover values which fall out-side the monetary sphere. Therefore, there are both theoretical and calculative problems in the usage of per capita income to assess levels of development. That is why, at best, it could be taken as an indicator of development rather than relying on it as an objective measure of development.

To make up for the deficiencies of the monetary measures and also to cover the non-monetary aspects, physical indicators are being used extensively in various studies. Researchers are using partial indicators such as productivity, calorie intake, employment, fertility and mortality rate in the preparation of the index of development. These indicators are partial in the sense that they reflect only certain aspects of development and do not give us a comprehensive or comparative picture. This is mainly due to the structural differences and variations in physical and biological features. Moreover, indicators such as productivity and employment are very difficult to measure when they are taken independently.

Thus, for a meaningful study of regional development, many experts have used various physical indicators in constructing the composite index of development. Though this measure is quite comprehensive, the method of assigning weights to these indicators has been questioned for its degree of subjectivity. One cannot assign equal weights to the indicators having different degrees of importance arid the process of assigning weights ought to have theoretical justification. Therefore, while constructing the composite iridex of development, the indicators should be assigned weights on a scientific basis. To do so, a method of the composite weighted index has been developed. This is based on the principle of combining the various socio-economic and cultural factors to get an aggregate picture.

For the scientific assignment of weights, different experts have evolved different methods. Hemlata Rao has reviewed some important works in this regard, of which mention may be made

of works by W.Beckerman and K. Bacon, Llrewnowski, McGranahan, Ashok Mitra, Nanjappa and Iyengar.

The Planning Department of Karnataka State is also using the composite index method in the preparation of Five-year and annual plans. It has selected 22 indicators which have been classified into (a) Demographic factors, (b) Occupational structure, (c) Land utilisation, (d) Agricultural development, (e) Industrial development arid (f) infrastructural development. Weights have been assigned on the basis of the proportion of previous plan outlays. However, this method of assigning weights is not rational as the previous plan outlays might have been guided by non-economic factors and may not correlate with the indicators.

Thus, it is very clear that one should avoid arbitrariness and subjective valuation while assigning weights to the indicators. Therefore the scientific method of deriving weights assumes great importance. One of the scientific methods on which we can rely upon is Factor analysis. It provides factor loading for each variable and the factor loading is the coefficient of correlation between the observed variables and the unknown derived factor. While constructing such a composite index of development, the first principal component method has been taken into consideration. This method, at two stages, is resorted to make inter-regional comparison of relative levels of development.

With this method of deriving scientific weights, one should also keep in mind the problem of proper selection of indicators. Since we are dealing with the concept of development there is all the possibility of making erratic and arbitrary selection of indicators. Therefore, proper selection of indicators is extremely important to make the optimum use of the data and also to find out answers to the issues raised.

While selecting indicators, one should also pay attention to the differences in the meaning of concepts to be used and whether the indicators are related to static or dynamic settings. Confusion about structural and developmental indicators should be avoided. Such indicators, which cannot be meaningfully connected to our concept of development, should be eliminated. Therefore, both selection and use of indicators should be on proper rational and logical grounds. The skill of a researcher in the exact interpretation of indicators also assumes great significance.

Conclusion

A researcher who is probing a research problem like the one taken up in the present study has to face a major constraint of inadequate availability of reliable data. For a study with a long-time span and covering multi-sectors, it is very difficult to prepare a general index of development. One has to cross-check the data with different sources and eliminate any inconsistency and inaccuracy. One has to inevitably forego some indicators if the data on the same indicators are not available for all the selected years and regions. This is inevitable, as we cannot present a comparative picture if the data are not comprehensive. Therefore, the discretion of a researcher in the selection of indicators ultimately guides him to the realistic results and successful completion of his research endeavour. Rationality, selectivity, reliability, objectivity, measurability and comparability ought to be the main consideration for a researcher.

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