CHAPTER I

## INTRODUCTION

### 1. REGIONAL ECONOMICS : ITS IMPORTANCE

The last three decades have witnessed a phenomenal increase of interest in regional analysis. In fact, before 1950, regional economics, generally, was considered with interregional propagation and transfer of business cycles[1]. Regional analysis, by now, is developed as a distinct area in economics and has already established a place for itself. As J.R.Meyer puts it, "One very straightforward explanation of the surge in regional economics, in fact, is to say that it resulted from fortuituous belending of many economist's desires to apply certain recently honed conceptual tools and policy marker's desires to seek more adequate and analytical answers to complex problems related to regional and

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1 R.Vinning, "Regional variations in cyclical fluctuations viewed as frequency distribution", Econometrica, July 1945.

———, "The region as a concept in business cycle analysis", Econometrica, July 1946.

———, "The region as an economic entity", American, Economic Review, May 1949.

urbon growth"[2]. To H. W. Richardson, "the development of regional economics as an academic discipline has been accelerated by its policy implications"[3].

Regional analysis, which is based on the theoretical foundations of location theory, international and inter-regional multiplier theory, input - output analysis and mathematical programming[4], has greater orientation towards quantification, forecasting and the development of logically rigourous frame works[5]. However, "regional economics is incomplete in a number of important respects, apart from the mere existence of a number of untouched research questions and problems. Specifically, the suggestion has been advanced that regional economics has reached a stage where it could benefit from redirection of effort away from the design of broad conceptual frame works and accumulation of regional income accounts toward the formulation and testing of behaviourial hypotheses, with the initial emphasis being placed on hypotheses could be quite readily developed from the application of general economic concepts already

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2 J.R.Meyer; "Regional Economics : A Survey", in "Survey of Economic Theory - Growth and Development", VolumeII, Surveys V-VIII, MacMillan and Co. Ltd., New York,1967, pp 240-271.

3 Harry W. Richardson; "Elements of Regional Economics", Penguin Books, Great Britain, 1969, pp 14.

4 J. R. Meyer; op.cit., pp 250.

5 Ibid; pp 257.

available"[6]. As such a brief discussion on some theories and evidences of Regional Growth Process is made in Section 2. Section 3, deals with studies related to regional inequalities in India. In Section 4, the present study's importance, scope and the hypotheses tested in the present work are discussed. At the end, the place of Karnataka in the national setting is presented.

## 2. REGIONAL GROWTH PROCESS : SOME THEORIES AND EVIDENCES

Economists have long recognised the existence of regional dualism at all levels of national development and throughout the historical experience of almost all presently developed countries[7]. However, the classical economists did not take much interest in the spatial dimension of economic development. Interestingly, most of the location theory developed in the present century falls within the classical or neo-classical equilibrium frame work[8]. Hence, it is important to examine whether the pattern of regional growth in a free - market leads to a convergence in regional

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6 Ibid; pp 264.

7 J.G. Williamson; "Regional inequality and the process of national development : A description of the patterns", Economic Development And Cultural Change, Vol.XII(4), Part II, July 1965, pp 3-4 .

8 S.Hallond; "Capital Versus the Regions", MacMillan, London, 1976, Chapter I .

per capita incomes and the strength of such convergence tendency, if it exists. In the neo-classical static world, equilibrating factor flows will ensure that differences in wage and income levels among regions will not last for long as labour will flow from low - to - high - wage regions, and if wages and marginal productivity of capital are inversely related, capital will flow in the opposite direction[9]. However, the model is not much useful in analysing empirically the trends in regional inequalities. It was only in the early fifties, the economists seriously questioned the self - equilibrating classical mechanism.

The french economist, F. Perroux, was one of the first to argue that the fundamental fact of spatial as well as sectoral development is that, "growth does not appear everywhere and all atonce, it appears in points or development poles, with variable intensities, it spreads along diverse channels and with varying terminal effects for the whole of the economy"[10]. What is suggested here is that, the process of economic development is essentially unbalanced.

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9 H.W.Richardson ; op. cit., pp 50-55.

10 Quoted, N.M. Hansen, "Development pole theory in a regional context", D.L.McKee, R.D.Dean, W.H. Leahy (Eds.), "Regional Economics", The Free Press, New York, 1970, pp 122.

Gunnar Myrdal also questioned the notion of stable equilibrium and points out that, "the play of the forces in the market normally tends to increase, rather than to decrease, the inequality between the regions"[11]. He says that, "if things were left to market forces unhampered by any policy interferences, industrial production, commerce, banking, insurance, shipping and indeed almost all those economic activities which in a developing economy tend to give a bigger than average return - and, in addition, science, art, literature, education and higher culture generally would cluster in certain localities and regions, leaving the rest of the country more or less in backwater"[12]. And further he argues that once growth starts through historical evidences in a locality "thereafter the ever - increasing internal and external economies .... fortified and sustained their continuous growth at the expense of other localities and regions where instead relative stagnation or regression become the pattern"[13]. The impact of growing regions on the rest of the economy was demonstrated by Myrdal with the help of two opposing kinds of forces which he calls 'back-wash' and 'spread' effects.

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11 G.Myrdal, "Economic Theory and Underdeveloped Regions", Vora and Co., Pvt.Ltd., Bombay, 1958, pp 38.

12 Ibid., pp 38.

13 Ibid., pp 38-39.

The 'back-wash effects' refers to all adverse effects whereas 'spread - effects' refers to all growth inducing effects on the other regions caused by the economic growth in the prospering regions . He includes the adverse effects of labour migration, capital movements and trade under the label "back - wash effects" . According to him, these economic factors are reinforced by non-economic factors such as inferior status of public utilities, poor health of the people, illiteracy and the traditional social systems. On the other hand, the 'spread - effects' consist mainly of an increasing demand for the products of back-ward regions and the diffusion of technology and knowledge . In Myrdal's view, the 'spread effects' are weaker than the 'back-wash-effects' and if interregional differences are to be narrowed, nations must rely on state intervention. The alternative is to wait for a natural end to the process of cumulative causation, which may be a long time coming . From the results published in the economic survey of Europe in 1954, he draws two important conclusions[14]. They are : i) the regional inequalities are much wider in the poorer countries than in the richer ones ; and ii) while regional inequalities have been diminishing in the richer countries, the tendency has been the opposite in the poor countries . In practice, governments in many advanced countries have

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14 Ibid., pp 45.

taken active steps for many years to redress regional imbalances and this is one reason why regional disparities tend to be less in advanced countries than in developing countries[15]. Thus, the contribution of Myrdal's theory of circular and cumulative causation is, as A.P. Thirlwall puts it, "its emphasis on development as a cumulative phenomenon and more important still, its challange to static equilibrium theory , i.e. that regions or nations which gain an initial advantage may maintain that advantage in perpetuity to detriment of development elswhere"[16].

Following Perroux, A.O. Hirschman finds that for any economy to attain higher income levels, "it must and will first develop within itself one or several regional centres of economic strength. This need for the emergence of "growing points" or "growth poles" in the course of the development process means that international and inter-regional inequality of growth is an inevitable concomitant and condition of growth itself"[17]. He explains the process of interregional transmission of economic growth in terms strikingly similar to those of Myrdal. Hirschman himself points out that his 'polarisation' and 'trickling down'

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15 A.P. Thirlwall, "Growth and Development", (Second Edition), MacMillan Press Ltd., Hong-Kong, 1978, pp 134.

16 Ibid., pp 138.

17 A.O. Hirschman, "The strategy of economic development", New Haven : Yale University Press, U.S.A., 1958, pp 183-184.

effects correspond exactly to Myrdal's 'Back-wash' and 'Spread' effects[18]. Though Prof. Myrdal and Hirschman, both agree that, in the initial stages of development, regional inequalities do take place, they differ in their emphasis and conclusions. Hirschman maintains that , "in the end the trickling down effects would gain the upper hand over the polarisation effects"[19]. However, both of them fully agree on the importance of political forces in effecting a North-South rapproachment within a country, and on the need for the emergence of such forces on the international level to help narrow the gap between the developed and underdeveloped countries[20].

Similarly, R.B. Hughes also argues that, " a free market system of organisation, by nature, causes advanced regions ( whatever the original cause of advance ) to grow, at least in part, at the expense of other regions. Consequently, once income differences emerge they tend to become self perpetuating , unless some exogeneous influence i.e. Government or change, acts to offset market forces[21].

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18 Ibid., pp 187.

19 Ibid., pp 189.

20 Ibid., pp 187.

21 R. B. Hughes Jr., "Interregional income differences : self perpetuation", The Southern Economic Journal, Vol.XXVIII (4), July 1961, pp 41.

H. W. Richardson also attempted to explain the persistence of regional disparities through the working of economic forces. According to him there are three potential convergence forces : (i) the possibility of equilibriating factor flows as predicted by the neo-classical model, (ii) reallocation of resources within region from low-wage sectors to high productivity , high-wage sectors, (iii) high-income matured regions may slowdown future increases in per capita income[22]. However, he says that there is nothing inevitable about these convergent forces. According to him , the non-homogeneity characteristics of economic structure, variations in activity structure and uneven distribution of property owners over the regions are the factors which lead to persistence of regional per-capita income differences[23].

Inspite of the recent attention which this problem has attracted, very little progress has been made in formulating and testing of general explanation of the occurance of inequality in the spatial distribution of national income[24]. However, there are some studies conducted for a number of the countries of the world. F.A.Hanna[25],

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22 H.W.Richardson ; op. cit., pp 55-56.

23 Ibid., pp 57-58.

24 J.G.Williamson ; op. cit., pp 3-4.

25 F.A.Hanna, "State Income Differentials , 1919-1954", Duke University Press, Durhum. N.C., 1959.

Perloff[26] and Easterlin[27] have made studies for U.S.A.. Richardson[28] presents the study for Great Britain. Studies have been conducted by W. Baer[29] for Brazil and by Minoru[30] for Japan. But Williamson's celebrated work[31] which provides an empirical varification of Myrdal's hypothesis is worth considering.

The evidence collected by Williamson shows fairly conclusively that regional disparities in per capita income

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26 H.S.Perloff, "Interrelations of state income and industrical structure". Review of Economics and Statistics, Vol. 29, May 1957.

27 R.A.Easterlin, "Interregional Differences in P.C.I., Population and Total Income, 1840-1950", in "Trends in the American Economy in the 19th Century", NBER - Studies in Income and Wealth, Vol. 24, 1960.

28 Richardson ; op. cit., pp 60. And also see A.G.Brown, "Regional Economics, With Special Reference to U.K.", in "Surveys of Applied Economics", Volume I, Surveys I-IV , The MacMillan Press Ltd., Great Britain, 1973, pp 1-44.

29 W.Baer, "Regional inequality and economic growth in Brazil", Economic Development And Cultural Change, Vol. XII (3), April 1964.

30 Minoru, "Regional income disparity and internal migration of population in Japan", Economic Development And Cultural Change, Jan. 1964.

31 Williamson ; op. cit.

tend to widen in the early stages of the development process and then narrow. He compiles three types of data for his study. They are : (i) the international cross-section data for 1950s, (ii) short and long time series data for individual countries and (iii) cross-section data for U.S.A. ( 1950 and 1960 ), treating the individual states as 'Countries' and the 'Counties' within the states as regions. The measure of regional inequality taken is the coefficient of variation of 'regional per capita income', with each region's observation weighted by its relative share of the total population. So far as the international cross-section data are concerned, a sample of twenty-four developed and developing countries in 1950s gives the lowest weighted coefficient of variation ( i.e .139 ) for the richest group of countries consisting of Australia , Newzealand, Canada, the U. K., U.S.A. and Sweden, and the highest coefficient of variation ( i.e. .464 ) for a group of countries undergoing rapid structural changes including Brazil, Italy , Spain, Columbia and Greece . India shows a much lower coefficient of variation ( i.e. .275 ) suggesting that very poor countries tend to be uniformly poor . The short - time series data for sixteen countries showed the coefficient of variation to be stable or falling in all the developed countries, and increasing in developing countries like Japan, Yugoslavia

and India. However, Brazil is an exception to this. The longer historical time series data supports the hypothesis that a 'Statistic' describing regional inequality will traceout an inverted 'U' over the national growth path. Further, he also finds that regional inequality is much more extensive within the agricultural than within the industrial sector.

Williamson explains the regional per capita income inequality in terms of (i) labour migration (ii) capital migration (iii) interregional linkages (iv) central Govt.'s policy . All these factors, according to him, work to diverge the income levels in the initial stages of development and after certain stages of development, automatic reversal takes place.

It seems, from the foregoing discussion, that the regional inequality is an inevitable evil in the early stages of development. But there is no time limit for the reversal of this trend. Now the question is whether we should allow this inequality to continue till the natural reversal takes place. However, Myrdal points out that , "inequality and trend toward rising inequality stand as a complex of inhibitions and obstacles to development and that , consequently, there is an urgent need for reversing the trend and catering greater equality as a condition for

speeding up development"[32]. Therefore, the policy of growth with equity must take into consideration the levels of development and rates of growth.

## 3. REGIONAL INEQUALITIES IN INDIA : A BRIEF SURVEY

Before we study the trends in regional inequalities in India, it is also necessary to know the approach towards the regional development under the Fiver Year Plans of India.

Though Indian planners were much engrossed in speeding up of economic growth, they expressed their awareness of regional development problems, particularly regional disparities in development since the beginning of planning in the country[33]. The second Five Year Plan also observed : "In any comprehensive plan of development, it is axiomatic that the special needs of the less developed areas should receive due attentions. The pattern of development must be so devised as to lead to balanced regional development"[34]. Because of the resource constraint, no specific programmes were envisaged in the second Five Year Plan. It points out that, " as

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32 G.Myrdal, "The Challange of Poverty", Allen Lanc , The Penguin Press, London, 1970, pp 50.

33 Government of India, "First Five Year Plan - A draft outline", Planning Commission, July 1951, pp 142-158.

34 Government of India, "Second Five Year Plan", Planning Commission, 1956, pp 36.

development proceeds and large resources become available for investment, the stress of the development programmes should be on extending the benefit of investments to under-developed regions ; only thus can a diversified economy be built up"[35]. However, in drawing up and in implementing the Second Five Year Plan, the regional aspects of development were dealt with in three different ways. Firstly , through the plans of states, emphasis was given to programmes which had a direct bearing on the welfare of the people in different parts of the country. Secondly, special programmes were undertaken in particular areas where development had either received a temporary setback, or was being held back by certain basic deficiencies . Thirdly, steps were taken to secure more dispersed development of industry which, in turn, creates conditions for development in several related fields. The Third Five Year Plan Chapter on 'Balanced Regional Development' may be considered as a major policy statement on regional development and related issues in the documents of the Five Year Plans in India. The Third Five Year Plan states that, "balanced development of different parts of the country, extension of the benefits of economic progress to the less developed regions and wide spread diffusion of industry are among the major aims of planned development"[36]. There is no doubt that the Third Five Year

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35 Ibid.,

36 Government of India, "Third Five Year Plan", Planning Commission, 1961, pp 142.

Plan provided extensive opportunity for the development of different parts of the country. Besides assigning some important programmes to state plans, it also included features for the development of areas which have been relatively backward in the past. For instance, the intensive development of agriculture, extension of irrigation, village and small industries, large - scale expansion of power, development of roads and road transport, provision for universal education for the age-group 6-11 years and large opportunities for secondary, techniqal and vocational education, improvements in conditions of living and water supply, and programmes for the welfare of scheduled tribes and castes and other backward class were some of the schemes included in the Third Five Year Plan to develop backward areas. Further, the size and pattern of outlays in the state under the Third Five Year Plan were calculated to reduce disparities of development between different states[37]. Thus, it concludes that, "whatever the shortcomings, the aim must be that over a reasonable period all regions in the country should realise their potential for economic development and should attain levels of living not far removed from those of the nation as a whole"[38]. In the Draft Fourth and Fifth Five Year Plans issues concerned with

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37 Ibid., pp 147.

38 Ibid., pp 153.

regional development were indirectly referred to. However, the Sixth Five Year Plan aims at, "a progress reduction in regional inequalities in the place of development and the diffusion of technological benefits"[39]. Thus, we find that the Indian planners' interest is continuously increasing towards the problem of regional disparities in India.

At this stage it is interesting to know the studies relating to trends in regional inequalities in India. There are a number of regional studies which have appeared in recent years. But there is no unifomity of concepts used in these studies. States, agro-climatic regions, districts and even tehsils are considered as regions by different authors for their studies. Further, most of the studies have considered per capita income levels of regions for the analysis of regional inequalities. However, some studies are based on different indicators of development.

K.R.G. Nair observes that, "the first decade of Indian planning seems to have witnessed some decrease in inter - state income differentials, but this decrease is only marginal"[40]. By constructing a composite index of development for the fifties and sixties for the Indian states, S.K. Rao concludes that , "regional disparities have not been reduced

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39 Government of India,"Sixth Five Year Plan 1980-85 : A Frame Work", Planning Commission, August 1980, pp 4.

40 K.R.G.Nair,"Inter-State Income Disparities in India", Indian J. of Regional Science,Vol.III(2),1971, pp 49.

in the course of fifteen years of planning"[41]. V. Nath points out that, "economic growth during the 1950s and 1960s was probably some what more rapid in the developed states than in the less developed ones"[42]. B. H. Dholakia and R. H. Dholakia have found that, " state income inequalities have been increased between 1960-1961 and 1970-1971 in real terms"[43]. Kamal Suri says that, " an analysis of the salient economic variables reveals that the inter - and intra - state disparities have widened during the course of our planned development and thus the major objectives of a balanced regional growth has not been adequately realised "[44]. A. K. Singh has calculated the weighted coefficient of variation ( VW) for 14 states in India for the period, 1950-1951 to 1974-1975 . He carriedon the analysis for three phases separately because of the non-availability of comparable data for the entire period of analysis. His findings are as follows:[45]

i) In the first phase inter-state income disparities show

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41 S.K.Rao,"A note on measuring economic distances between Regions in India", Economic and Political Weekly Vol.III (17) , April 1973, pp 799.

42 V.Nath, "Regional development in Indian Planning", Economic and Political Weekly, Vol.V, Annual number 1970, pp 259.

43 B.H.Dholakia and R.H.Dholakia, "Inter-state income inequalities and inter-state variations in growth of Real Capital Stock", Economic and Political Weekly, Vol.XV (38).Sept.20, 1980, pp 1586.

44 Kamal Suri,"Inter-and Intra-state disparities widen", Economic Times,5th March,1982.

45 A.K.Singh,"Patterns of Regional Development",Sterling publishers, Private Ltd., New Delhi, 1981, pp 24-26.

dome decline between 1950-1951 and 1955-1956 but a stable trend between 1955-1956 and 1960-1961.

ii) In the second stage i.e. between 1960-1961 and 1970-1971, he finds that income disparities after registering a decline in the early'sixties tend to increase in the late 'sixties .

iii) In the third phase i.e. between 1970-1971 and 1974-1975, again a convergent trend in the state per capita income was observed.

iv There are a few studies on inter - regional comparision which have used district as the unit of analysis . The most important among them is, A.Mitra's[46] study which is based on the census of India 1961. Mitra has classified the districts of India into four levels of development on the basis of wide range of indicators. The study brings out the fact that the modern manufacturing activities is concentrated in the districts at the top level of development . A.K. Singh[47] finds that, the interregional and inter-district disparities in per capita and per worker output have increased both absolutely and relatively between 1951 and 1961 in U. P. However, he finds that the disparities have been narrowed

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46 A. Mitra, " Levels of Regional Development in India ", Census of India 1961, Vol. I, Part 1-A.

47 A. K. Singh ; op. cit., pp 82-83.

down between 1961 and 1971. K.R.G. Nair's[48] study indicates that there is a considerable increase in inter-district per capita income disparities in Kerala for the post 1970 period. On the basis of the 'composite indicator' of development for 1961 and 1971 for the districts of Rajasthan, K. L. Sharma concludes that, " the extent of regional disparities in the economy as a whole has decreased significantly during the sixties".[49] Using 'composite development index', D. M. Nanjundappa and M. B. Gouda have found that, " the gap between the least developed and the most developed district has been narrowed over the period 1961-1977 in Karnataka ".[50]

Thus, we find that different researchers have arrived at different conclusions as regards the trends in regional inequality in India. Perhaps, the differences in their data base and the different measures of development used by them

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48 K. R. G. Nair, "Regional Disparities in Kerala ", in K. R. G. Nair (Ed.), "Regional Disparities in India", Agricole publishing Academy, New Delhi, 1981, pp 143.

49 K. L. Sharma, "Spatial Disparities in Rajasthan", Indian Journal of Regional Science, Vol. VII (1), 1975, pp 93.

50 D. M. Nanjundappa and M. B. Gouda, "Development of Backward Areas", Paper Presented at National Seminar on 'Design of Backward Areas of Development' held at Patna, Jan. 17-18, 1979.

may account for such conclusions. However, it can be said that regional income inequality in India seems to have fairly remained more or less constant if not increased during the fifties and sixties.

At this point, it is interesting to know the effectiveness of the government's policy in reducing the regional inequalities in India. J.C. Sandesara observes that, "the trend in employment and value added by the organised sector indicates fairly clearly that some narrowing as between the developed states on the one hand and the underdeveloped states on the other has occurred. It appears that organised industry has contributed towards narrowing the inter-state imbalances . It seems fairly clear that but for the counter-weight of industry, given other things, the imbalances would have probably widened".[51] It appears that Sandesara's contention is supported by S.Gupta's findings that, "public sector investment activities in India over the period 1950 - 1956 have contributed to reducing the spatial income disparity in the country".[52]

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51 J. C. Sandesara, "Industrial Economy : Objectives, Achievements and Problems", In J. C. Sandesara (Ed.), "The Indian Economy - Performance and Prospects", Department of Economics, University of Bombay, 1974, pp 558.

52 S. Gupta, "The Role of Public Sector in Reducing Regional Income Disparities in Indian Plans", The Journal of Development Studies, Vol.9(2), Jan. 1973.

On the other hand, V. Nath concludes that, "the analysis of state plan expenditure - from which social services, infrastructure facilities were financed does not however, show higher expenditures in backward states. Reduction of regional disparities has not been considered important to influence either locational decisions relating to large public sector projects or to merit large special provisions for development of backward areas".[53] K.N. Reddy also finds that the recommendations of Finance Commissions, except the Fifth Commission, are not in line with the objective of reducing regional disparities.[54] Bhagavati concludes that, "there is evidence that the planning for regional balance in India has been at best week and at worst negligent and negligible . This is demonstrable by reference to industrial location and pricing policies".[55] Thus, there exist conflicting views about the role played by the government in correcting the regional imbalances in India during the fifties and sixties.

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53 V. Nath; op. cit., pp 259.

54 K.N.Reddy, "How for Federal-Finance Operations in India Result in Reduction of Regional Disparities", Artha-Vikas, Vol.I, Jan. 1972, pp 106 - 116.

55 J. N. Bhagavati, "International and Interregional Development", In E.A.G.Robinson and M.Kidron (Eds.), "Economic Development in South Asia", MacMillan and Co.,Ltd.,1970, pp 542.

There are some economists who express their fear that the national objectives of efficiency and equity are in conflict. Renaud, for instance, argues that, "if under free market forces, we can maximise national output, policies for greater interregional equality will tend to reduce total output".[56] But Isard and Reiner argue that, "a policy of 'Pure Equalisation' is necessarily a poor policy, although a policy toward greater equalisation can be and is likely to be valid".[57] However, K.R.G. Nair points out that , "Inter-state income disparities in India are not based on differences in permanent natural resource endowments like area, unskilled labour and mineral resources. They seem to be more due to man-made factors like skilled labour, irrigated land, industrial capital. The poor states in India do not seem to be natural resource poor and hence have potentiality for economic development. The view that the reduction in inter-state income differentials can be advanced only on grounds of equity and will stand in the way of economic efficiency in terms of maximization of national output

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56 B.M.Renaud, "Conflicts between National growth and Regional Income Inequality in a Rapidly Growing Economy: The case of Korea," Economic Development and Cultural Change, Vol.21(3), April 1973, pp 437.

57 W. Isard and T. Rainer, " Regional and National Economic Planning and Analytical Techniques for implementation", in W.Isard and J.H. Chambarland (Eds.), "Regional Economic Planning - Techniques of Analysis for less Developed Areas", OEEC, Paris, 1961, pp 23.

does not, therefore, seem to hold much water in case of India".[58]

## 4. THE PRESENT STUDY : IMPORTANCE, SCOPE AND HYPOTHESES TESTED

Increasing attention is being paid to the regional dimension, particularly since the beginning of the Third Five Year Plan, in Indian state plans. In fact, the Karnataka State Fourth Five Year Plan observes that, "the balanced development of all regions is as much an economic necessity as it is a social and political desideratum, if periodic set backs in the process of development of the state as a whole are to be avoided".[59] It needs to be noted that Karnataka is one of the states showing keen interest in recognising the problem of regional disparity. Direct and indirect references have been made in the Karnataka state plan documents about the issues concerned with regional disparities in Karnataka state. And, with a view to reduce the regional dispatities in the state, the state Five Year Plan Documents include the following objectives :

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58 K. R. G. Nair ; op. cit., 1971, pp 51.

59 Government of Mysore, "Fourth Five Year Plan (1969-74)", ( Policy and Programmes ), Planning Department, Bangalore, 1970, pp 15.

i) An equitable disposal of the benefits of economic development and social improvement.[60]

ii) To make deliberate efforts at reducing regional imbalances.[61]

iii) To attempt to rectify the imbalances in the industrialisation in the state and develop agro-based and other cottage and small industries in a big-way to improve rural industrialisation and for providing self employment opportunities. And, to further reduce the regional imbalances in the availability of other infrastructural facilities like banking , rural transport etc., and to give a big push to rural development so as to improve the quality of rural life ; earmarking of inputs, especially credit for weaker sections shall be an important component of the policy frame.[62]

Keeping these objectives in mind, the state planners are attempting to correct regional imbalances through

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60 Ibid., pp 64.

61 Government of Mysore, "Draft Fifth Five Year Plan - 1974-79", Planning Department, Bangalore, 1973.

62 Government of Karnataka, " Karnataka Draft Sixth Five Year Plan - 1980-85", Vol. I, Strategy, Outlays and Programmes - Planning Department, Bangalore, 1980, pp 33.

special programmes and resource allocation . In addition to this, the state government has also evolved some planning machinery at the district level. Hence, a systematic and thorough study of levels of development, periodically, of different regions in the state becomes imperative. Such a study will throw some light on the achievements and failures of the policies followed in the past. It will indicate the direction of change desired in future policies to achieve the desired goals . In fact, reduction of regional imbalances is one of the means of achieving the goal of redistributive justice.

At this stage two important questions are to be answered : One, the question of defining the region ; and, two, the question of measuring regional disparity.

Taking the first question first, it is important to know that, no single concept of region is suitable for all purposes. Different regions can be demarcated for different purposes. It is a common practice to use 'States' as the unit of analysis in the regional studies in India. But there can be regions within states and beyond states. However, to assess the levels of development in different regions, a collection of a handful of statistics on comparable basis with respect to several economic and non - economic aspects for different regions is very essential. Therefore, the regional analyst has to accept the regional

frame work in which the data are available. It is for this reason we opt for 'District' as the unit of our analysis. The data are available more fully for the districts of Karnataka.

With regard to the second question, generally, one can think of two measures of regional disparities : (i) composite index of development, (ii) per capita income of a region. The first one is based on several indicators of development. In fact, this is the measure which has been employed by the researchers who have worked on Karnataka regional development so far. But this does not give us a comprehensive indicators of development of a region. We are interested in the variations in the levels of 'economic development' between the regions. By 'economic development', we mean, an aggregate economic progress of a region. And, it is the per-capita income of a region which is widely considered as the best single index of economic development, both in national and international studies. In the present study, as the data are available for the first time on Net Domestic Product, at factor cost, at district level, we use per capita District Domestic Product ( i.e. district per capita income ) at factor cost as a measure of regional disparities in Karnataka State. It is in this respect that the present study shows a departure from the other studies.

In the light of the foregoing discussion, the present study proposes to examine the following hypotheses :

i) A 'Statistic' describing regional inequality will trace out an inverted 'U' over the national growth path. The stated hypothesis indicates that regional disparities in per capita income tend to widen in the early stages of the development process and then narrow down. This study attempts to examine, empirically, the extent of inequality in the districts of Karnataka State and examine the validity of the above hypothesis with reference to growth experience of Karnataka during the plan periods.

ii) In the process of economic development, a well-known hypothesis advanced is that there is a negative correlation between the level of income and the share of agriculture and positive correlation between the level of income and the share of non - agricultural production. The present study seeks to test the hypothesis with reference to Karnataka districts. Cross - sectional and temporal studies are conducted by considering primary, secondary and tertiary sectors at district level for the said purpose.

iii) Economic development is generally found associated with high levels of productivity, worker rates, urbanisation, literacy rate, population in the working age group, degree of industrialisation, infrastructure, among other things. The present work investigates into the above factors and

attempts to examine, whether, the productivity, worker participation rate, proportion of population in the working age-group, literacy rate, urbanisation, degree of industrialisation and the infrastructure are the factors responsible for inter - district income inequalities in Karnataka.

(iv) Colin Clark, in his famous economic sector thesis, argues that " ..... low real income per head is always associated with a low proportion of the working population engaged in tertiary production and a high percentage in primary production ..... A high average level of real income per head is always associated with a high proportion of the working population in tertiary industries."[63] The high per capita income, thus is (a) negatively associated with the share of agriculture and related industries in labour force, (b) positively associated with the shares of secondary, tertiary sectors in labour force. The present study attempts to test the significance of the above hypothesis at two points of time viz. 1960-61 and 1970-71, for the districts of Karnataka.

(v) The present study seeks to vindicate what H. S. Perloff says, " There is a significant relationship between income levels and industry ( employment ) structure, but

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63 Colin Clark, "The Conditions of Economic Progress", (1st ed.), London, 1940, pp 7-12.

that this relationship is not best analysed by three-way classification which has been employed by Clark and others",[64] by examining and isolating the extent of the contribution of the industrial structure - dividing the labour force into more than three sectors - besides, productivity and worker participation rate, leading to inter-district income variation in the state. With the help of standardisation procedure, an effort is made to isolate and quantify the factors of income inequality.

(vi) Irrigation, fertilizer consumption, agricultural implements, size distribution of holdings, cropping pattern, live-stock, infrastructure, rainfall, rural literacy rate, area under HYV crops, land-man ratio, among other things, are important factors influencing agricultural productivity. Therefore, the hypothesis is that the agricultural productivity ( per hectare and/per agricultural worker ) will be higher in the districts with the high levels of irrigated area, area under HYV crops, area under high - valued crops, fertilizer consumption, rainfall, rural literacy rate, infrastructure, agricultural implements, land-man ratio, concentration ratio, live-stock than that in the districts

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64 H. S. Perloff, "Interrelations of state income and Industrial structure", Review of Economics and Statistics, Vol. XXXIX (2), May 1957, pp 165.

with low levels of the above factors. To test this hypothesis, cross-sectional study for the years 1960-61, 1970-71 and 1975-76 is conducted for the Karnataka districts .

(vii) A region with a lower level of inputs is likely to produce a lower level of output, ceteris paribus. The present study attempts to examine the influence of the factors, namely, land, labour, irrigation, fertilizer , livestock, education to the inter-district variations in agricultural production. An attempt is made to fit the Cobb - Douglas production function to the district data for the years 1960-61, 1970-71 and 1975-76.

Unfortunately, no systematic investigation has been undertaken so far to test the above hypotheses which have a strategic importance. The study, thus, attempts to contribute to the understanding of regional inequality, factors affecting regional inequality at the micro-level unit ( district ) of administration in Karnataka .

The study covers all the nineteen administrative districts of Karnataka . They are Bangalore, Belgaum, Bellary, Bidar, Bijapur, Chickmagalur, Chitradurga, Dakshina - Kannada (D.K.), Dharwad, Gulbarga, Hassan, Kodagu, Kolar, Mandya, Mysore, Raichur, Shimoga, Tumkur and Uttar - Kannada (U.K.).

For examining the extent and factors of inter-district variation in per capita income and agricultural productivity, cross - section analysis has been resorted to . Such a restriction is governed exclusively by the availability of data. The analysis is based on district-wise data on details of district domestic product, workers, literacy rate, urbanisation, age - composition, infrastructure, agricultural output, size-distribution of land holdings, irrigation, fertilizer consumption, livestock, cropping pattern, agricultural implements, among other things.

The present work is based on the secondary sources of data. Wherever the published data were not available, the data have been obtained from the official records (unpublished), and they are duly adjusted and estimated in concurrence with economic concepts and make them comparable overtime . By and large, the data are collected from the State Bureau of Economics and Statistics, State Department of Agriculture, Statistical Abstracts of Karnataka, Population census publications, Live-stock Censuses , Census of Agricultural Holdings in Karnataka and C.S.O. publications. These data were obtained for the years 1960-61, 1970-71 and 1975-76.

The sequence of the work is as follows :

Chapter two examines the extent of inequality in the districts of Karnataka State, after deriving the income series

at constant prices, for the periods 1960-61, 1970-71 and 1975-76 . It also discusses the sectoral shares and their importance at a point of time and over a period of time.

Chapter three is devoted to the estimates of workers for 1961 such that they are made comparable to the 1971 census data on workers. In addition, the classification of workers by employment is also made comparable to that of 1961 and 1971 .

Chapter Four examines empirically, with the help of the Multiple Regression Technique , the factors responsible for the inter-district income inequalities in Karnataka.

Chapter five seeks to examine and isolate the extent of contribution of industrial structure, productivity and worker participation rate leading to inter-district income variation in the state. Isolation and quantification of sources of income inquality is attempted with the help of Standardisation Procedure or Shift and Share Analysis.

Chapter six investigates, with the help of the Multiple Regression Technique, the factors affecting inter-district agricultural productivity variations in Karnataka for the years 1960-61, 1970-71 and 1975-76.

Chapter seven examines the sources of variation in inter-district agricultural production in Karnataka. With the

help of Cobb-Douglas type production functions, the influcence of factors, like land, labour, irrigation, agricultural implements, fertilizer, HYV seeds, live-stock and rainfall have been explored.

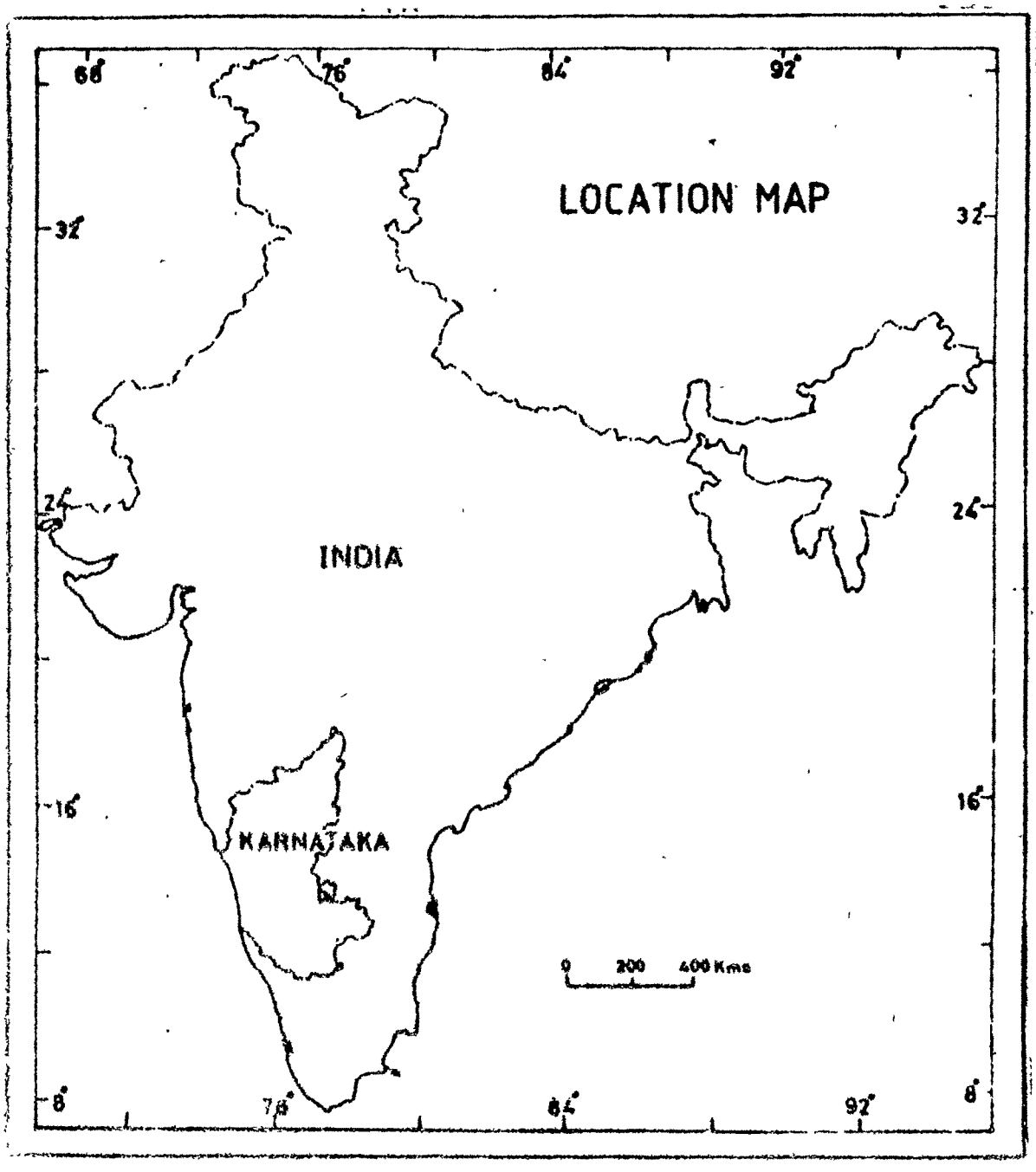
Summary of findings of the study are discussed in the concluding Chapter .

## 5. KARNATAKA STATE IN THE NATIONAL SETTING

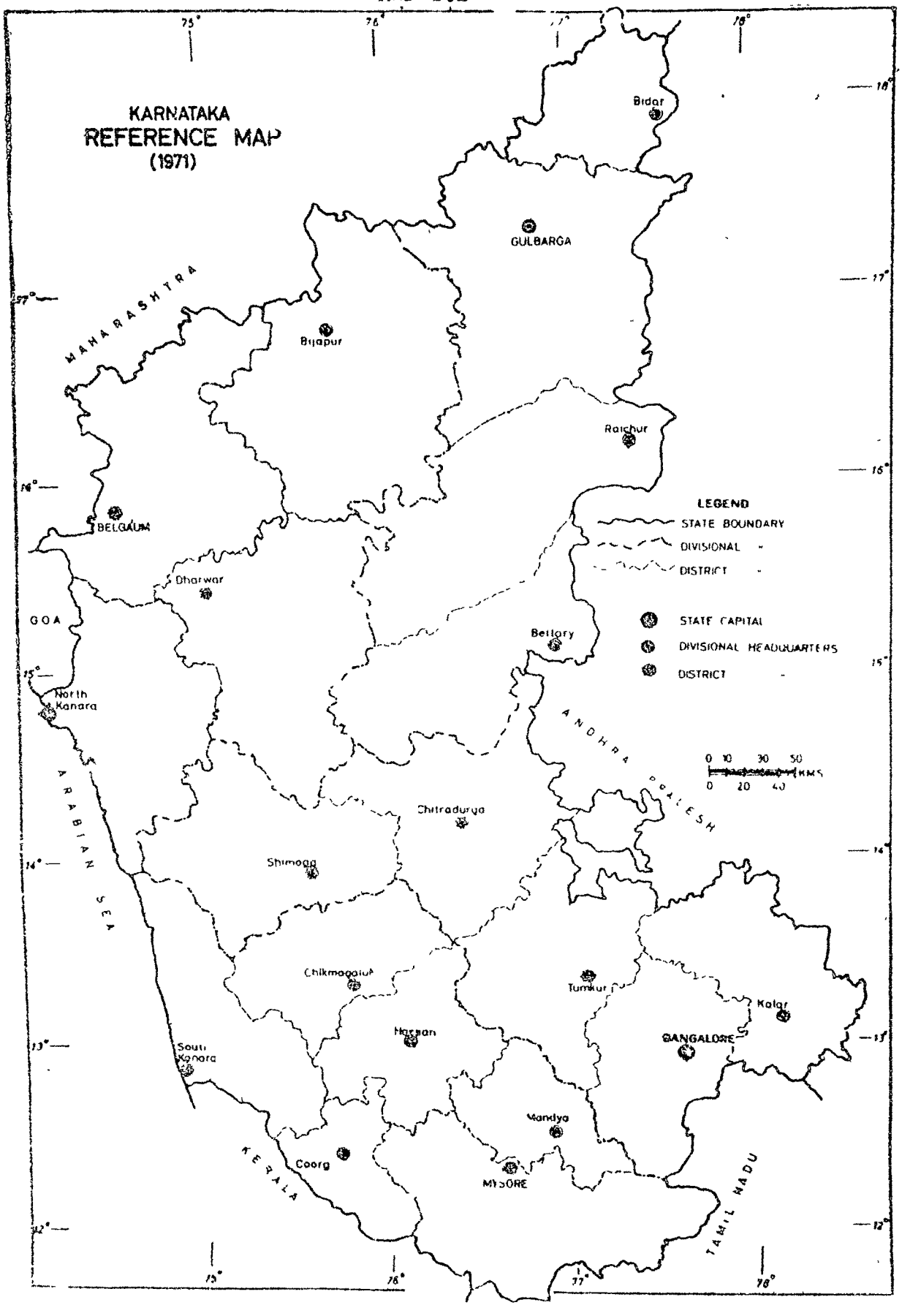
It may not be out of place to present, at this stage, the place of Karnataka in the national setting.

The present state of Karnataka was known as ' Mysore State ' until 1st November 1973 . However, the erstwhile State of Mysore came into existence on 1st November 1956, under the States Reorganisation Act. The extent of area of the state is 1, 191 , 791sq. Kilometers and its population, according to the 1981 census ( provisional figures ) is 37, 043, 451 . It is the eighth largest state in terms of both area and population . The state comprises 175 Talukas grouped into 19 Districts. which are further grouped into four divisions for administrative convinience. The location map of Karnataka and the Karnataka State map with its district boundaries are given in Map 1.1 and Map 1.2 respectively.

MAP 1.1


LOCATION MAP
INDIA
KARNATAKA
0 200 400 Kms
68°
76°
84°
92°
32°
24°
16°
8°

MAP 1.2


KARNATAKA
REFERENCE MAP
(1971)
LEGEND
STATE BOUNDARY
DIVISIONAL -
DISTRICT -
STATE CAPITAL
DIVISIONAL HEADQUARTERS
DISTRICT -
0 10 30 50 KMS
0 20 40
Bidar
GULBARGA
Bijapur
Raichur
BELGAUM
Dharwar
GOA
Bellary
North Kanara
Chitradurga
Shimoga
Chikmagalur
Tumkur
Kolar
BANGALORE
Hassan
South Kanara
Mandya
Coorg
MYSORE
MAHARASHTRA
ANDHRA PRADESH
ARABIAN SEA
KERALA
TAMIL NADU
75°
76°
77°
78°
18°
17°
16°
15°
14°
13°
12°

The state is situated in the south-western part of the Indian Union and lies between 11.5° and 19° North latitudes and 74° and 78° East langitudes. The state is bounded by Maharashtra in the North and Goa and Arabian Sea on the West . In the East it is bounded by Andhra-Pradesh and in the South by Tamil-Nadu and Kerala.

The state may be divided into four regions on the basis of agro-climatic conditions ; the Coastal region, the Malnad ( Eastern ) region, the North Maidan and the South Maidan.

Karnataka is endowed with a number of perennial rivers. The two important river systems of the state are the Southern Krishna and its tributaries in the North and the Cauvery and its tributaries in the South. ~~In the South~~ There are a number of perennial rivers rising in the Western Ghats and flowing West-Ward in to the Arabian Sea. Important among them are the Sharavati, Kalinadi and Netravathi . These are most suited for tapping water resources.

Even though the state is exposed to both monsoons , it receives the major portion of its rainfall from the South-West monsoon, which sets in usually about the end of May or early June and continues, with some intervals, till the end of September. The North-Eastern Monsoon commences in October and ceases by December. The average annual rainfall

in Karnataka is 1400 MM . However, it varies from 7620 MM on the Western Ghats to about 380 MM in the Eastern and North Eastern parts of the state. The normal annual rainfall for the state is 1355 MM, but it varied from 553 MM in Bijapur to 3933 MM in Dakshina - Kannada during the year 1978.

Karnataka grows almost all varieties of crops for the simple reason that it possesses varying types of soils and climatic conditions . It has four types of soils : (i) Deep black cotton (ii) Red and sandy loans (iii)Laterite and (iv) Alluvial.

The state is fairly rich in mineral resources which are of industrial importance.. Apart from being the sole gold producing state in India, Karnataka has large deposits of important minerals like iron and manganese ore, chromite, bauxite, limestone and clays, pyrite, quartz, etc.

It is also important to note that the majority of the districts are rich in the resources like, forest, animal, mineral, agricultural and water resources. Of course, this observation is based on several studies which have assessed the resource potentials in Karnataka. Therefore, an adequate planning for systematic exploitation of resource potentials is needed to augment the state income.

At this stage, it is interesting to know the position of Karnataka as compared to other states in terms of

some important indicators. Such a comparision is broughtout in Table 1.1 .

It is clear, from the table , that the highest per - capita income is Rs. 409 in Maharashtra and lowest Rs.215 in Bihar during the year 1960-61. If we consider the per - capita income for all-India as the dividing line between developed and backward states, we have seven developed states and as many as nine backward states in India during the year 1960-61. The per capita income in Karnataka was Rs. 295 as against the per capita income Rs. 307 for all-India in 1960-61. Thus, Karnataka was one of the nine backward states in the country for the period 1960-61.

In 1970-71 , there were only six states i.e. Panjab , Haryana, Gujarat, Maharashtra, West-Bengal and Karnataka, whose per capita income was found to be higher than all-India level. Karnataka ranked 6th in terms of per capita income in the year 1970-71. However, per capita income of Karnataka was marginally higher than all-India average in real terms for the year 1970-71.

It is also evident, from the table, that the Karnataka's per capita income was Rs. 386 as against the all-India per capita income of Rs. 345 at constant prices in the year 1974-75 . Thus, Karnataka moved away from the list of backward states in 1960-61 to the list of developed

TABLE 1.1 : Select Indicators For Different States In India

| Sr. No. | States | Per capita income at constant price (Rs.) | | | Growth of P.C.I. (in %) | | Density of population per $KM^2$ | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1960-61 | 1970-71 | 1974-75 | 1960-61 to 1970-71 | 1960-61 to 1974-75 | 1961 | 1971 | 1981 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Andhra Pradesh | 275 (10) | 310 (10) | 330 ( 6) | +0.85 | +1.31 | 131 ( 8) | 157 ( 9) | 194 ( 9) |
| 2 | Assam | 315 ( 7) | 314 ( 9) | 270 (11) | -0.02 | -1.09 | 97 (13) | 150 (11) | - - |
| 3 | Bihar | 215 (15) | 230 (15) | 225 (15) | +0.48 | +0.32 | 267 ( 3) | 324 ( 3) | 402 ( 3) |
| 4 | Gujarat | 362 ( 3) | 439 ( 3) | 328 ( 7) | +1.38 | -0.70 | 110 (12) | 136 (13) | 173 (10) |
| 5 | Haryana | 327 ( 6) | 441 ( 2) | 421 ( 3) | +2.15 | +1.82 | 172 ( 6) | 227 ( 7) | 291 ( 7) |
| 6 | Karnataka | 295 ( 8) | 361 ( 6) | 386 ( 5) | +1.45 | +1.93 | 123 (10) | 153 (10) | 193 (11) |
| 7 | Kerala | 259 (12) | 298 (11) | 304 ( 9) | +1.00 | +1.15 | 435 ( 1) | 549 ( 1) | 654 ( 1) |
| 8 | Madhya Pradesh | 260 (11) | 261 (14) | 259 (12) | +0.02 | -0.02 | 73 (14) | 94 (14) | 118 (13) |
| 9 | Maharashtra | 409 ( 1) | 427 ( 4) | 462 ( 2) | +0.30 | +0.08 | 129 ( 9) | 164 ( 8) | 204 ( 8) |
| 10 | Orissa | 217 (14) | 265 (13) | 245 (14) | +1.43 | +0.87 | 113 (11) | 141 (12) | 169 (12) |
| 11 | Punjab | 347 ( 4) | 471 ( 1) | 496 ( 1) | +2.21 | +2.58 | 166 ( 7) | 269 ( 6) | 331 ( 6) |
| 12 | Rajasthan | 284 ( 9) | 353 ( 7) | 279 (10) | +1.56 | -0.12 | 59 (15) | 75 (15) | 100 (14) |
| 13 | Tamil Nadu | 334 ( 5) | 349 ( 8) | 305 ( 8) | +0.31 | -0.64 | 258 ( 4) | 315 ( 4) | 371 ( 5) |
| 14 | Uttar Pradesh | 252 (13) | 269 (12) | 254 (13) | +0.46 | +0.05 | 251 ( 5) | 300 ( 5) | 377 ( 4) |
| 15 | West Bengal | 390 ( 2) | 382 ( 5) | 388 ( 4) | -0.14 | -0.03 | 399 ( 2) | 504 ( 2) | 614 ( 2) |
| | ALL - INDIA | 307 | 356 | 345 | +1.63 | +0.83 | 149 | 177 | 208 |

(Figures in brackets are ranks in descending order)

contd...

TABLE 1.1 (contd.)

| Sr. No. | States | Literacy rate (in %) | | | Worker participation rate (in %) | | % of urban population to total population | | Composite index of infrastructure |
|---|---|---|---|---|---|---|---|---|---|
| | | 1961 | 1971 | 1981 | 1961 | 1971 | 1961 | 1971 | 1966-67 |
| | 1 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 | Andhra Pradesh | 21.19 (10) | 24.57 (11) | 29.94 (10) | 49.38 ( 2) | 41.39 ( 1) | 17.43 ( 7) | 19.31 ( 6) | 93 (10) |
| 2 | Assam | 27.36 ( 6) | 28.72 ( 8) | - - | 42.13 ( 7) | 28.35 (13) | 7.67 (14) | 8.87 (14) | 73 (12) |
| 3 | Bihar | 18.40 (12) | 19.94 (14) | 26.01 (13) | 39.96 ( 9) | 31.04 ( 9) | 8.42 (13) | 10.06 (13) | 98 ( 9) |
| 4 | Gujarat | 30.45 ( 3) | 35.79 ( 4) | 43.75 ( 3) | 37.63 (10) | 31.45 ( 6) | 25.79 ( 3) | 18.08 ( 7) | 111 ( 7) |
| 5 | Haryana | 21.15 (11) | 26.89 ( 9) | 35.84 ( 8) | 35.15 (11) | 26.44 (15) | 17.23 ( 8) | 17.66 ( 8) | 129 ( 5) |
| 6 | Karnataka | 25.40 ( 8) | 31.52 ( 7) | 38.40 ( 7) | 42.26 ( 6) | 34.74 ( 5) | 22.34 ( 6) | 24.31 ( 4) | 90 (11) |
| 7 | Kerala | 46.85 ( 1) | 60.42 ( 1) | 69.17 ( 1) | 31.46 (14) | 29.12 (11) | 15.09 (10) | 16.24 (11) | 135 ( 4) |
| 8 | M. P. | 17.13 (14) | 22.14 (12) | 27.82 (12) | 50.03 ( 1) | 36.72 ( 2) | 14.30 (11) | 16.30 (10) | 53 (15) |
| 9 | Maharashtra | 29.82 ( 4) | 39.18 (33) | 47.37 ( 2) | 46.60 ( 3) | 36.46 ( 3) | 28.22 ( 1) | 31.17 ( 1) | 117 ( 6) |
| 10 | Orissa | 21.66 ( 9) | 26.18 (10) | 34.12 ( 9) | 40.76 ( 8) | 31.22 ( 8) | 6.32 (15) | 8.41 (15) | 69 (13) |
| 11 | Punjab | 26.49 ( 7) | 33.67 ( 8) | 40.74 ( 6) | 31.30 (15) | 28.88 (12) | 23.06 ( 5) | 23.73 ( 5) | 201 ( 1) |
| 12 | Rajasthan | 15.21 (15) | 19.07 (15) | 24.04 (14) | 42.53 ( 5) | 31.24 ( 7) | 16.27 ( 9) | 17.63 ( 9) | 59 (14) |
| 13 | Tamil Nadu | 31.41 ( 2) | 39.46 ( 2) | 45.78 ( 4) | 43.64 ( 4) | 35.78 ( 4) | 26.68 ( 2) | 30.26 ( 2) | 171 ( 2) |
| 14 | U. P. | 17.65 (13) | 21.77 (13) | 27.38 (12) | 32.50 (13) | 30.94 (10) | 12.85 (13) | 14.00 (12) | 107 ( 8) |
| 15 | West Bengal | 29.28 ( 5) | 33.20 ( 6) | 40.88 ( 5) | 33.24 (12) | 27.91 (14) | 24.45 ( 4) | 24.75 ( 3) | 152 ( 3) |
| | ALL INDIA | 24.04 | 29.46 | 34.80 | 34.97 | 32.92 | 17.97 | 19.91 | 1100 |

( Figures in brackets are ranks in descending order ).

For source - see next page...

SOURCES: Columns 2 to 4 , Reserve Bank of India Bulletine, April, 1978, pp 286.

Columns 7, 8, 10, 11, 15, 16, are derived from population Censuses of India 1961 and 1971.

Columns 9, and 12 are derived from population Census of India 1981 ( Provisional Figures ).

Columns 13, and 14, Report on Resurvey on Economic questions - some results, Census of India, 1971, Series I - India, Miscellaneous paper 1 of 1974 .

Column 17, N.Shah, "Infrastructure for the Indian Economiy", Table IV in V. Dagli (Ed) , "Infrastructure for the Indian Economy", Vora and Co., Bombay, 1970, pp 25.

NOTE : Figures for Assam and Bihar are derived by deflating current price figures by all-India whole sale price index to have the comparable figures with 1960-61 base. And, figures for Karnataka are used from Bureau of Economics and Statistics, Government of Karnataka , Bangalore, as the figures in the above said source ( i.e. RBI) are not based on the 1960-61 base ( with respect to per capita income in both the cases ).

states in 1970-71 and 1974-75 . It is also interesting to know that the range of distance of Karnataka's per capita income from that of per capita income of highly developed state i.e., Punjab , is narrowed down in 1974-75 as compared to that of 1970-71.

The growth performance of the state seems to be quite impressive when it is compared with that of the other states. Karnataka turns out to be the 4th fastest growing state in India next only to Punjab, Haryana and Rajasthan between 1960-61 and 1970-71. However, its rate of growth is slower than the all-India rate of growth between the years 1960-61 and 1970-71. The average annual compound rate of growth of per capita income of Karnataka is worked out at 1.45 % as against 1.63 % for all-India between 1960-61 and 1970-71 in real terms. Negative growth rates are observed for Assam and West Bengal during this period. When we observed the per capita income growth rates between 1960-61 and 1974-75 , Karnataka turns out to be the second fastest growing state in the country, next only two Punjab . However, there are six states viz., A.P., Haryana, Karnataka, Kerala, Orissa and Punjab which have showed faster rates of growth than the all-India growth rate between 1960-61 and 1974-75 . The average annual compound rate of growth of per capita income in Karnataka is worked out at 1.93 % as against 0.83 % for all-India between

1960-61 and 1974-75. This means that, the rate of growth achieved by the state is higher in the early years of the 'seventies than that achieved in the 'sixties . Negative growth rates are observed in Assam, Gujarat, M.P., Rajasthan, Tamil Nadu and West Bengal between 1960-61 and 1974-75.

The density of population in as many/seven states /as i.e. Bihar, Haryana, Kerala , Punjab, Tamil Nadu , Uttar Pradesh and West Bengal is found to be higher than that of the country as a whole in the periods 1961, 1971 and 1981. In Karnataka the density of population is found to be lower than all-India level in all the three periods. Kerala and Rajasthan are found to be the highest and lowest thickly populated states, respectively, in all the three periods.

In respect of literacy rate, Karnataka stands above the all-India level in the years 1961, 1971 and 1981 . The percentage of literate population to the total population in the state is 25.40, 31.52 , 38.40 in 1961, 1971 and 1981, respectively, whereas the literacy rate for the country as a whole is 24.04 % , 29.46 % and 34.80 % for the years 1961, 1971 and 1981, respectively.

Kerala and Rajasthan account for the highest and lowest literacy rates, respectively, in all the three periods. Even though the literacy rate has improved in each of the

states from 1960-61 to 1970-71 and from 1970-71 to 1980-81, the rates are found to be lower than the all-India rate in seven states in 1961, 1971 and 1981 periods. The states with the low literacy rates are A. P., Bihar, Haryana, M.P., Orissa, Rajasthan and U.P. Though Karnataka's rank is improved from 8th to 7th in respect of literacy rate from 1961 to 1971, its rank remains unchanged from 1971 to 1981.

The proportion of the working population to the total population in Karnataka is also found to be a little higher than that at the all-India level. The worker participation rates in the state are 42.26 % in 1960-61 and 34.74 % in 1970-71. Despite the adjustments made for the conceptual differences between 1961 and 1971 censuses, the worker participation rates in all the states are found to be lower in 1971 as compared to that in 1961. This is evident from the data contained in the table . However, the highest ( 50.03 % ) and the lowest ( 31.30 % ) worker participation rates are found in M.P. and Punjab, respectively, in 1960-61. Whereas A.P. and Haryana are the states having the highest ( 41.39 % ) and the lowest ( 26.44 % ) worker participation rates, respectively, in 1970-71.

Urbanisation is taken as an indicator of economic development. There are only six states viz., Maharashtra, Tamil Nadu, Gujarat, West-Bengal, Karnataka and Punjab, in 1960-61 and five states viz., Maharashtra, Tamil Nadu,

West Bengal, Karnataka and Punjab in 1970-71 whose proportion of Urban population is found to be higher than the country's Urban population. Maharashtra and Orissa are found to be the most highly Urbanised and the least urbanised states of India, respectively, in the 1961 and 1971 years.

In respect of infrastructural facilities, Karnataka's position is below the all-India level . Its position is found to be lower than even some of the most backward states like Bihar, U. P. and Rajasthan. Therefore, an improvement in the infrastructural facilities in the state will be definitely help to move the state to the higher ranks of development.

Thus, in many respects Karnataka's position is comfortable in the national setting . However, if further efforts are made to correct regional imbalances existing in the state, such an effort , will go a long way in furtherance of Karnataka's position in the days to come.