International Journal of Advance and Applied Research
www.ijaar.co.in
ISSN – 2347-7075 Impact Factor – 7.328
Peer Reviewed Bi-Monthly
Vol.10 No.2 Nov – Dec 2022

Socio-Economic Analysis Of Regional Development In Karnataka State

Nandkumar
Research Scholar, Department of Sociology, Bangalore University, Bangalore
***Corresponding Author*- Nandkumar**
Email- nandusmainalle@gmail.com
DOI- 10.5281/zenodo.7496135

Abstract
The Regional development of Karnataka was obtained with the help of data based on optimum combination of socio-economic indicators. In the State and district wise data mostly for the recent years with respect of some indicators were included in the study. The level of development has been separately estimated for agriculture, Animal husbandry, industry, transport and communication and socio-economic indicators. In case of transport and communication sector, Bengaluru district ranked first and Chamarajnagar was least in development. Karnataka require improvement in various dimensions for enhancing the level of overall socio-economic development for unified balanced integration of curative, preventive and promotional services. The level of development was examined separately for agricultural. industrial, infrastructural and overall socio-economic developments. There is a wide disparity have been observed in the level of development among different districts of the State. The socio-economic development was positively associated with the growth and progress of overall development. The development does not influence significantly the socio-economic development. For bringing about uniform regional development, potential targets for various indicators have been estimated for low developed district. It requires improvements of various dimensions in some of the indicators for enhancing the level of overall socio-economic development.

Key-words: Development indicators, Karnataka, Population, Socio-economic development.

Introduction:

The early works of Myrdal (1957) and Hirschman (1958) contributed to the theory of regional economic growth and convergence. In fact these works gave rise to the development of the 'Inverted U-shaped hypothesis' wherein with the growth of an economy regional disparities tend to increase in the early stage of development and thereafter at a certain stage it will decrease. The empirical studies conducted by Kuznets (1958) and Williamson (1965) validated the inverted U-shaped hypothesis using data for developed countries.

Another version of the neoclassical growth model is the convergence hypothesis. Assuming that tastes and preferences (i.e., savings, investment and population growth) and technology are similar across regions, the neoclassical growth model of Solow (1956) predicts that regional differences in per capita income should converge on a common level of per capita income. This is on account of the neoclassical assumption of diminishing returns to capital. It implies that poor regions with lower capital per head will have higher marginal productivity than in rich regions with greater capital per head.

Karnataka is an average or representative Indian state-if there is such a thing as an average or representative Indian state. In 1971, Karnataka had a population of 29 million persons, small beside Uttar Pradesh's 88 million but large compared to Punjab's 13.5 million. Bangalore, the state's capital and India's sixth largest city, has a population of about 3 million and is a focal point for commerce, industry, and educational institutions. Mysore city, Mangalore on the south coast, Belgaum, and the Hubli-Dharwar axis are other important urban centres. Despite the presence of these and a number of lesser cities and towns, however, Karnataka is primarily rural; three people out of four live in villages, and of these most belong to cultivator and agricultural labourer households. The state is neither particularly wealthy nor especially poor. Its

per capita income is in the middle range for India, its agricultural production is adequate for its needs but nothing more, and it has some, but not lavish, exploitable mineral wealth: iron ore, manganese, chromite, and gold. Forest and plantation products add some diversity to Karnataka's economic base: sandalwood, teak, rosewood, and eucalyptus trees; coffee, coconut, cashews, cardamom, and fruits. Sugarcane, cotton, and tobacco are important cash crops.

History of Karnataka shows that North Karnataka was more developed politically, economically and culturally. This is evident from the fact that most of the Kannada dynasties are from north Karnataka, namely, Kadamba, Rashtrakuta, Chalukya, Kalachuri, Vijaya Nagar and so on. Three gems of Kannada literature Pampa, Ponna and Ranna were from this region. The question is in spite of this, why North Karnataka has at present remained an under developed region. The reason is that, after the collapse of the Vijayanagar Empire, the members of the royal family went over to , Mysore and Pennukonda of Andhra Pradesh. Over the period, under the leadership of Hyder Ali, Mysore state extended its borders up to most parts of Karnataka, Andhra Pradesh and Tamil Nadu. On the other hand, Hyderabad Nawab did not followed the example. Hence Hyderabad Karnataka region did not develop. The same was case with Bombay Karnataka region, but it is comparatively better than Hyderabad Karnataka terms of development.

For this reason, regional imbalances in Karnataka have always been studied by dividing the state into North Karnataka and South Karnataka. In North again two parts can been seen, namely, Hyderabad Karnataka and Bombay Karnataka regions. To reduce the regional imbalances Karnataka Government has taken various steps like setting up Hyderabad Karnataka Area Development Board, Bayaluseeme Development Board, Border Area Development Progamme, Malanad Area Development Board and so on. Government had also appointed a high-power committee for redressal of regional imbalances under the chairmanship of Prof. D. M. Nanjundappa during 2002-03. The committee, using 35 indicators, categorised the 175 taluks into 39 most backward taluks, 40 more backward taluks and 35 backward taluks.

The committee found that north Karnataka region was backward in general and Hyderabad Karnataka in particular as more backward. The committee recommended various programmes for reduction of regional imbalances. Karnataka government has started implementing the committee's recommendations since 2007-08. However, serious research on regional imbalances in Karnataka is scanty in general and on the High-power committee recommendation and its implementation in particular. The present paper discusses district and division wise imbalances in growth and development.

Karnataka has been a key State in contributing to the progress and development of the nation. About 56 per cent of the total geographical area is net sown. Area under forest is about 20 per cent. Out of six crore population, majority (61.3 %) live in rural areas (Anon., 2014). Seventy one per cent of working population are engaged in agriculture and allied activities in the state. Gross per capita Income is ` 86864. The State has population density of 234 per square kilometer and the adult literacy rate of 56 per cent. Agriculture is an important primary sector. It provides food to the growing population, row materials to the agro-based industries and various other products to fulfil the basic needs.

In this paper data in respect of 27 districts of Karnataka had been critically analysed and wide disparities in the level of development were found in different stages. It was, therefore, felt necessary to make a deeper analysis for socio-economic indicators for evaluating the imbalances of development in the districts of Karnataka. Socio economic development, by definition, is not a pre-determined state but it is a continuous process of improvement in the level of living (Narain et al., 2000). It implies the availability of goods and services to the existence of an agricultural, industrial and technological infrastructure and human related services of education and health. Considering the multi-dimensional process and dynamics of socio-economic development,

a need for building up of a composite index of development based on various socio-economic variables was felt necessary. Hence, an attempt has been made to quantify the socio-economic development of different districts of Karnataka State by constructing composite index of development for each district and compared among them.

Materials and Methods:

A. Method of Analysis:

Socio-economic development is multi-dimensional and it is continuous process of improvement of levels of living. The impact of development in different dimensions cannot be captured fully by any single indicator. Moreover, a number of indicators when analysed individually, do not provide an integrated and comprehensible picture of reality. Hence there is a need for building up of a composite index of development based on various economic indicators combined in an optimum manner. For this study. the districts have been taken as the unit of analysis. All the twenty districts of Karnataka State have been included in the analysis. The study utilises data on most of the economic indicators for the year 2005-06 to 2017-18. A total of thirty-nine development indicators have been included in the study.

B. Estimation of Composite Index:

Since variables in respect of different indicators are taken from various population distributions and these are recorded in different levels of measurement, their values are not quite suitable for combined analysis. Hence these variables have been transomed and standardized and their standardized values are used to build up the composite index of development. The best value of transformed variable for each indicator (with maximum/minimum value depending upon the direction of the impact of indicators 0 to 10 development) is identified and the deviations of transformed variables from the corresponding best values are obtained for each indicator. The statistical techniques presented by Narain, Rai and Sarup are applied to construct composite index of development for each district. The composite indices of development have been obtained separately for agricultural, industrial, infrastructural service and socio-economic sectors for different districts. The value of composite index thus obtained is non-negative and lies between 0 and 1. A value close to zero, indicates higher level of development whereas a value close to one indicates lower level of development.

Model districts for poorly developed districts have been identified from different divisions on the basis of composite index of development. Model districts are better developed and the best values of different indicators of model districts are taken as the potential targets for low developed districts.

Results and Discussions:

Growth of District Income in Karnataka

Growth is calculated making use of the district income data computed by the Directorate of Economics and Statistics (DES), Government of Karnataka, for all the districts of the state. The DES calculated the district income estimates for the year 1960–1961 and 1999–2000 to 2006–2007.

Table-1 shows the annual compound growth rates (per cent) of NDDP and PCI across three sectors for the state and its districts, divisions and regions from 1999– 2000 to 2012–2013 at constant (2004–2005) prices. The annual average growth rate of net state domestic product (NSDP) was 6.87 per cent whereas the per capita NSDP grew by 5.4 per cent from 1999–2000 to 2012–2013. However, the variation in growth rates between the districts was substantial, which can be observed from the CVs given in Table 1.

Table 1. Growth of NDDP and PCI Across Sectors in Karnataka: CAGR from 1999–2000 to 2018–2019 (at 2014–2015 Constant Prices) (in Per Cent)

Districts	Growth of net district domestic product across sectors				Growth of per capita income across sectors			
	Primary	Secondary	Tertiary	NDDP	Primary	Secondary	Tertiary	DPCI
Bangalore Rural	1.47	8.53	8.86	6.86	0.31	7.29	7.62	5.64
Bangalore Urban	2.8	7.92	12.36	10.74	1.62	6.69	11.08	9.48
Chitradurga	2.74	6.34	6.23	5.01	1.56	5.13	5.01	3.81

Davangere	3.89	6.71	8.23	6.41	2.7	5.49	6.99	5.2
Kolar	4.94	11.42	5.75	6.43	3.74	10.15	4.54	5.21
Shimoga	2.64	8.13	6.57	5.66	1.47	6.9	5.35	4.46
Tumkur	4.21	8.74	6.69	6.26	3.02	7.5	5.47	5.04
Bangalore	3.33	8.03	10.64	8.89	2.15	6.79	9.38	7.65
Bagalkote	1.65	4.7	6.39	4.28	0.49	3.51	5.17	3.08
Belgaum	1.2	4.76	6.68	4.45	0.04	3.57	5.46	3.25
Bijapur	3.15	6.78	4.54	4.48	1.97	5.56	3.34	3.28
Dharwad	−2.23	5.84	9.99	7.08	−3.35	4.63	8.73	5.86
Gadag	0.69	5.52	7.08	5.12	−0.46	4.32	5.85	3.92
Haveri	4.41	1.64	5.6	4.19	3.21	0.48	4.39	3
Uttara Kannada	0.34	2.85	7.49	4.74	−0.81	1.68	6.26	3.54
Belgaum DV	1.42	4.65	7.09	4.91	0.27	3.45	5.87	3.72
Bellary	3.09	5.48	6.85	5.43	1.91	4.27	5.63	4.22
Bidar	2.45	6.39	5.34	4.71	1.28	5.18	4.14	3.52
Gulbarga	0.82	3.12	6.19	4.05	−0.33	1.94	4.97	2.86
Koppal	6.27	6.53	5.45	5.8	5.06	5.31	4.25	4.59
Raichur	1.41	10.21	6.35	5.26	0.25	8.95	5.14	4.06
Gulbarga Div	2.58	5.63	6.22	4.99	1.4	4.42	5.01	3.79
Chamarajanagar	3.72	4.81	3.42	3.65	2.53	3.61	2.23	2.46
Chickmagalur	0.03	6.93	4.72	2.93	−1.11	5.7	3.53	1.76
Dakshina Kannada	2.09	5.11	7.27	5.93	0.92	3.91	6.04	4.72
Hassan	3.9	7.83	7.3	6.16	2.71	6.6	6.07	4.95
Kodagu	4.27	6.95	8.7	6.51	3.08	5.72	7.46	5.29
Mandya	3.7	5.43	4.45	4.33	2.51	4.23	3.26	3.14
Mysore	3.69	3.72	7.94	5.98	2.5	2.53	6.71	4.77
Udupi	1.74	10.18	7.94	6.98	0.58	8.92	6.71	5.76
Mysore Div	2.81	5.69	6.94	5.51	1.63	4.48	5.72	4.3
North	1.87	5.03	6.75	4.94	0.71	3.83	5.53	3.74
South	3.07	7.43	9.51	7.79	1.89	6.2	8.26	6.56
Karnataka	2.55	6.74	8.7	6.87	1.15	5.27	7.22	5.41
CV(%)	70.13	36.06	27.04	27.16	127.96	44.02	32.55	34.33

Note: NDDP: per capita net district domestic product, DPCI: district per capita income; PCNDDP: per capita net district domestic product; CV: coefficient of variation.

Source: Author's computation based on various issues of district domestic product of Karnataka, DES, GoK and Karnataka at a glance, DES, GoK

It has been quite revealing, especially when we look at the growth rates in the primary and secondary sectors. Therefore, policy emphasis has to be on these sectors in order to provide investment incentives in these regions. The best performers with growth rates higher than the state average are Bangalore Rural, Bangalore Urban, and Dharwad and Udupi districts. The analysis shows that the overall high growth rate of Bangalore Urban district is due to high growth rates in all three sectors. Bangalore Rural and Udupi districts achieved above-average overall performance with rapid growth in two sectors, namely, secondary and tertiary. However, the overall high growth of Dharwad above the state average is attributed to its fastest growth of the tertiary sector. The overall lowest growth rate of Chikkamagalur may be attributed to its zero or negative growth of the primary sector in the study period. Poor performance in the growth of the tertiary and secondary sectors might have resulted in poor overall growth of

Chamarajnagar and Gulbarga districts, respectively. Although Koppal and Raichur showed an excellent performance in secondary sector growth, their overall growth was below the state average growth rate. This is due to the small size of the secondary sector in the district economic composition.

Table 2:
Composite Index of Development

Districts	Industries		Agricultural		Animal husbandry		Transport & Communication		Socio-economic Condition	
	C.I	Rank	C.I	Rank	C.I	Rank	C.I	Rank	C.I	Rank
Bagalkot	0.1374	5	0.3937	13	0.0535	4	0.0766	10	0.54	24
Belgaum	0.3438	21	0.0509	1	0.0602	5	0.0663	8	0.18	6
Bellary	0.3656	23	0.2722	6	0.5779	25	0.2087	19	0.81	10
Bengaluru	0.024	1	0.5498	21	0.0215	2	0.013	1	0.78	5
Bengaluru (R)	0.1234	4	0.3075	7	0.3601	18	0.0326	3	0.87	11
Bidar	0.781	27	0.6355	25	0.4776	24	0.1988	18	0.81	16
Chamarajanagar	0.6048	25	0.5956	23	0.3593	17	0.5221	27	0.95	14
Chickamagaluru	0.335	19	0.4256	16	0.0509	3	0.3087	25	0.92	11
Chitradurga	0.0437	2	0.0732	2	0.384	19	0.0761	9	0.79	8
Dakshinakannada	0.3187	18	0.486	18	0.3942	20	0.1959	16	0.83	12
Davanagere	0.3123	17	0.3935	12	0.3505	16	0.209	20	0.65	18
Dharwad	0.2927	14	0.3357	10	0.324	15	0.1919	15	0.8	9
Gadag	0.355	22	0.5769	22	0.2152	10	0.2266	22	0.65	19
Gulbarga	0.3422	20	0.3165	8	0.3133	14	0.2219	21	0.89	22
Hassan	0.0466	3	0.1267	3	0.2562	11	0.3053	24	0.16	4
Haveri	0.2838	13	0.6127	24	0.4418	23	0.0941	12	0.22	22
Kodagu	0.3116	16	0.4227	15	0.0162	1	0.063	7	0.88	18
Kolar	0.1901	8	0.7931	27	0.1897	9	0.0596	6	0.79	7
Koppal	0.1523	6	0.327	9	0.5825	26	0.1983	17	0.58	21
Mandya	0.2495	10	0.2672	5	0.2764	12	0.1153	14	0.71	1
Mysore	0.2821	11	0.1978	4	0.1863	8	0.0293	2	0.73	2
Raichur	0.2822	12	0.6994	26	0.6955	27	0.4084	26	0.83	13
Shimoga	0.2257	9	0.4834	17	0.3109	13	0.1021	13	0.75	3
Tumkur	0.1575	7	0.5259	19	0.4161	21	0.0345	4	0.85	15
Udupi	0.3024	15	0.3688	11	0.1853	7	0.0524	5	0.98	3
UttaraKannada	0.7389	26	0.5459	20	0.4218	22	0.0842	11	0.96	20
Vijayapura	0.4977	24	0.401	14	0.1845	6	0.2703	23	0.84	14

Source: Karnataka at a glance. Directorate of Economics and Statistics, Bengaluru

The Level of Development

The composite indices of development have been worked out for different districts separately for agricultural, industrial, infrastructure service and overall socio-economic sectors. The districts have been ranked on the basis of development indices and composite indices (C.I) of development along with the districts rank are presented in below table.

The composite indices of development was worked out separately for agricultural sector, livestock, industrial and transport and communication sector for different districts of Karnataka and given in Table 2. The sectors were ranked on the basis of level of development. It is observed from the table that, Belgaum district is ranked first and the Kolar district is ranked last in agriculture development. The composite indices vary from 0.0509 to 0.7931 in case of agriculture facilities.

While in case of livestock development Kodagu district is found to be on the first position and Raichur district is ranked last and composite index varies from 0.0162 to 0.6955. In industrial sector, Bengaluru district ranked first and Bidar is at last and composite indices of development vary from 0.0240 to 0.7810. In case of transport and communication, Bengaluru

district is first and Chamarajanagar is ranked last. The composite indices of development ranges from 0.0130 to 0.5221.

Table 3
Kalyana Karnataka Region Financial Allocation

Year	Allocation	Expenditure
2013-14	200.000	1820.00000
2014-15	4283.950	3534.07166
2015-16	7114.620	6684.55792
2015-16R	2882.370	2665.45431
2016-17	12705.130	11340.25631
2017-18	2056.930	699.09000
2018-19	1879.000	1435.00000
2019-20	5771.818	5579.18673
2020-21	5641.033	5252.51442
2021-22	1796.644	11241.96982
2022-23	357.957	350.00000

Source: HKRDB

Above table discussed that Financial Allocation in H K Region. It is evident from the table the fluctuating occurred in financial allocation in K K Region so that it is called like under developed region in Karnataka state.

Emerging Problems:

The growth of relative to other towns in Karnataka, has been extremely rapid. Bangalore is growing unabatedly and has emerged as a highly concentrated centre of urban population in the State, leading to regional imbalances. If a single city tends to take away a large share of the urban population, it reflects a polarized pattern of development, and concomitantly shows a spatial imbalance in the pattern of the urbanization process (National Institute of Urban Affairs, "State of India's Urbanization", 1988). The case with Bangalore is the same which reflects the urban primacy problems. The problems of urban primacy are: they swallow up huge investments; demand a major portion of the resource allocations of the state; prove highly uneconomical in providing infrastructure facilities; tend to have a high consumption rate as compared with the production rate; and cities generate a lot of demand for goods of common consumption provoking increased production in the hinterland.

This is leading to serious environmental problems. This rapid urbanization is mainly due to the rapid shift in human activities from primary to non-primary enterprises with changing resource base. Such a shift impacts human affordability and their capabilities in achieving an improved standard of living through better access to infrastructure and services. Problems of urbanization, especially manifestations of lopsided urbanization, results in some basic problems in the field of housing, slums, transport, water supply and sanitation, water pollution and air pollution and inadequate provision for social infrastructure (schools, hospitals) etc. To solve the emerging problems, two issues have to be addressed, to reduce the influx of population into large towns and cities and to work out a means to decongest overcrowded cities by directing people to move to new designated areas of growth.

Regional Imbalances Within the Study Area:

A. Problems with Regional Imbalances

The resources are unduly over exploited in some areas whereas the rich resources are not optimally used in other areas due to uneven distribution of population in the State. There is heavy strain on basic infrastructure in the large urban centers due to high concentration of people in them. This trend has to change and people need to spread out more evenly in the State.

B. Attempted solutions towards Regional Development

Studies reveal that two approaches have been adopted till date to tackle the problem of persisting imbalances: In the first

approach, planning strategies have been designed in such a way that can mitigate the regional imbalances by spreading the development impulses uniformly over the region. During the five-year plan periods, the state of Karnataka laid stress to develop resources and strategies for promoting the welfare of its people, ensuring regional development. In the second approach, new schemes and planning strategies of decentralization are adopted. The planning strategies under planned decentralization have the prescriptions like the development of satellite towns, ring towns, counter-magnets, new towns and other variations.

C. High Power Committee for Redressal of Regional Imbalances (HPCFRRI)

The government took a decision in November 1999 to constitute a High Power Committee of Experts to study the regional imbalances in the State and work towards redress of problems. The committee with D.M. Nanjundappa as its Chairman has clearly indicated the imbalances and backwardness in Karnataka. Further, the final report also presents that the districts in north Karnataka are lagging behind those in south Karnataka and also in comparison to the state average.

The Nanjundappa committee expressed that the problem of regional disparities and backwardness is sought to be tackled in the following way:

i. Backwardness is to be identified and taken into account during resource allocation;
ii. Special Area Development Programs and Employment Generating Schemes have to be formulated and implemented directing them at backward area development in the region;
iii. Initiate measures to promote private investments in the backward areas or regions; and formulate policies to promote equalization of access to ground level of physical facilities and services in the region.

It was realized that urban development policy interventions for balanced urban development were needed. With this objective, the government created the following boards to look into the development activities more closely. The boards are: Hyderabad – Karnataka Development Board, Malnad Area Development Board and the Bayaluseeme Development Boards. Some areas were categorized under others.

Conclusion

On balance, the results strongly affirm the accepted interpretation of Karnataka's ecological and socioeconomic structure. District ranks on factors one and two offer an objective way of ascertaining to what degree each district demonstrates the typical features of its region. Karnataka as a whole would appear to stand to gain from agricultural research and extension activities devoted to two lines of action: further expansion of the state's irrigation facilities-canals, tanks, and wells; and substantial attention to raising output and the capacity to absorb modern inputs in the drier ragi, jowar, cotton, and bajra areas that comprise the bulk of the state's rural economy.

The Bagalkot, Belgaum, Bengaluru, Chitradurga, Gulbarga, and Mysore were observed to be better off in socio-economic development whereas the districts of Chamarajanagar Raichur, Bidar and Kolar districts are remained at the low level of development. These findings can be a guide for policy makers to further analyze the reasons and causes of underdevelopment and development of the districts and to address the problems in a holistic manner. Ballary, Bidar and Raichur districts are backward in animal husbandry development index. This is an important finding which calls for improvement in the animal husbandry sector in these districts. There is a need for strengthening animal husbandry by improving veterinary research and extension services by providing infrastructural facilities. To increase livestock production by providing incentives for dairy, poultry farming, pig breeding and sheep /goat production, establishing more fodder extension services, state livestock breeding farms and overall sector.

There are two obvious directions for future research on Karnataka’s economic structure and development. First, the urban-industrial dimension of the state needs to be explored through the addition of appropriate variables. Second, agricultural development can be probed more deeply by utilizing land

and labour productivity measures and a wider collection of input and technological variables, including tractors and pump sets, and rural infrastructure.

References:

1) Aziz Abdul (2001): "Economic Development: Vision Strategies for the Future" in Jeevan Kumar and Susheela Subrahmanya (ed.), Vision Karnataka 2025: Strategies and Action Plans for Sustanable Development, (Bangalore: Southern Economist)
2) Chandrashekar H and Nagaraju S. (1999): "Regional Pattern of Agriculture Development in Karnataka" in Srinivas Gowda M.V . and Nanje Gowda (ed.) Economic Evelopment of Karnataka: Leading Issues, (Bangalore: Local Advisory Committee, 81 Annual Conference of the Indian Economic Association).
3) Government of Karnataka (2002) High Power committee for Redressal of Regional Imbalances, (Chairman Prof. D.M.Nanjundappa)
4) Government of Karnataka Various Issues of Karnataka at a Glance
5) Government of Karnataka Various Issues of Karnataka Economic Survey
6) Nanjunhdappa D M (1999), "Karnataka's Economy: Retrospect and Prospects" in Srinivas Gowda M.V. and Nanje Gowda (ed.) Economic Evelopment of Karnataka: Leading Issues, (Bangalore: Local Advisory Committee, 81 Annual Conference of the Indian Economic Association).
7) Narain, P., Sharma, S.D., Rai, S.C. and Bhatia, V.K. (2000). Regional disparities in socio- economic development in Tamilnadu. Journal of the Indian Society of Agricultural Statistics 53: 35-46.
8) Narain, P., Sharma, S.D., Rai, S.C. and Bhatia, V.K. (2002). Dimensions of regional disparities in socio-economic development in Madhya Pradesh. Journal of the Indian Society of Agricultural Statistics 55: 88-107.
9) Narain, P., Sharma, S.D., Rai, S.C. and Bhatia, V.K. (2003). Evaluation of economic development at micro level in Karnataka. Journal of the Indian Society of Agricultural Statistics 56: 52-63.
10) Narain, P., Sharma, S.D., Rai, S.C. and Bhatia, V.K. (2004). Estimation of socio-economic development in Hilly states. Journal of the Indian Society of Agricultural Statistics58: 126-135.
11) Panchamuchi P R (2001) North, South Divide Karnataka's Development Scenario, CMDR Monograph No. 21, Centre for Multi-Disciplinary Development (CMDR), Dharwad, Karnataka.
12) Sharma, A., Dhakre, S.D. and Sharma, R. (2008). Inter-District Disparities in Socio-Economic Development in Nagaland. Productivity, 49(2): 196-200.
13) Vyasalu Vinod and Vani B.P. (1999): "Development and Deprivation at District level –Human Development in Karnataka" in Srinivas Gowda M.V. and Nanje Gowda (ed.) Economic Envelopment of Karnataka: Leading Issues, (Bangalore: Local Advisory Committee, 81 Annual Conference of the Indian Economic Association).