CHAPTER 2

REVIEW OF LITERATURE

Review of Literature on public Expenditure on infrastructural development

- Gayithri, K (1968) in her thesis entitled Growth and Pattern of State Expenditure - A Case Study of Karnataka opines that there was considerable amount of growth in the expenditure in Karnataka even after accounting for price and population factors. Expenditure growth was much faster than that of the State Domestic Product (SDP). Even within categories like revenue and capital accounts, a big chunk was in the nature of government consumption comprised of wages, salaries and pension to government employees. These trends cast a doubt on the usefulness of government expenditure in achieving economic growth. Hence there was a need to rationalise the expenditure policy.

- Thimmaiah (1977) analysed the growth and pattern of Karnataka state government expenditure during the period 1957-58 to 1977-78. The study classified the expenditure under five important categories, viz., and expenditure on police state function, merit goods, economic infrastructure, social welfare and lastly, production. The study has tested the applicability of Wagner's law of increasing state activity and Johnson's behavioural hypothesis of public expenditure in case of Karnataka and found that neither of them operates in case of Karnataka. However, this work does not proved further into the factors governing the growth and pattern of government expenditure and the impact of expenditure on the state economy.
Singh (1983) has attempted to observe the expenditure pattern in Bihar state during 1947-48 to 1974-80. The study has analysed the trends and patterns of government expenditure under development and non-development expenditure in Bihar. But the study has not gone beyond presenting the trends to assess the impact of government expenditure in Bihar. An important factor left out by the study is the classification changes brought about in budget heads during 1961-62 and 1974-75 which makes the time series data non-comparable. The classification changes if ignored would give scope for absurd results. According to 1974-75 classification changes, the title of expenditure head 'Famine Relief' was changed to 'Relief on account of natural calamities'. The study which does not take note of these changes has given the expenditure pertaining to this category under two different heads, 'Famine Relief' for the period till 1973-74 and 'Relief on account of natural calamities' as a separate column for the later period. Similarly prior to 1974-75, the expenditure pertaining to roads and bridges, housing, etc, which were shown as part of 'public works' head, were later furnished under separate major heads from 1974-75. The author, unaware of these changes, shows a decline in the share of 'public works' category. Taking the 'public works' category as one series without accounting for such changes has skewed the results.

Gowda (1988) has examined the impact of public expenditure of Karnataka state on the growth process vis-a-vis the effect of growth on public expenditure. The author has made use of 'macro-dynamic technique' to study the growth process and analyse the interdependence between growth and the budget components. An examination of allocation of public expenditure among different sectors during the period 1960-61 to 1977-78 has led the author to conclude that the allocations were motivated by political considerations and hence the state's economic growth was affected by such decisions.
• Dadabhavi and Bagalakoti (1994) constructed composite indices for health status and health infrastructure for the year 1976-77 and 1992, using indicators like Health Status Index - Infant mortality rate (urban, rural and combined) and Life expectancy at birth. For Health Infrastructure Index, they used Number of hospitals and dispensaries (per 1000 sq.km and per lakh population), Number of beds per lakh population and Number of primary health centres and sub-centres per million populations. They found that in regard to health status and health infrastructure the gap between rural and urban is declining. This is evident in the case of states like Kerala, Punjab, Maharashtra, Andhra Pradesh, Gujarat, West Bengal, Rajasthan, and Uttar Pradesh. Further, Assam and Karnataka show positive trends. In Bihar, Orissa and Madhya Pradesh the gap has not declined considerably. The study indicated that: (1) Government should play a major role in improving the health of the people. (2) Spending on health infrastructure will have a more positive impact on health status. (3) Expansion of investment on health infrastructure in rural areas in general mid rural areas of backward regions in particular will reduce the rural-urban as well as inter-state disparities in health status. (4) Universalisation of education, especially female health education will not only improve health status but will also help to solve other socio-economic problems. (5) Higher investment for overall and accelerated development is necessary to improve the capabilities of the people and capacity of the government to allocate more funds for health programmes.

• Panchamukhi (2000) found low coefficients of correlation between government deficits and expenditures on education and health. This implies that when the central government or state governments increased total expenditures, those for social service expenditures increased only a little. However, he also found that social service expenditures declined as governments sought to reduce fiscal deficits during economic reforms.
• Bhatt R (2000) estimated that public expenditure on health, in Karnataka. He conclude that, some areas has poor health outcomes due to unregulated private sector and high prevalence of Communicable diseases in those areas, the inaccessibility of public health facilities, The long waiting period and the delays caused due to non- availability of services under one roof, the bribes which need to be paid. This prompts the people to seek private Health Care Services.

• Tilak (2002) found that public expenditure on education in India experienced rising trends in the 1960s, followed by a steep decline in the 1970s, and then a slow and steady increase in the 1980s, followed again by severe cuts in the 1990s. Such serious fluctuations may not ensure building a strong and sustainable education edifice. The study reiterated the Kotari commission’s recommendation for 6 per cent GDP to be spent on education as against the present outlay of 3.5 per cent.

• Somannavar (2003) constructed the principle composite index for health infrastructure for the year 1960-61, 1970-71, 1980-81, 1990-91 and 1999-00 for districts in Karnataka using the variables like, number of government institutions per lakh population, number of medical institutions per 1000 sq. km. area, number of PHCs and PHU’s per 1000 sq. km. area, number of beds per lakh population, number of sub-centres per lakh population, number of physicians per lakh population and number of health workers per lakh population. The study observed the reduction in inter-district disparity from 1961 to 2000. Further, health infrastructures and its impact on health status has been analysed with the help of a two-variable regression analyses. Indicators of health status are CDR, IMR, and LEB. His study found the development of health infrastructure having positive impact on the health status of the people.
Chakraborty (2003) examined the impact of social sector expenditure on human development across countries in a multivariate framework. His study selected four major countries in South Asia, namely Bangladesh, India, Pakistan and Sri Lanka. The sample included Australia, Canada, Norway, Sweden, United Kingdom and United States to represent countries with high HDI and GDI; China, Indonesia, Malaysia, and South Korea to represent Asian Countries outside South Asia, and Gambia to represent countries with low HDI and GDI outside South Asia. The data analysed related to the years 1993, 1994 and 1995. Using fixed effects model of pooled least squares for the early 1990s, the analysis of link between per capita expenditure on health and education and Human Development Index (HDI), revealed that there is a positive functional relationship between the two. The per capita income, though found significant in determining human development, is not a sole factor, which leads to human development. The study also estimated coefficients of pooled least squares revealed that per capita spending on education and health have relatively stronger impact on human development than growth in per capita income per se. The same were results when HDI (Human Development Index) was replaced by GDI (Gender Development Index). This result reinforces the view that, public expenditure on human capital formation gets transformed to desired objectives of better human development in general and gender-sensitive indicators in particular, despite the constraints of intra-household disparities in resource allocation. In other words, the public policy stance plays a crucial role in human development.

Chandrasehkar (2006) attempted to bring out the contribution of public expenditure on education to economic growth. The study reveals that the growth of public expenditure on education is brighter in nominal terms, but not so in real terms. Public expenditure on education and national income are positively correlated. The study also predicted that,
had the public expenditure on education been 6 per cent of national income, its contribution to national income would have been Rs. 97244.307 at current prices and Rs. 50786.986 at constant prices. The CAGR of public expenditure on education is estimated at around 12 per cent and 5 per cent at current and constant prices respectively. He concluded that the CAGRs of public expenditure would generate an equal CAGR of national income both at current and constant prices. He suggested that the government should allocate adequate funds (at least 6 per cent of GDP) to education in order to realise the targeted increase in the rate in growth of national income.

- Ghosh (2006) inferred, in his study on India, that while the disparities in per capita income among the states are increasing, the disparities in social development are coming down, pointing to the importance of public social sector expenditure in achieving human development.

- Joshi (2006) using the data from the year 1986-87 to 2002-03, found that social sector expenditure as a share of combined (centre and states) budget increased during the reform period. In case of the central government, social sector spending increased considerably after 1990-91. Whereas the combined social sector spending of all 25 states share decreased during reform period. Education expenditure of the Centre as a share of GDP increased, while that of states decreased until 1996-97. But the implementation of mid-day meals programme resulted in considerable increase in the expenditure on elementary education after 1997-98. Thus, with the exception of expenditure on elementary education, expenditure on all other sub-sectors suffered. In case of health, centre’s spending as share of budget and GDP increased significantly, while that of the states decreased. The study rightly advocated immediate and sustained steps from the government to improve the condition of education and health.
Rawat, Agarwal and Dev (2006) examined the revenue and capital expenditure of Centre, states and union territories in India from 1986-87 to 2002-03, and plan outlay of health and family welfare from the first to tenth plan. The study indicated that although, the government has made much effort in providing health to the people since independence, a lot still needs to be done. The government should not only increase expenditure on health and family welfare but also improve the quality of services provided, in order to have an efficient and healthy society.

Review on Infrastructure and Regional Development

- Shah (1970) "Over All Summary: Infrastructure For The Indian Economy." He studied the pattern and level of infrastructural facilities inherited by India on her independence and the trends during the first fifteen years of planning (1970). He also attempted to relate the level of per capita income of Indian States with their level of infrastructural development and suggested that a strong correlation exists between them.

- Rao Hemlata (1977) “Identification of Backward Regions and the Trends in Regional Disparities in India” This study undertaken by used twenty four indicators representing the sectors of agriculture, industry, banking and education for analysing the trends of regional disparities and for the identification of backward regions.

- Dieter Biehl (1980) “Determinants of Regional Disparities and the Role of Public Finance” He tried to determine the factors responsible for regional disparities within different European countries (1980). Comprehensive tests regarding the role of public infrastructure in explaining regional disparity were conducted for Germany with 1970 data. It was observed that when infrastructure inputs were used as explanatory variables in explaining variations in regional per capita income (PCI), then the 9 adjusted co-
efficient of determination (R2) varied from 0.4 to 0.5 and were significant at 5 per cent levels. This indicated that regional disparities in development levels measured by PCI could be explained by variation in levels of public infrastructure. 2. In an attempt to estimate the general productivity of infrastructure

- Chand and Puri (1983) “Regional Imbalances and Inequalities in India” in their study discussed the problem of regional disparities in the world and provided the experiences of developed and developing countries with special reference to India. The main objective of this study was to show the concern of the plans over regional disparities and balanced regional development. In addition it showed inter-state disparities in terms of per capita income, industrial growth, transport, communication and developed banking facilities. To obtain an overall view of interstate disparities it combined indicators and formed a composite index of development. The study also enquired as to whether the industrial licensing policy of the government of India and the policies of the financial institutions and commercial banks actually helped in reducing regional disparities.

- Tewari (1984) "Economic Infrastructure and Regional Development in India" He examined the interrelationship between economic infrastructure and development and tried to identify the role of the former in the latter through analysis of state level data at two time points – 1970-71 and 1980-81(1983). The result suggested that in 1970-71 six states had both higher levels of infrastructure and higher levels of development, while five states had both lower levels of infrastructure and lower levels of development. He also used a regression analysis to express index of economic development as a function of index of infrastructure and contribution from each of the primary, secondary and tertiary sectors. It was found that co-efficient of the infrastructure index was significantly positive and had the highest magnitude among the four variables. He concluded that
economic infrastructure has a substantial positive effect on economic development of India. In his publication of 1984 he looked at inter-regional disparities in levels of development in Indian context and commented that there existed a perpetual gap between the developed group of states and the developing states. According to him, an inadequacy of existing infrastructural facility seems to be the major obstacle in the path of progress of the developing states.

- B.M. Joshi (1987) analysed the magnitude and trends in interstate disparity in infrastructural development over the period 1961-86. He took the state as the unit of analysis. A broader view of infrastructure was taken and all basic economic and social services were included under infrastructure. Power irrigation, transport, banking health and education were taken as items of study under infrastructure. A total of 12 indicators have been selected for the purpose of the study. The study used only limited number of indicators. It will not provide integrated picture of the reality.

- C.K. Degaonkar (1990) makes an attempt to assess the process of regional growth- the growth poles and growth centres, their emergence and their role in the development of regions. He also attempts to identify the backward pockets of Gulbarga district in Karnataka. It is an attempt to develop a conceptual framework of a district plan in multi-level planning structure. He uses secondary data for his study. The regional development within the district economy is analysed with the help of 22 socio-economic indicators. The analysis is done at four points in time 1971-72, 1976-77, 1981-82, and 1985-86 to get a comparative picture of development. His analysis is purely on the basis of secondary data. But the non-availability of the data in respect of many comparative indicators for a period earlier than 1971-72 was a major problem.
• Dadibhavi (1990) In his project report the author try to study the extent of inter-state disparity in the infrastructure development in India also examine the disparities converging of diverging over time and relationship between infrastructure and economic development by using 27 development indicators and constructs a) physical infrastructure index (10), b) financial infrastructure index (7), c) social infrastructure index (10) in seven major states of India in the period of 1970-71 to 1984-85. The major findings of the study is a) disparity in distribution of economic infrastructure increased among the states up to eighties and thereafter showed some sign of decline in disparity, b) the regional disparities in the spread of socio economic infrastructure facilities widened between 1970-71 and 1980-81 and thereafter the variations fluctuated around the disparity found in the year 1970-71, c) the role of infrastructure in economic development is examined thought correlations and multiple regression. Out of 27 infrastructure variables selected 13 variables show positive significant association with per capita State Domestic Product (SDP).

• Dietmar Rothermund (1991) analyses the regional disparities in India by taking certain social and economic indicators of development. He uses census data of 1971 and 1981 for the comparison. He examines six economic indicators and five social indicators and construct their respective ranking scales and makes comparison between this. Final relative positions of states are determined through the summation of individual ranks. The study considers only 15 states for comparisons and it is not multi-dimensional. Moreover, the degree of Interregional disparities is not identified.

• Choudhury and Roy (1992) “Inter-state and Intra-state Variations in Economic Development and Standard of Living” in her paper examined in particular the sources of growth and factors affecting growth and structure at the state level for understanding
regional variations in levels of economic development and the standards of living of the people. The measured interstate disparity in terms of state domestic product (SDP) and per capita household consumption expenditure gives an idea about the economic status of the states and standard of living of the people. She also made comparisons of ranking of states on the basis of per capita income and per capita consumption expenditure. The comparison gives an idea about standard of level of consumption of the people and level of disparity between the states.

- Dadabhavi and Bagalkoti (1994) “Inter-state Disparities in Health Status in India” in their study explained disparities in terms of health indicators. It covered the period from 1976-78 to 1990-92 and took major seventeen states for the analysis. They analysed the impact of per capita income, availability of health infrastructure, literacy rate, public expenditure on the health status of the population and the analysis of the study revealed that disparity across states is increasing and is shown by rising coefficient of variance. He emphasized on government role, expansion of investment on health infrastructure, universalization of education especially female education in rural areas of backward regions for the reduction of regional disparities in health.

- Sarker (1994) made an assessment of the strategies and policies adopted by Planning Commission in various plans for reducing regional disparities. He also provided a brief literature of studies and theories on regional economic problems and examined disparities in the socio-economic development of states and in their plan outlay with the help of coefficient of variation and average Euclidean distance. This study was confined to fifteen states and covered a period of twenty seven years from 1960-61 to 1986-87 and took fourteen indicators for the study of imbalances. It also showed a strong relationship between the development of states and amount of per capita plan allocation which grew
stronger over the years of the plan periods and studied the structural changes in the patterns of development in different states by employing cluster analysis (grouping the states into based on similarity in development process) and principal component analysis (rank the states in accordance with the composite index of development).

- Manish Shanna and Renu Gupta (1995) made an attempt to identify the inter-regional disparities among the states in India. They are considering economic development synonymous with industrial development. In their analysis they use 1) output indicators 2) Employment indicators and 3) Infrastructural indicators. From the individual ranks of various indicators, they determined the composite index of development. This study shows that state of Madhya Pradesh belongs to relatively backward state excluding the indicator related to power development. The study also examines inter regional variation in economic development within the state. This study is considering only very limited number of indicators.

- Das and Barua (1996) “Regional Inequalities, Economic Growth and Liberalization: A Study of Indian Economy” examined several dimensions of regional economic disparities among twenty three states over the period of 1970-92 by Computing Theil’s index a measure of inequality. They showed trends (linear or non-linear) in regional disparities in terms of SDP (state domestic product), agriculture, manufacturing infrastructure and service sector and found that interstate disparities increased in almost all the sectors. They also explained non-linear relationship between regional inequality and per capita income. A very important conclusion of this study was related with radical policy reforms (radical departure from the previous policies of concentrating the efforts of green revolution only in a few regions of northern India and adopting policies towards
horizontal expansion across all the regions) which could give priority to agriculture, services and unregistered manufacturing for the reduction of inter-regional inequality.

- Gayitri (1997) "Role of Infrastructure in the Industrial Development of Karnataka: A District Level Analysis" She studied the role of infrastructure in the industrial development of Karnataka at the district level and commented that the effects are quite significant. The interlink between the infrastructure and industrial development in the state with district as the unit of comparison is highlighted. She concluded that the high positive correlation observed in the case of Karnataka between the infrastructure and industrial development highlights the need for the availability of adequate infrastructure facilities in promoting industry.

- Ghosh and Prabir (1998) in this paper the researcher study to understand the role of physical infrastructural facilities and planning on regional income determination in Indian states since independence and mainly concerned with the level of income differentials rather than growth, they use OLS regression for testing of hypothesis and use the principal component analysis for the data analysis in the period of 1961-62 to 1994-95 and conceder 19 major states of India. The main two findings of the study is 1) regional disparity has been rising in recent period and plan outlay has not played any major role in this regard. 2) Regional imbalance in physical infrastructure has been found to be responsible for rising income disparity across the 19 states.

- Canning (1999) “Infrastructure’s Contribution to Aggregate output” In his he used an aggregate production function approach incorporating labor, physical capital, human capital (education ) and other infrastructure variables namely, number of telephones , electricity generation capacity and transportation. The panel of annual cross country data (82 countries) for the period 1960-90 has been used in the analysis. Using, a simple least
square regression analysis, the author finds that the elasticity of output with respect to physical capital is around 0.37. For human capital in the form of education the elasticity was found to be around 0.1, which is substantially lower than that estimated by similar kind of studies. Regarding infrastructure, it was found that there was no significant impact of electricity generating capacity, or transportation infrastructure on the agricultural output. It should be noted that a large impact was realized when increasing the telephone stock and removing an equal amount of investment in other physical capital, in the model. This result suggests that there is a large externality to telecommunications infrastructure and this result was found to persist when the sample was split into developed and less developed countries. The implication of this study is that investment in some of the specific infrastructure would increase the productivity manifold.

- Ahuluwalia (2000) “Economic Performance of States in Post- Reforms Period” in his study emphasized on the importance of economic performance of the states and examined data by using Gini coefficient. He compared pre reform and post reform periods and analysed the performance of states in terms of per capita income, literacy, level of infrastructure, poverty and private investment during the post-reform period and compared it with performance in the previous decade. The study found that disparities increased more in the growth rates of states in the post reform period as coefficient of variation of growth rates increased from fifteen percent in the 1980s to twenty seven percent in the 1990s. He also explained reasons for the superior performance of some states which in turn helped to expand success from one state to other state and identified policy measures required for increasing growth in the poorer states. The paper noted accelerated growth in the richer states and decelerated growth in the poorer states in the post reform period. The study suggested some policy implications under which growth
potential of states can be determined in terms of factors such as investment growth, literacy level, quality of infrastructure, policy environment and governance.

- Kurin (2000) In his article the author analyze disparity in terms of demographic indicators, female literacy, state domestic product and poverty, development and non developmental expenditure by state government, investing banking activities and level of infrastructure development. he use only few infrastructure facilities like consumption of power per capita, registered vehicles per 1000 person, telecom lines per 1000 persons, percentage of irrigated area in gross cropped area. The author analyze regional disparity in infrastructure development in major 15 states in India by constructed the composite index of infrastructure development.

- Chandrasekhar and Ghosh (2003) “Per Capita Income Growth in the States” analysed the trends in aggregate net SDP (state domestic product) and per capita net SDP (state domestic product) among the states and ranked the states over the decades of 1970-71, 1980-81, 1990-91 and 2000-01. Analysis showed that inequality increased dramatically in nineties and it also increased during 70’s and 80’s but not very speedily. In this study states were ranked in terms of human development and showed increasing regional disparity in human development.

- Dholakia (2003) “Regional Disparity in Economic and Human Development in India” in his paper examined the trends in regional disparity in India’s economic and human development over the decades of 80’s, 90’s and 2000-01 and found that per capita income did not show any significant trend in regional disparity over the last two decades while social and human development indicators showed a falling trend in regional disparity. The study showed a marked decline in regional disparities in the social and human development indicators during 1981-91, while in nineties regional disparities
showed mixed results, as it increased in terms of poverty and decreased in terms of death and literacy rates. The study emphasized on reducing the regional disparities in economic and human development by discussing the recommendations of the Planning Commission and Finance Commission. He also examined the casualty between economic and human development.

- Khan (2004) “Infrastructure Development” in his study highlighted the relationship between infrastructure development and economic development of a country. Infrastructure development may affect production and consumption directly and create many positive and negative externalities. Therefore, it is essential to look at the relationship between infrastructure and economic development process. Further, study presents the impact of infrastructure on economic growth and quality of life. Infrastructure has strong forward and backward linkages within the economy. It affects economic development process both at production and consumption level. In the case of production, it contributes to economic growth in various ways such as reduction of input costs, increasing the productivity of other factors like capital and labor providing more job opportunities and attracting foreign and local investment; at the consumption level, it contributes to the quality of life of households by providing clean water, sanitation, electricity, transport and communication facilities which increase the real income level of households on the one hand and to help to reduce environmental pollution on the other.

- Rai and Bhatia (2004) In this paper authors evaluate the level of development in agricultural, industrial, infrastructural and over all socio economic sectors for different districts of Assam and has been made estimated with the composite index based on 48 developmental indicators in the year 2001. The major findings of the study are there is
a positive and significant association between the development in agriculture and socio economic fields. Wide disparities in the level of development have been observed.

- Ghosh and Prabir (2004) In this paper the researchers investigate the role played by various types of infrastructure facilities in determining the level of economic development across Indian states in the period of 1970-71 to 1999-2000. The major findings are interstate disparity in physical, social and financial infrastructural facilities have remained at high level over the same period and physical and social infrastructure facilities highly significant factors determining the interstate level of development, while financial infrastructure dose not play clear role.

- Rajashi Mujmder (2005) In this paper they examine the relationship between infrastructural availability and development at district level and trends and patterns by using a multidimensional approach with sub-sectoral, sectoral and composite indices development and infrastructural availability in the period 1971-2001. In this study they observed significance association between infrastructure and development levels. The findings suggest that identification of specific of different regions, cost-benefit analysis, followed by infrastructural expansion one major plans of balanced regional development. the major findings of the study is there has been noticeable rise in levels of infrastructure and development during the study period, regional disparities have increased in the post-SAP period indicating that perhaps this era has rewarded the better-off regions and neglected the weaker once.

- Dadibhavi and Bagalkoti (2006) “Reforms and Regional Inequalities in India” estimated the trends in inequalities in the levels of income and growth of the major seventeen states of India during the post-reform period by using the coefficient of variation method. The estimation revealed disparity in the level of state incomes especially in the reform period
and these income inequalities have increased as revealed by the increasing value of coefficient of variation. Different measures of convergence and divergence were estimated to measure the regional disparity. The study emphasized on attracting more resources, creating an enabling environment such as overall investment, investment in agriculture, improvement in basic infrastructural facilities like transport in backward states and upgraded governance.

- Benni (2007) In his paper the author analyze the quantify regional infrastructural development disparity among the districts of Karnataka state and to rank the disparity on the bases of composite development index and to know the states of development among the north and south districts of Karnataka state.

- Raychaudhuri and Halder (2009) They calculate inter district disparity among the 17 districts of West Bengal state and then highlights the disparity in physical and social infrastructure development among them by using rank correlation to gives rank sufficient hints about the casual relation between the per capita income and infrastructure. The findings of the study show that rising disparity among the districts in the first half of the present decade after a continuous decline in the last decade of last century. Physical infrastructure has a greater influence on income distribution among the districts than social infrastructure.

- Shiddalingaswami and Raghavendra (2010) In this paper the authors analyze the trends and pattern of per capita income of Karnataka with special focus on district and division level disparities and also study the relationship among and between per capita income, human development, workforce and work participation rate from 1991 to 2007-08. The major finding of the study is social overhead capital (SOC) is key factor in promoting higher and economic development, which will reduce the regional disparity.
• Aditya Patra and Arabinda Acharya (2011) They study the regional disparities in infrastructural facilities across 16 major states of India analyze its impact on regional economic growth by using the simple multivariate method to compute a composite infrastructure development index (CIDI) by combining various infrastructure services available at state level and analyze the it effects on economic growth by using correlation matrix and path regression analysis. The finding of the study is there is a positive relationship between infrastructure development index (IDI) and per capita net state domestic product (PCNSDP) and negative relationship between IDI & Poverty.

• Ohlan (2012) “Pattern of regional disparities in socio economic development: District level analysis” In this paper the researcher study the problem of disparities in socio-economic development at the district level in India using the Wroclaw taxonomic technique based on 43 selected socio-economic development indicators, these indicators spread into three sectors like agriculture, industry and infrastructure facilities and constructed socio-economic development index. On the base of this index districts are classified into four development categories. The index shows that India’s southern region is far more developed in comparison of central and north regions. The result show that wide disparities in the level of socio-economic development exit among different districts within and between different regions of India. The level of development in infrastructural sector is found to be positive and statically significantly associated with over all development.

Reports

• Nanjundappa Report (2002) The high power committee on redressal of regional imbalance popularly known as Nanjundappa committee submitted its report in June 2002. The committee on the basis of 35 socio-economic indicators assessed the level of
development of 175 taluks in the state. These indicators are spread over five sectors like agriculture, industry, economic infrastructure, and social infrastructure and population characters, taking the state average of development of these indicators as the benchmark equal to one. The committee prepared a comprehensive composite development index (CCDI) with appropriate weights and identified 114 taluks as backward talukas. These taluks were farther classified into three groups, most backward, more backward, and backward based on the value of the comprehensive composite development index (CCDI). those with the values ranging from 0.52 to 0.79 as most backward, 0.80 to 0.88 as more backward, 0.89 to 1.00 as backward. On this range the committee found that 39 most backward, 40 more backward and 35 backward talukas out of 175 in the Karnataka. Among the 39 most backward talukas 26 in north karnataka and 13 in south Karnataka.

- The “Indian infrastructure report” 2003 focus on how public expenditure allocation in the context of infrastructure services has been made so for and who is accountable for such expenditure and also focusing on evolving criteria for the allocation of funds as per the recommendation of central finance commission and state finance commissions to strengthen decartelization efforts and the relationship between state and urban local bodies in then expenditure process and manner in which grants are made and utilised.

- “Report of the committee for evolving a composite development index of states” in this the committee use general method for allocating funds from central to states based on both states development needs as well as its development performance. The states need is based on a simple index of (under) development. The index includes ten sub components like education, health, household amenities, poverty, connectivity etc. Among these some components are related to infrastructure facilities.
The report “The contribution of infrastructure to regional development” investigates the contribution of infrastructure to regional development in 141 regions in European communities. The study group allows to estimate quasi production function that can be used to quantify the contribution of infrastructure and other factors to regional development in terms of income, productivity and employment.

All these studies have found the glaring disparities between the states of India, districts and taluks of Karnataka. They also found positive and significant relationship between economic growth in terms of GSDP, Per-capita income with the sector-specific indices sought in the studies. The major finding of some of these studies was social and economic infrastructure which played as a key factor in promoting economic development by reducing the regional disparities.