CHAPTER – II
REVIEW OF LITERATURE
2.1 Introduction:

There are stream of literature dealing with various aspects of infrastructure. However, literature related to infrastructure and regional disparities are rather limited and it is partial in the sense that they have not covered certain aspects of the social-infrastructure and backwardness. The complexities of socio-economic issues in development of region have been rarely examined. Hence, in this chapter an attempt has been made to capture the previous literature on infrastructure, resource allocation and investment in education, social infrastructure, education and development, education and policies, and regional disparities.

The available literatures have been addressed the following issues and dimensions;

- Theoretical Issues
- Infrastructure and Regional Disparities
- Investment in Education
- Education and Development
- Education and Policies

2.2 Theoretical Issues:

In the earlier theoretical coverage many scholars have put forth their ideas in the field of infrastructure provision and its impact on economic development. Literature about the importance of infrastructure and its requirement in the development of an economy were presented by development economists like Albert Hirschman (Hirschman A.O, 1958). Hoffman (Hoffman W.G, 1958), Lewis (Lewies, 1954), Nurkse (Nurks, 1954), and W.W. Rostow who have expressed their opinion as infrastructure is a pre-condition for economic development and the regional growth theories have inter related theories on location aspect of development and their link with availability of infrastructure in that region or locality. Many scholars observed that development occurs unequally based on the availability of the geographical infrastructure. Hence, variations in geographical incidence and manmade infrastructure facilities will have significant impact on development of that region.
2.3 Infrastructure and Regional Disparities:

The following available literatures have been expressed the relationship between infrastructure and regional disparities.

Shenggenf and Ravikumar, have attempted to analyze the regional disparities in china. Time series data has been used and log linear regression models have been use to examine, special the disparity issues since 1949. They have provided an outline for equitable educational development of China. According to the authors the three important elements of balanced development are infrastructure, social investment and government reforms (Shenggenf & Ravikumar, 2011).

Shunfongsong, George S.F Chu, Rongquing CAO have also examined the regional disparity in china. By using 1985 and 1991 time series data, authors developed a linear regression model to explain the extent of regional disparities. Authors found that between 1985 and 1991 the disparities in china have been widened. The major factors responsible for widening disparities are historical and geographical features of the regions. Hence, they have strongly advocated for investing more in education and environment to reduce regional disparities. (Shungfongsong, S.Fchu, & CAO, 2000)

Buddhadeb Ghosh and Prabirde examined the linkages between infrastructure and regional disparities in India. Authors have tried to develop a planning for globalized India. Authors have used time series data and developed long-run linear relationship regression models to estimate the determinants of state level development and interstate variations. Authors identified that there are differences among the states of India in terms of development indicators, authors have proved that economical and social infrastructure have significant influence on state level development and this lead to interstate disparities (Ghosh & De, 2005).

Antle undertook a cross sectional study of under developed countries. Author has used the Cobb Douglas production function and found a positive relationship between infrastructure and aggregate agricultural productivity. Author concluded that transport and communication infrastructure contributed to the expansion of aggregate agricultural productivity across a sample of 47 under developed countries (Antle, 2003).
Niaz Asadullah M and Gaston Yalenetzky have analyzed the trends in educational opportunities in India. Authors, by using time series data for period from 1983 to 2004 have tried to estimate the extent of inequalities in educational opportunities. According to authors, inequality educational opportunities have been reduced in globalized India. However, there are significant disparities across the states of India. (Asadullah & Yalenetzky, 2011).

Jocelyn A. Songco has points analyzed that rural infrastructure investments help to raise the economic status of the rural poor through increased income and improved consumption levels (Songco, 2006).

Lars Hendricks Roller and Leonard have examined that cross country study on telecommunication industry proved that economic productivity increases at an increasing rate with the density of the telecommunication network. According to authors not only does higher infrastructure spending result in higher income growth, the latter might indeed lead to a more intensive use of infrastructure facilities, with the possible consequence of a rapid deterioration of facilities (Roller & Waveman, 2001).

Tommaso Agasisti Josh M and Corderoferrera examined that the disparities between Italy and Spain, in terms of students’ achievements and factors responsible for the achievements of students. Authors have conducted a multi level analysis by using OECD data with the help of hierarchical linear model and base line models. Authors found that both countries are affected by strong internal regional heterogeneity, where some regions have achievement scores well above the OECD mean and other are placed among the worst performers in the OECD area. Although, regional governments are more autonomous about educational policy making in Spain, regional indicators exert a higher influence on educational results in Italy where educational system is strictly regulated by the national government (Josh & Corderoferrera, 2013).

The effect of subsidies on the regional disparities has been explained by Yukoshindo by using overlapping generation (OLG) model. The author attempted to estimate the effect of education subsidies in regional the economic growth and disparities in china. It has been found from the study that the increase in government subsidies for education promotes individual investment in human capital and economic growth is accelerated. Differences in productivity exit between the regions over time, the growth gap widens with over increase in subsidy rate (Yukoshindo, 2010).
Ben Meade has analyzed the achievement disparities in primary schools. Author have used multiple regression and case study analysis .according to author rural students currently have access to primary schools, there are large differences in the levels of learning that take place among different population and different context. It has been found from the study that there are relatively strong levels of disadvantage connected to attending rural schools in poor communities and that this disadvantage can be linked to both contextual and structural elements (Meade, 2012).

According to the analysis of Hirschman, infrastructure matters for regional disparities (Mathur, 1973). Many organizations institutions like World Bank, UNDP and others have been publishing on different aspects of infrastructure and need of them for development. The world development report, 1994 emphasized on the issue of infrastructure with the name infrastructure for development (Bank, 1994). UNDP has been publishing human development reports since 1990 have thrown light on the importance social infrastructure for development. Infrastructure Development in India reports has discussed extensively the role, impact of various infrastructures in India. Other than these important reports individual researchers and scholars also contributed to the stock of literature on infrastructure and related issues and some of them have reviewed according to the needs of the present study.

Gowda and Mamatha have highlighted the role and prospects of Indian infrastructure development (Srinivasagowda, B.M.V, & Mamatha, 1997). They stresses that the pay off from better infrastructure brings a strong positive relationship between GDP and infrastructure stock per-capita (GOI, 1980)

Chakravarthy worked for planning commission in connection with the identification of backward region and it is a relative study of infrastructure backwardness. They viewed the problem of backward was a multidimensional and suggested the criteria to know the backward regions. The national committee made a study on the backward areas. The committee has identifies six types of backward regions, which required different type of infrastructure importance of private investment in infrastructure development (Chakravarthy, 1981).
Somik V. Lac (1999) critically analyzed the relationship between public policies and regional economic growth. The major insight of Somik’s review of regional development is that a single incentive or developmental activity cannot lead the success. The author analyzed the efficacy of public infrastructure investment in the development process (Lac V, 1999).

Anitabh Kundu Soumen Bagehi – Debolina Kundu are of opinion that state wise disparities in the level of urban amenities were extremely high in the nineties. Further authors argued that government and parasitical institutions have not exhibited sensitivity in favor of backward statistics infrastructure (Amitab Kundu, 1999).

M.S. Bhatia attempts to build a composite index of rural infrastructure and examines the relationship between infrastructure development and the level of production and growth in agriculture (M.S.Bhatiya, 2000).

In the article entitled “Infrastructure Development in India Current Issues and Future Options” Chandan and Vipin have made considerable effort to analyze the development in infrastructure sector. According to the author infrastructure is absolutely critical for India’s economic growth and for sustainable development. In recent years, there has been some shift in the government approach towards infrastructure development. The infrastructure services which have been predominantly the responsibility of the state, participation of the private sector has also seen encouraged in selected sectors like transport, power, communicates etc. provision of quality infrastructure is a crucial prerequisite for sustainable growth (Chandan & K.P.Vipin, 2010)

Sulthan and Mohideny have attempted to correlate between infrastructure and economic development. According to author, a second policy is needed for infrastructure development in the country. The thought of infrastructure policy is to create a sound regulatory framework. Private firms would operate in this regulatory environment and produce infrastructure services. The aim for regulation is to protect the interest of the customers, obtain condition and competition develops the institution frame work. The ultimate goal of infrastructure policy is to effectively deliver infrastructure services of high quality and at low prices, to house hold and firms in country. The success of policy in infrastructure must be judged by the quality, quantity and prices that end users are change for the services. Thus, India’s economic
growth is related with its infrastructure development and there is a strong positive association between the two previsions of sufficient and quality infrastructure is very essential for India to expand its sustainable growth (Mohideny & Sulthan, 2009).

Rama Baru and others have attempted to analyze the inequalities in access to health services based on caste class and region factors. According to them, Despite India’s impressive economic performance after the introduction of economic reforms in the 1990s, progress in advancing the health status of Indians has been slow and uneven. Large in equalities in health and access to health services continue to persist and have even across states, between rural and urban areas, and with communities. Socio-economic in equalities manifest in caste, class and gender differentials, and inequities in the availability, utilization, and affordability and health services” (Baru, Acharya, Acharya, Shivakumar, & K, 2010).

Sapna Desai attempted to analyze importance of health insurance for good health keeping. According to the author, the Rashtriya Swastya Bima yojana and national rural health mission have the potential to transform the health financial security and poor households. Her experience of Vima sewa indicates that health insurance must be firmly linked to an effective public health system. A high percentage of claims for preventable illness, unnecessary expenditure as medicines, increasing hysterectomies and inequitable claims patterns are four trends that are likely to be seen in the implementation of RSBY. To ensure that health insurance plays its intended role, appropriate investment in prevention, insticularly in water sanitation, as also, county involvement and a strengthened public sector are essential” (Desai, 2009).

Vithob analyzed the Regional imbalances in Karnataka with the emphasis of agriculture development. It is found from this work that regional imbalance has been conceptualized and conceived as having two major dimensions and is viewed in terms of material or physical and social conditions of the existence of people in a region. Karnataka is one of the leading states in the union of India in terms of growth development, but measured in all development indices, it has not been able towards off the problems of regional imbalances” (Vithob B.K, 2009).
Jinkooklee and James P. Smith have raised the issue of inequalities between male and female. By using pilot survey data they have found that there is significant difference in educational attainments between male and female. They also found that parents give more preference to sons than daughters. However, both sons and daughters benefit out of the education of parents (Jinkooklee & James P, 2014).

Junyang, Xiahung and Xinilu have addresses the educational inequality in china. Authors have used gini co-efficient to analyze the educational disparities among various groups. They identified that the recent policies of china for the promotion of educational attainment have significantly made positive impact and these policies have been also, succeeded in reducing educational inequalities. Accordingly, the disadvantaged groups and lower income groups have been benefitted by the policies of government. Therefore, authors strongly suggest investing for educational attainments of lower sections of the society (Junyang & Xinilu, 2014).

Binswanger has conducted a cross-country analysis using annual data collected from 58 countries. Author has found a positive and significant correlation between aggregate crop production and road development and also estimate the effect of public investment in the farm level output supply and input demand (Binswanger, 1997).

Krish Rao Akkina has compared the technology and economic structures, which are similar across countries, where poor countries will have a tendency to grow faster than the rich countries. The author attempts to show that there is substantial increase in demand for electric power in India and the supply though has increased has not kept pace with demand (Akkina, 2007).


The mentioned literature works have been attempted to explain the linkages between infrastructure and regional disparities.
2.4 Investment in Education:

A good number of empirical studies clearly reveal the exiting positive relationship between investment and education. Following are some of the important studies, which explain the positive relationship between investment and education.

Isaac M Ntshoe has analyzed the political economy of access to education and equitable allocation of resources to higher education. Researchers have raised the issue of need for increasing access to higher education for all blocks of South Africa. To address the issue authors have used cross-section data. According to authors there are no meaningful relationship between increasing access to higher education and social justice. It has been found from the study that in South Africa access to higher education has been increased expanded and popularized, but this has not been reflected in ensuring social equity, social justice and social development due to lack of external competitiveness (Ntshoe, 2003).

Konstantions Angelo Poulos, Jim Malley, Apostalis and Philippoulos have analyzed the welfare implication of resource allocation and public education. Authors have used dynamic stochastic general equilibrium model to analyze public education expenditure. They have found that there can be important cyclical effects of different resource allocation policies depending on the operating target used and the degree of macroeconomic uncertainty. The overall welfare effects of resource allocation rules can be significant in the case of a rule based on the difference between the market value of human capital growth and its social planner value. It appears possible to design allocation improving education policy rules (Poulos, Mally, Apostolis, & Philippoulos, 2011).

Mehmet Mercan, Sevgi Sezer have analyzed the effect of education expenditure on economic growth. Authors have conducted co-integration analyses and augmented dickey fuller test to analyze the effect of education expenditure on economic growth specially for turkey periods from 1970 to 2012 .they have found that A positive relation between education expenses and economic growth was found in the Turkish economy for the period 1970-2012.Education expenses in Turkey had a positive effect on economic growth positively. A Greater allocation of resource on education expenses could make the Turkish economy more dynamic (Mercan & Sezer, 2014).
Xuejuan Su examined the endogenous determination of budget allocation and education. Author has used primary and secondary data to analyze the endogenous determination of public budget allocation across hierarchical education stages. It has been found from the study that Overall, it will have quantitative but not qualitative impact on the endogenous determination of allocation polices favoring higher education. In less developed economies, exclusive participation and large schooling expenditure at higher education at the expense of basic education. In developed economies, the budget allocation is more balanced (Xuejuan.Su, 2006).

Mukhopadhaya P has attempted to analyze the income disparity and equality in education in Singapore. Author has used time series data and gini co-efficient to analyze the income inequality and level of education. Author has identified that the academic ability of children is not uniformly represented across different parental educational background groups, with students from favored backgrounds being increasingly represented in the top strata of every cohort. Accordingly, they remain the major beneficiaries of education polices, which perhaps increase the income disparity further. It is concluded that the yearly awards scheme is better than the elusive entrance scholarship for independent schools as the possible benefits acquiring to weather households are limited for the former. The income disparities across educational group have not been a major contributor to inequality. The between occupational disparity has a strong impact on overall inequality (Mukhopadhaya.P, 2003).

Rossidah wan, Abdul Aziz, and Adibah Shuib have addressed the Pareto analysis on budget allocation for different categories of faculties in higher education institution. Authors have used mathematical model to analyze the budget allocation in one of the public universities in Malaysia. They identified that to determine the allocation proportions among three groups and to identify the faculties that have the greatest cumulative effect on university budget allocation. They have given significant insights for the management in dealing with planning budget allocation (Aziz, Shuib, & Aziz, 2013).

George Psacharopoulos has analyzed the value of investment in education. Author has found form the theory that broad overview of human capital theory and presents high- lights of the most recent evidence on the private and social returns to
education. A distinction is made between the narrow social returns, as traditionally estimated in the economics of education literature, and the wide social returns that include externalities. The distributive implications of particular education finance policies are discussed. And also found that the education finance policies most conducive to social welfare are those that give priority to investment in the lower levels of education, including preschool, and the acquisition of general, rather than occupation specific skills (Psacharopoulos, 2006).

Latika Chaudhary has analyzed the taxation and educational development in British India. Author has used cross section data and developed long run regression models to analyze the effects of public investments across Indian districts in the early 20th century. Author found that Public investments in primary education had positive and statistically significant effects on literacy. More public money would have leded to better out comes for male literacy. The colonial educational budget in early 20th century was insufficient to tackle the problem of mass illiteracy even if the entire budget was targeted primary education. To increase literacy the British government would have had to either raise taxes/reallocate revenues from other sources toward education spending. Higher public spending would not have had any appreciable effect on female literacy (Chaudhary, 2010)

Keikajisa M,Venkatesha palanichamy have addressed the effects of investment on education in rural Tamilnadu.Authors have used pooled and panel data to analyze the changing determinants of schooling investment in Tamilnadu.They found from the study that high correlation between children attainment of basic schooling and the households assets for forming disappeared during the mid 1980s,however.even after the mid 1980s the attainment of advanced education is still affected by rain fall and thus by form income, indicating the lack of insurance markets and segregating poor households under agriculturally unfavorable conditions from advanced education. Mean while, the segregation based on gender and adult members education has been disappearing (Keikajisa M, 2010).

Lijing yang Brian Mecall have analyzed the world education finance policies and higher education access. Author used panel data for the period from 1998 to 2009, to analyze international indicators and relationship between educational finance policies and higher education access among 85 countries. It has been found from the
study that Public expenditure per tertiary student bears a negative association with tertiary enrolment ratio, where as GDP per capita and public spending education as a percentage of GDP both have positive effect on tertiary enrolment. For fixed amount of total budget and rising demands for higher education, various nations have reduced spending per college student and drawn on more private resource to expand higher education access (Mecall, 2014).

Lijun Pan examined the impacts of education investment on skilled and unskilled wage rate, inequality and economic development. Author has used four sector general equilibrium models to analyze the impacts of an increase in education capital investment by the government on skilled–unskilled wage inequality and economic development. Author identified that an increase in the amount of education capital investment by the government will decrees the wage rate of skilled labor and increase the wage rate of unskilled labor, resulting in a reduction of their wage gap. In this regard, the government may pay attention to the potential social conflicts and instability when implementing the education investment policy. Some actions, such as subsidies to skilled wage and tax rebates to the urban high-skill industry, may also be taken into account. In addition, the results also indicate that increased education capital investment will lead to a reallocation of the production factors and will not necessarily boost economic development. If the manufactured output value occupies a large share in the national income, and the growing education capital investment leads to the expansion of the manufacturing sector, the increase in education capital investment by the government will stimulate economic development. Therefore, they conclude that the development level of the manufacturing sector plays a crucial role in determining economic development when the government carries out the education policy (Pan, 2014).

P.H.T Schimit L.H.A. Monteir N, Omar examined the education and investment. Authors have tried to develop a model for social evolution on education and investment. They have found that Assume that the households of a country are socially classified according to the monthly total income, and that they can be part of a lower, a middle or an upper class. By using multi-agent systems, here we model and simulate the economic evolution of households which earn a wage pay taxes and invest in education. The return of the education investments monthly added to the salary of the family, and it is function of the corresponding grand total put in
education along the time. When a family is unemployed, consider that it receives cash due to a social program made by the government. The time evolution of the percentages of households belonging to each class is investigated by varying the government investment in such a program of cash transfer and the proportion of employed households in the population. Accordingly, that the government should invest in the unemployed lower class if it intends a growth of the middle class. We also propose and analyze mean-field approximation written in terms of ordinary differential equations. It has found that the model fits real data from Brazil, in the period between 2003 and 2011 (L.H.A & Monter N, 2014).

Malcolm Mercer has attempted to analyze the donor policies, practices and investment priorities in support to education. Author has used time series data to examine the policies, practice and investment support to education. Author found that The Education for All Global Monitoring Report 2011, whilst conceding that considerable progress towards education related goals had been made over the previous decade, reminded us that many challenges still remain. It has been found from a study commissioned by the European Commission in 2012 to examine the policies, practices and investment priorities of bilateral and multilateral agencies in support of education since 2002. The overriding development policy focus has been on poverty reduction and economic and social development; and education policy has been prepared in the firm belief that relevant good quality education for all is a crucial driver of overall development (Mercer, 2014).

Reinoud D. Stoel, Thea T. D. Peetsma, and Jaap Roeleveld have examined the school investment and achievement in elementary education. Authors have used longitudinal data and developed a multivariate model to analyze the relations between the development of school investment, self-confidence, and language achievement in elementary education. Authors identified that the significant differences between the children achievement and development. The increase in language ability and the decrease in school investment correspond with the hypotheses. No hypothesis is formulated about self-confidence, but an increase for some and a decrease for others are found. The hypothesis that development in language ability, school investment, and self-confidence are mutually positively associated is supported, as is the hypothesis that intelligence accounts for some of the differences in language ability. School investment, self-confidence, and intelligence each explain a different part of development in language ability (D.Stoel, D.Peetsma, & Roeleveld, 2003).
Ioana Manafi and Daniala Elena Marinescu have analyzed the influence of investment in education on inclusive growth and its empirical evidence from Romania versus EU. Authors have used cluster analysis to examine the influence of investment in education on inclusive growth. Authors found that influence of the investment in training on others macroeconomic indexes, such as unemployment rate, GDP, lifelong learning, medium wage for the EU countries. Authors compare the indexes from 2008 with the one from 2010-2011 to see how the targets from Europe 2020 strategy were affected by the crisis and to determine which countries are closest to achieve the targets. To reach the EU 2020 targets, Romania has to increase its education efficiency by optimizing the school network and training education managers. The quality of education could also increase if the management of human resources is improved. The Government should invest more in lifelong learning and trainings in order to adapt permanently the workers skills to a changing labor market (Manafi & Marinescu, 2013).

Elwin Tobing attempted to analyze the taxation, human capital formation and private investment in education. Author have used long run endogenous growth model to examine the both public and private investments in human capital and endogenous population growth. It has been found from the study that the growth affects of Indonesian government policy that lowered the capital income tax rate in the mid-1980s. Quantitative analysis of the model finds that the introduction of these two features not only makes economic growth more sensitive to changes in capital income taxation than in models that omit these features, but also produces a relatively high growth rate as observed in the data. Accordingly, that the growth effects of changes in public spending on education are stronger than the taxation. And also found that in the endogenous growth model, public policy aimed at enhancing human capital is more conducive to growth than a physical investment encourage tax reform (Tobing, 2011).

Renuka Ganegodage K, Alicia N. Rambaldi have analyzed the impact of education investment on Sri Lankan economic growth. Authors have used both the neoclassical and endogenous growth model to examine the contribution of investment on education to Sri Lankan economic growth during the period from 1959 to 2008. Authors have found that The impact of education is assessed through a quality adjusted human capital stock measure. The returns to investment in education are
positive but significantly lower than those found for other developing economies. Unlike the case of most developed economies, higher returns from investment in physical capital cannot produce any sizable positive externalities. The war has had the expected negative effect on output, and the results on economic policy changes are inconclusive. The results indicate a need for an appropriate strategy to allocate resources on education to improve its returns to the economy (Ganegodage & N.Rambaldi, 2011).

2.5 Education and Development:

A good number of empirical studies clearly reveal the exiting positive relationship between education and economic development. Following are some of the important studies, which explain the positive relationship between education and economic development.

Swapna, and others have attempted to analyzed, higher education in Karnataka. Authors have opined that despite on impressive growth of higher educational institutions in Karnataka, it is still not in position to meet demands for higher education and number of higher educational institutions and enrollment is not impressive. We need to develop more higher educational institutional and more students enrollment. The major weakness and reasons for the less impressive growth of higher education in Karnataka are that we need to completely over has significant up gradation of academic infrastructure in many higher educational institutions (Swapna, Patil, & Patil, 2010).

Fritz Akhmad Nuzir and Bart Julian Dewancker have addressed the role of education facilities in sustainable urban development. Authors have used primary data and conducted case study and survey to analyze the role of education in urban development in Japan. They found that Science and technology are the outcomes of education process, therefore education in Japan plays important role in the development of the economy and society (Nuzir & Dewancker, 2014).

Golets Y and Chletsos M have attempted the development and education disparities in Greek peripherals. Authors have used the factor analyses based routed component matrix and cluster analyses to examine the studies for analyzing Greek regions and their disparities focus on GDP statistics. According to the authors there is
significant difference in education development in Greek regions and also they identified those regional disparities and a development pattern was presented (Golets & Chletsos, 2011).

Matthias Schundeln and John playforth have examined the linkages between education and economic growth in India. Authors have used cross-section data to analyze the difference between private and social returns to education of government sector employs on economic growth. Authors have found from the study that in India educated people find privately rewarding jobs in a sector in which social returns are low, namely the government sector. This could help explain high returns to education at the micro level and smaller negative coefficients on education growth in growth regressions at the macro level. The empirical results, which are consistent with this hypothesis, are based on an analysis of state-level data from India spanning 40 years (Schundeln & Johnplayforth, 2014).

Marius-Cristian Pana and Cosmin Mosora have addressed the relationship between education and economic development. Authors have used cross section data to identify the education contributes the economic performance of a country. They have found that Education is a key factor in any strategy designed to encourage economic development. Accordingly, they highlighted the limits of quantitative approaches concerning the relationship between education and economic development. The risks associated with action proposed by different strategies are related to the over accumulation of educational capital compared with the labor market needs. For this reason, these strategies should be rethought, and the educational systems should be reformed using quality criteria. Thus, the institutional frame that allows to link education with labor market should be taken into account (Pana & Mosora, 2013).

Peadar Cremin and Mary Goretti Nakkabugo have analyzed the educational development and poverty reduction. Authors have used panel data to analyze the education development and poverty reduction. They have found that the concept of development has evolved from an exclusive focus on economic growth towards an interrelated, even integrated approach involving progress across a range of disciplines such as health, education, economics and agriculture. The Millennium Development Goals (MDGs) are rooted in this evolved conception of development. A concerted
global effort embracing multiple disciplines in the formal and informal sectors is now essential for their achievement. Accordingly, the changing meaning of development, while at the same time tracing the benefits of investing in education for poverty reduction, and the conditions that facilitate and/or hamper education’s contribution to poverty reduction (Cremin & Nakabugo, 2012).

2.6 Education and Policies:

The following available literatures have been expressed the relationship between education and its policies.

Jon-Chao Hong, Jeou-Shyan Horng, and Chan-Lijin have attempted to analyze the competency disparity between pre-service teacher education and in-service teaching requirements in Taiwan. Authors have used primary data and developed coefficient analysis to explore pre service teacher education and in-service teacher knowledge and competency to meet the demands of professional carrier. Authors found from the study that risk management and pro active thinking skills are the most significant factors in terms of competency disparity. And also found that years of service and size of schools have a significant difference in the value system of competency disparity and can be applied to change the programme of prospective teacher education to enhance futures performance (Hong, Horng, & Chan-Lijin, 2008).

Yuying Tong has examined the gender disparity between the place of education and assimilation. Author has developed the generalized estimating equation regression model (GEE) to analyze the earnings disadvantage of immigrants in US labor market. It has been found that the Immigrant scientists and engineers who have received their college education abroad are at an earnings disadvantage, regardless of whether they completed their higher degree in outside the United States. However, their earnings can rise faster than their native born peers if they completed their education in the United States. And also found that attending college and Pre College in U S plays more substantial role in closing gap between immigrants and non-immigrants among scientists and engineers (Tong, 2010).
Mohd Hanafi Mohd Yasin and Hasnah Toran Mohd Mokhtar Tahar, and Safanibari have analyzed the teacher perspective on infrastructure of special education classroom in Malaysia. Authors have used primary data to analyze the infrastructure of school on special education and special integration program. They have found that the school must provide adequate and accessible facilities for the needs all the students. To improve the quality of classroom infrastructure and other facilities in the school integration of special education programme requires continuous effort and commitment from all parties. Teachers need to improve the skills and knowledge in planning, supervising and managing the classroom as well as infrastructure facilities for students with special needs (Hanafi, Yasin, Toran, Tahar, & Safanibari, 2010).

Latika Chaudhary, Aldo Masacchio, Steven Nafziger, and Seyan have analyzed the beginning of public elementary education in Brazil, Russia, India and China. Authors have used case study and secondary data to analyze the comparative perspective on the development of public primary education in four of the largest developing economies. Authors have been found from the study that the importance of political decentralization and relatively broad political voice for the early spread of public primary education in developed economies (Chaudhary, Masacchio, Nafziger, & Seyan, 2012).

Anju Saigal analyzed the quality of education program in Rajasthan. Author have used case study to examine the innovations in teacher support in government schools through the quality education programme. It has been found from the study that the Support for teachers through the use of professional dialog and modeling. Supporting change in teacher practices at school sites, providing teacher with concrete strategies, constructionist approaches to learning as per the NCF 2005. To develop the practice of teacher support and pedagogic shift (Saigal, 2012).

Christopher Colclough and Anuradha De have addressed the impact of aid on education policy in India. Authors have used secondary and time series data to analyze the impact of aid and donors on education policy in India. They have found that a significant direct impact upon management practice, finance, reporting, accounting procedures and monitoring arrangements. These changes probably improved the efficiency and certainly accountable and accountability of the educational process (Colclough & De, 2010).
Jandhyala B.G and Tilak have analyzed the post elementary education and development in India. Authors have used regression co efficient analysis to the linkages between post elementary education and development. Authors have been identified that the Post elementary education plays a significant role in development. Secondary and higher education enhances earnings of the individuals and contributes to economic development.post-elementary education makes a significant contribution to reduction in absolute as well as relative poverty. It also influences negatively the infant mortality rate, life expectancy is also positively related to post elementary education. The contribution of secondary and higher education to development is quite significant (B.G & Tilak, 2007).

Jos Mooij has examined the primary education teacher’s professionalism and social class about motivation and de-motivation of government school teachers in India. Author have conducted field work in Andra Pradesh, within A P two districts were selected, Kurnool and, east Godavavari. And author also has used secondary and cross section data to analyze the Teacher’s about their profession. They found that the governments’ schools teachers do not seen to have benefited from this, many feel that they are held in low eastern and some are out rigidly unhappy in their profession. Some are motivated. All agree that there has been a significant decline in their social status, there is need for a new professional ethos and culture (Mooij, 2008).

Santosh Mehrota has analyzed the reforming elementary education in India. Author have conducted survey .It has been found from the study that On extensive survey carried out in eight states Bihar, Madhya Pradesh, Rajasthan, Uttara Pradesh, West Bangel, Andra Pradesh, and Assam. Author also found that the public spending pattern, improving the teacher accountability and work environment, incentives to improve demand for schooling and the private sector, it argues that central to universalizing elementary education will be improving the level, equity and efficiency of public spending. However, even these reforms, improving teacher accountability will still remain the key to the achievements of the goals (Mehrota, 2006).

Wankade, G.G and Anirban Sengupta have attempted to analyze the village education committees in West Bengal. Authors have used primary data and conducted micro level study in south 24 districts to analyze the decentralization of educational
administration in west Bengal in India. They found from the study that there is no scope for the poorly educated people to be part of VEC. Unstable economic capacity of people was often behind their participation in public works and drop out of their children from school. Solving the majority of the problems that schools were facing is beyond the scope of VEC. Active involvement of panchayat was essential. However, to avoid this responsibility panchayat often extended excuses like scarcity of government funds. There was need for change in such mindset. Local administration becomes more active in generate their own resources. It becomes possible to initiate on participation of the local community in developmental activities (G.G & Sengupta, 2005).

Arathi Sri Prakash analyzed the child centered education and democratic learning in rural Indian primary schools. Author have used primary data to analyze the child centered teaching in rural primary school in southern Indian states of Karnataka. It has been found from the study that The utilization of the child centered pedagogic modals in the context requires specific engagement with the material conditions and institutional systems of Indian rural education, but also importantly with the regulative hierarchical discourses that reproduce social inequality (Prakash, 2010).

Sujatha Bhan, Suzanne Radricks have analyzed the Indian prospective on child’s Right to education. Author have conducted case study to understand the Indian perspective on child’s right to education. Analysis the feasibility of RTE and highlight the challenges in its implementation in India. They found that the For the Right to education act to succeed, the marginalized children should not be just physically included in schools but should be socially included (Sujatha Bhan, 2012).

Caroline Dyer, Archana Choksi, Vinita Awasty, Uma Iyer and Renu Mayade have analyzed the knowledge for teacher development in India. Authors have used qualitative data generated from six case studies to analyze In-service training in DIETS and teacher development challenges. They have found that the ecological validity of teacher education might be improved by consciously both acknowledging and incorporating local knowledge. DIETS (District institutes of education and training) would provide pre and in-service refreshment for elementary school teachers and support them. The DIETS would understand the professional development requirements of its teacher and respond with locally sensitive and needs based INSET
programmes. INSET programmes are generally designed at state/national level and delivered by the DIET at the district level. Teacher development programs need to be able to convince teachers of their own capacity directly to effect change and to build on and extend teachers views of the possible. (Dyer, Choksi, Awasty, & Iyer, 2004).

Lijing Yang and Brian McCall have examined the world education finance policies and higher education access. Authors have used the panel data to analyze international indicators and to examine the relationship between education finance policies and higher education access among 86 countries from 1998 to 2009. They have found from the study that public expenditure per tertiary student bears a negative association with tertiary enrollment ratios, whereas GDP per capita and public spending on education as a percentage of GDP both have a positive effect on tertiary enrollment. These results imply that for a fixed amount of total budget and rising demands for higher education, various nations have reduced spending per college student and drawn on more private resources to expand higher education access (Yang & McCall, 2014).

2.7 Concepts:

Concept is an abstract symbol representing object, a property of an object or a certain phenomenon, like, book, person, intelligence, and meeting. A concept like ‘aggression’ or ‘frustration’ or ‘political participation’ represents a number of events under one general name or label. Therefore, ‘a concept is in really a definition in short-hand of a class or group of fact; the purpose is to present in simplified from the thinking about phenomena, events and processes’.

Major Concepts of the Present Study:

In the following section, the major concepts have been presented along with their meanings in general and their meaning in the context of present study.

Infrastructure:

The term ‘‘infrastructure’’ is derived from the Latin words ‘Infra’ meaning ‘beneath’ and ‘structure’ meaning to ‘construct’, which includes power, transport, telecommunications, provision of drinking water and sanitation and safe disposal of waste which are central to the activities of households and to economic production.
Infrastructure refers to the facilities, activities and services which support operation and development of other sectors of the economy. In other words, infrastructures are such basic requirements like the railways, roads, ships, railways, communications, energy, banking, finance, science, technology, health, education and other public utility concerns. In the present study infrastructure refers to infrastructure for primary education in Karnataka.

Social infrastructure:

Social infrastructure is concerned with the supply of such services which meet the basic needs of a society. In other words, social infrastructure refers to such basic services as education and training, health and sanitation, drinking water, housing, sewage and others. Social infrastructures are known as ‘social overheads’ which supports the economic system indirectly. In the present study social infrastructure refers to infrastructure for education in Karnataka.

Physical infrastructure:

Physical infrastructures are those infrastructures which are directly concerned with needs of such production sectors as agriculture, industry, trade and others. In other words, physical infrastructure refers to those facilities which directly support the process of production and distribution of the economy. For example: - Energy, irrigation, transport, telecommunication, banking, finance, and insurance, science and technology and others. Physical infrastructure is also known as ‘economic infrastructure.

Human development:

The United Nations development programme, in its methodology to construct the human development index has been used to three dimensions namely, education, health and income. All these are important components of human right. It sustains economic growth by providing basic as well as specialized skills that ensure increased productivity and higher per capita incomes on the other hand human development is directly depending upon universal access to education, health and income with their implications for equity and social justice. Equal opportunity, equal access to education and equally utilizing these opportunities and access lead to sustainable, healthy, and educated society. Education is essential for growth and development is a major role in the development of individual construction of society is the key components of human development.
Education:

Education in its broadest, general sense is the means through which the aims and habits of a group of people lives on from one generation to the next. Generally, it occurs through any experience that has a formative effect on the way one thinks, feels, or acts. In its narrow, technical sense, education is the formal process by which society deliberately transmits its accumulated knowledge, skills, customs and values from one generation to another, e.g., instruction in schools. In the present study context, education refers to primary education in Karnataka.

Region:

Region is most commonly found as a term used in terrestrial and astrophysics sciences also an area, notably among the different sub-disciplines of geography, studied by regional geographers. In the present study context, education refers to primary education in Karnataka. In the present study context, region refers to south region and north region in Karnataka.

Disparity:

Disparity and disparities may refer to inequality and imbalances many fields. In the present study context, disparity refers to regional disparities in resource allocation and education infrastructure Karnataka.

Inclusive growth:

Basically means, "Broad based growth, shared growth, and pro-poor growth" It decreases the rapid growth. Rate of poverty in a country and increases the involvement of people into the growth of the country. Inclusive growth by its very defamation implies an equitable allocation of resources with benefits incurred to every section of the Society. But allocation of resources must be focused on the intended short and long term benefits of the society such as availability of consumer goods. People access, employment standard of living etc. It sets a direct relationship between macro and micro determinate of the economy and its growth.
Standard of living:

Standard of living refers to the level of wealth happiness, comfort, material goods and necessities available to a certain socioeconomic class in a certain geographic area. The standard of living includes factors such as income, quality and availability of employment, class disparity, poverty rate quality and affordability of housing, hours of work required to purchase necessities, gross domestic product, inflation rate, number of vacation days per year, affordable (or free) access to quality healthcare, quality and availability of education, life expectancy, incidence of disease, cost of goods and services, infrastructure, national economic growth, economic and political stability, political and religious freedom, environmental quality, climate and safety. The standard of living is closely related to quality of life.

Diminishing returns:

In economics diminishing returns (also called diminishing marginal returns) is the decrease in the marginal’ (per-unit) output of a production process as the amount of a single factor of production is increased, whiles the amounts of all other factors of production stay constant.

The law of diminishing returns (also law of diminishing marginal returns or law of increasing relative cost) states that in all productive processes, adding more of one factor of production, while holding all others constant, will at some point yield lower per-unit return.

Investment:

Investment has different meanings in finance and economics. Finance investment is putting money into something with the expectation of gain, that upon thorough analysis, has a high degree of security for the prince in economic theory or in macroeconomics, investment is the amount purchased per unit time of goods which are not consumed but are to be used for future production. In the present study context, investment refers investment or resource allocation in primary education in Karnataka.
**Market mechanism:**

Market mechanism is a term from economics referring to the use of money exchanged by buyers and sellers with an open and understood system of value and time tradeoffs to produce the best distribution of goods and services. The use of the market mechanism imply in a free market there can be captive or controlled markets which seek to use supply and demand, or some other form of charging for scarcity, both in social situations and in engineering.

**Health:**

Health is the level of functional or metabolic efficiency of a living being. In humans, it is the genet al condition of a person's mind, body and spirit, usually meaning to be free from illness, injury or pain.

The World Health Organization (WHO) defined health in its broader sense in 1946 as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

**School:**

School is an institution designed for the teaching of students or pupils under the direction of teachers. Most countries have systems of formal education, which is commonly compulsory. In the present study context, school refers to primary school in Karnataka.

**Teacher:**

Teacher or schoolteacher is a person who provides education for pupils (children) and students. In the present study context, teacher refers to primary teacher in Karnataka.

**Literacy:**

Literacy has been described as the ability to read for knowledge and write coherently and think critically about the written word. Literacy can also include the ability to understand all forms of communication, be it body language, pictures, video or sound (reading, speaking, listening and viewing). Evolving definitions of literacy often include all the symbol systems relevant to a particular community. Literacy
encompasses a complex set of abilities to understand and use the dominant symbol systems of a culture for personal and community development. In a technological society, the concept of literacy is expanding to include the media and electronic text, in addition to alphabetic and number systems.

**Dropout:**

These most commonly, dropping out refers to a student quitting school before he or she graduates or avoiding entering a University. In the present study context, dropout refers dropout student in primary education in Karnataka.

**Public expenditure:**

The expenditure incurred by the government to achieve economic development and promote the welfare of the people is known as public expenditure. In the present study context, expenditure refers to expenditure in primary education in Karnataka.

**Plan expenditure:**

The expenditure incurred on various economic and social services and other developmental activities are called plan expenditure. In the present study context, plan expenditure refers to plan expenditure in primary education in Karnataka.

**Non-Plan expenditure:**

The expenditure incurred on defense, civil administration, debt service, subsidies, etc., is called non-plan expenditure. In the present study context, non-plan expenditure refers to non-plan expenditure in primary education in Karnataka.

**Sectoral Growth and composition of State Income:**

Sectoral growth and composition of state income explain the relative contribution made by different sectors towards the income of the state. All economic activities are broadly grouped into three sectors such as primary sector, secondary sector and tertiary sector.
Primary Sector Income:

This is the basic sector of the economy and it consists agriculture, dairy, poultry, fishery, sericulture, forestry, mining and quarrying. These sectors primarily are based on land or nature. In the present study context, primary sector income refers to primary sector income by primary education in Karnataka.

Secondary Sector Income:

This sector consists all those occupations which are related to industry i.e. Manufacturing, construction, power projects and extraction activities etc. This sector primarily is based on capital. In the present study context, secondary sector income refers to primary education contributes to secondary sector in Karnataka.

Tertiary Sector:

This consists various service activities like, transport, communication, trade, commerce, banking, insurance, real estate, share market, radio, television, hotel industry, cinema, community and personal services etc. In the present study context, tertiary sector income refers to primary education contributes to tertiary sector in Karnataka.

Gross Domestic Product:

Gross Domestic Product is the total money value of all final goods and services produced within the geographical boundaries of the country during a given period of time. As a conclusion it must be understood, while domestic product emphasizes the total output which is raised within the geographical boundaries of the country, national product focuses attention not only on the domestic product but also on goods and services produced outside the boundaries of a nation. In the present study context, gross Domestic Product refers to primary education contributes to gross state domestic product in Karnataka.

Per capita Income:

The average annual income of an individual is known as per capita income. It is calculated by dividing the total national income by the total population.
Gross State Domestic Product:

Gross State Domestic Product is the total money value of all final goods and services produced within the geographical boundaries of the state during a given period of time. In the present study context, gross state domestic product refers to primary education contributes to gross state domestic product in Karnataka.

Economic Development:

Economic development generally refers to the sustained, concerted actions of policy makers and communities that promote the standard of living and economic health of a specific area. Economic development can also be referred to as the quantitative and qualitative changes in the economy. Such actions can involve multiple areas including development of human capital, critical infrastructure, regional competitiveness, environmental sustainability, social inclusion, health, safety, literacy, and other initiatives. Economic development differs from economic growth. Whereas economic development is a policy intervention endeavour with aims of economic and social well-being of people, economic growth is a phenomenon of market productivity and rise in GDP. Consequently, as economist Amartya Sen points out: “economic growth is one aspect of the process of economic development.”

Economic Growth:

Economic growth is a process where the real per capita income of a country increases over a long period of time. In other words, it is a continuous increase in a country’s production of goods and services, consumption, national income and real per capita income over a long period of time.

Budget:

Budget is a statement of anticipated revenues and expenditure of the government for the coming financial year. This is also called as the annual financial statement of the government. In the present study context, budget refers to budget allocation to primary education in Karnataka.
Market mechanism:

Market mechanism is a term from economics referring to the use of money exchanged by buyers-and sellers with an open and understood system of value and time tradeoffs to produce the best distribution of goods and services. The use of the market mechanism imply in a free market; there can be captive or controlled markets which seek to use supply and demand, or some other form of charging for scarcity, both in social situations and in engineering.

2.8 Research gap:

The previous studies have been established the relationship between investment in education and development. Some the studies have also analyzed the importance of investment in education. However, comprehensive studies are further limited. Previous studies have also examined regional disparity issues. Moreover, majority of the studies are concerned with particular aspects such as irrigation, roads, telecommunication, health, education and others. However, the previous studies have not attempted to relate the regional disparities to educational development in a comprehensive manner. Hence, the present study, “An Economic Analysis of Regional Disparities in Social Infrastructure Development in Karnataka” has been a unique attempt with new approaches and dimensions.
References:


