CHAPTER TWO
REVIEW OF LITERATURE

In this chapter an attempt has been made to review the available literature on the research subject. The chapter is designed in eleven sub-sections; Section 2.1 dwells on the relationship between education and economic development. Section 2.2 discusses the role of the State in education. Section 2.3 puts light on the aspect of Education as an investment. Section 2.4 presents the picture of importance of education to our society and it discusses ten significant functions of education. Section 2.5 describes delivery of Public Services and Public-Private Partnership. Section 2.6 has been devoted to measurement problems of returns on public investments in men. Section 2.7 dwells on the role of Human capital and discusses education as a form of Human Capital. Section 2.8 describes the aspects of Cost and Expenditure in Education. Section 2.9 deals with Public Expenditure in Social Sectors. Section 2.10 dwells on the Public Expenditure on education. Section 2.11 summarizes the chapter and presents the conclusion.

2.1 EDUCATION AND ECONOMIC DEVELOPMENT

The role of education in economic development has been recognized for quite some time in mainstream economic literature. Education has to be related to economic development, that it must have a developmental bias and that it has to be treated as an investment. Education has both intrinsic and instrumental value: it is desirable not only for the individual but also for the society as a whole (Sen, 1999). Education is both consumption as well as a capital good, but the conventional credit market mechanisms do not operate efficiently.

Education has been accorded an extremely high priority in the programmes of planned development and policies in India since independence. One of the most important and basic goals of educational development has been the Universalization of Elementary Education (UEE). UEE has become a constitutional obligation in India. The country has made considerable progress both in the field of elementary education and literacy since independence. But a long way has still to be traversed as the goal of the universalization of elementary education still remains as elusive as ever. Policy makers, analysts
and administrators believe that education promotes economic growth and it furnishes skilled, technical, scientific and high level manpower to meet the manpower needs of development of the economy. Therefore, education attracted a very high proportion of budgetary allocations of the financial, and hence, physical resources (Prakash, 1997).

The positive relation between education and development indicates that, as a result of the training given in educational institutions, the students must acquire productive capacity. In turn it means that it add to the sum total of production, and in fact produce much more than they would have done in the absence of this education. The test is that what ‘A’ has produced without education, is much less than the production in the case of ‘B’ with education. It is the difference between the two that should be called the productivity ascribable to education.

Inequalities across generations can persist if the level of education is co-related with parental income and wealth (Banerjee and Newman, 2003). This characteristic has been used to justify public intervention in the provision and financing of education from the equity perspective. Cross country studies have tried to quantify the impact of Government expenditure in rising educational and health indicators. The effectiveness and efficiency of Government expenditure in the social sector varies between different geographical regions, and also depends on the stage of development. Innovative institutional arrangements and alternative financing mechanisms are being explored in order to supplement public funds, and to improve the effectiveness of the public resources, thus invested. The frame-work for this review is predicated on the different strands of research mentioned above.

1. The literature on the rate of return to education indicates that there is considerable rationale for investing in education on behalf of both the individuals and the society. At the earlier stages, primary and secondary, the social returns can in some cases exceed private benefits, strengthening the case for public expenditure.
2. The human capital thus accumulated impacts positively on productivity, and higher rate of growth for the economy, as evidenced by empirical applications of models incorporation schooling variables in economic growth.

3. Externalities prevalent in the education sector necessitate intervention by the State in order to ensure equity and improve outcomes. The literature on effectiveness and efficiency in public expenditure investigates whether there is any impact on human development outcomes, and whether further gains can be achieved with better use of resources, with improved quality.

4. Finally, the growing literature on service provisions and delivery delineates the current state of the debate on how better institutional arrangements and governance can help achieve the objectives of equitable educational opportunity in terms of provision and access, addressing some of the inefficiencies of the public funding and delivery of education services.

Human development, in turn, has important effects on economic growth. If a central element of economic growth is allowing agents to discover and develop their comparative advantage, an increase in the capabilities and functioning’s available to individuals should allow more of them to pursue occupations in which they are most productive. In this sense human development can be seen as the relaxing of constraints which may have interfered with profit maximization. Furthermore, although human development represents a broader concept, many of its elements overlap significantly with the more traditional notion of human capital (Ranis, 2004). Thus, to the extent that human development is necessarily correlated with human capital and human capital affects the economic growth of a nation, human development is bound to have an impact on economic growth.

More specifically, each of the various components of human development is likely to have a distinct impact on economic growth. Education, for instance, has a strong effect on labour productivity. In agriculture, Birdsall (1993) uses data from Malaysia, Ghana and Peru to show that each extra year of a farmer’s schooling is associated with an annual increase in output of 2-5%. In Indonesia,
Duflo (2001) estimates an increase in wages of 1.5 to 2.7% for each additional school built per 1,000 children. In addition to its direct effect on productivity, education also affects the rate of innovation and technological improvements. Foster and Rosenzweig (1996) demonstrate that increased education is associated with faster technology adoption in Green Revolution in India. Similarly, higher education levels have been shown to increase innovation in businesses in Sri Lanka. In this sense human development may also enter into an Uzawa-Lucas type endogenous growth model as a factor affecting growth rates through its effect on technological change. Statistical analysis of the clothing and engineering industries in Sri Lanka showed that the skill and education levels of workers and entrepreneurs were positively related to the rate of technical change of the firm (Deraniyagala, 1995). Education alone, of course, cannot transform an economy (Ranis, 2004). The quantity and quality of investment, domestic and foreign, together with the choice of technology and overall policy environment, constitute other important determinants of economic performance.

2.2 ROLE OF STATE IN EDUCATION

The role of State in education has been recognized from the earliest times. There had been always state patronage for education in ancient India. State aid was given to the educational institutions. It has now been recognized that every child up to a certain age has a right to receive education and it is the duty of the State to make adequate provision for it. Even Adam Smith, the champion of natural liberty and laissez-faire, was in favour of State-controlled elementary education. John Stuart Mill, belonging to the classical tradition, also advocated that the State should provide for both elementary and higher education and the elementary education should be made compulsory.

In the case of education the supply should not be limited by demand. Demand for education like the demand for other things is largely a function of income. No doubt many parents have a demand for education for their children and are prepared to reduce expenditure elsewhere to send them to schools. But several parents cannot afford to do so. Some may do not like to be deprived of the income which their children could earn. For such and similar reasons in the
absence of free and compulsory education several children may not get any schooling at all. Hence, it becomes the duty of the Government to create a demand for and supply of education, at least for children up to a certain age (Singh, 1983). This implies that the cost of receiving education should be zero to this category of students, the entire cost being met by the Government.

Another reason why the State should be so much concerned about education is that private individuals are not likely to invest an optimum amount on the education of their children partly because some of them cannot afford it and partly because the investment in human resource via education does not yield quick results. There is a long gestation period involved in the fructification of investment in education. Hence, there is an apprehension that investment in material capital may become unduly large and investment in human capital unduly small (Singh, 1983).

Under such circumstances it is obvious that the State has to accept the responsibility of bearing a very substantial part of the cost of providing various types of education and training facilities. It has to obtain financial and physical resources for the supply of education. Thus spending on education becomes a problem of public finance.

Treating educational finance as a component of public finance has several implications. In the first place, it means that public expenditure on education should not be governed by market principles. It has been a recognized fact that there are some fundamental differences between public finance and private finance. Financial operations of the Government are not primarily motivated by financial returns. The objective of Government operations is primarily that of maximizing social welfare, where as the private business usually tries to maximize the welfare of its operations. The Government has to consider both the direct and indirect effects of its economic activities on the society. Expenditure on education has a big component of indirect beneficial effects on the society in general which cannot be easily evaluated in terms of money and charged from beneficiaries. Since a minimum of education has to be compulsorily imparted to every child the State has to create demand and supply for it simultaneously. For
creating a hundred percent demand for it from children of certain prescribed ages, in addition to legislative instrument of compulsion, the economic instrument of gratuitous (i.e., free) education has to be applied.

Education is a mixed enterprise provided both in the public and private sector. Private educational institutions get their finances from fees charged from the students, endowments, donations and subsidies from the Government. Government educational institutions depend for their finances partly on the fees but mainly on public revenue. So, the total cost involved in providing education is not merely the cost incurred by the Government or private bodies, but also the opportunity costs, i.e., the income which the students would have earned had they not joined the educational institutions. Another aspect of the cost of education which should also be kept in mind is its maintenance cost. Once a person has passed out of the educational institutions he may forget a good deal he has learnt and may lapse into ignorance unless he keeps himself abreast by constant study and practice. There is a lot of wastage in education. Skills learnt might be lost if the person are not able to get appropriate jobs. This employment aspect of education needs man-power planning in the context of the requirements of the economy. To meet the entire cost of compulsory education and part of the cost (larger part) of voluntary (higher) education huge public outlay, both of a capital and current nature, will be involved. It means that a sizeable portion of public revenue will have to be allocated to education.

Dalton (1954) thought that in the absence of the intervention of public authorities the individual was likely to invest more in material capital than in human capital: ‘For the return obtainable by an individual from a wise investment in human capital or in knowledge is generally smaller than that obtainable from an equally wise investment in material capital.’ Therefore, he suggested that public authorities by means of public expenditure should divert resources to the promotion and development of human capital. It is to be regretted that Governments of developing countries are making the same mistake as the individuals by giving higher priority to the physical capital formation. This seems to be a short-sighted policy. It is true that developing countries lack physical capital especially the infrastructure of development. But the creation of this
infrastructure by itself is not enough. Unless there are also trained and educated persons’ maximum advantage cannot be obtained from other resources.

To meet the expenditure involved in implementing the suggestions mentioned above it will be necessary to increase the financial resources of the Government. This may be done by imposing a special surcharge on Central and State taxes. The State Governments should also impose special educational cess as in the same line the government of India imposes educational cess on taxpayers. By pooling all the existing resources and the proceeds of new educational levies it should be possible to make an adequate provision for investment in education.

2.3 EDUCATION AS AN INVESTMENT

Education has many aspects. Economic aspect is only one of them. This aspect is mainly concerned with the cost of education and returns from education. To put the same idea in current economic jargon the economic aspect of education is its input-output relationship. The inputs for the production of education mainly consist of teachers, administrators, buildings and all kinds of equipments. This constitutes cost of education. The output consists of the volume of education acquired by the students. There is a demand for education partly because it is a consumption good providing immediate satisfaction, but mainly because it is an investment good intended to help in the production of additional goods at some future date. Parents and guardians send their children and wards to the educational institution to enable them to acquire knowledge and skills which may help them in earning income. It is in this sense that expenditure on education is considered as an investment (Singh, 1983).

Now a days it is increasingly accepted that the investment in men is a pre-requisite to the investment in physical capital, yet the ways as to how such an investment be done have received very little attention. Schultz (1961) has listed some of the most important ways that go to impart the skill and knowledge and change the attitude of the people to a significant degree:
1. Health facilities and services, broadly conceived to include all expenditures that affect the life expectancy, strength and stamina and the vigour and vitality of the people;

2. On-the-job training, including old-style apprenticeship organized by firms;

3. Formally organized education at the elementary, secondary and at the higher levels;

4. Study programmes for adults that are not organized by the firms including extension programmes notably in agriculture;

5. Migration of individuals and families to adjust to changing job opportunities.

The real planning problem is how to squeeze and twist consumption in such a way as to speed up development. Thus, greater efforts to improve education can be more conducive to development than some physical investment (Nagpal and Mittal, 1993).

The concept of education in the present context has to be changed dramatically so as to give it the shape of permanent education. Education is no longer perceived as a process lasting for a certain number of years at the beginning of an individual’s life; rather it is believed that education is a continuous process. Schools and Universities are no longer seen as the only places where education can occur. Education is believed to be possible, when people read magazines, listen to the radio, watch television, receive information from the Government. It is now generally defined as any process which helps the individual to live more effectively within his present environment and permits him to participate in the process of improving his conditions.

**2.4 IMPORTANCE OF EDUCATION TO SOCIETY**

The word ‘School’ has been derived from the Greek word ‘Skhole’ that means leisure. It was before in the ancient Greece to utilize leisure time in a systematic way. But now this concept has changed to prime time activity. It is an
essential investment field now, on which the entire superstructure of life of the individual and nation will build.

School in the modern time is treated as the most suitable, active and formal agency of education. As per the changing need of the hour, school develops and grows with its specific goals. It is emerged out of the demand for education and pressure on the parents regarding their educational pursuit. Education has a great social importance especially in the modern, complex industrialized societies. Philosophers of all periods, beginning with ancient stages, devoted to it a great deal of attention. Accordingly, various theories regarding its nature and objective have come into being. Some of the significant functions of education are discussed as under:-

(i) To complete the socialization process:-

The main social objective of education is to complete the socialization process. The family gets the child, but the modern family tends to leave much undone in the socialization process. The school and other institutions have come into being in place of family to complete the socialization process. It becomes the school's duty to train the whole child even to the extent of teaching him honesty, fair play, consideration for others and a sense of right and wrong (Kumar, 2011). The school devotes much, of its time and energy to the subjects such as cooperation, good citizenship, doing one's duty and upholding the law. Directly through textbooks and indirectly through celebration of programmes patriotic sentiments are developed in a child. The nation's past is glorified, its legendary heroes respected, and its military ventures justified.

(ii) To transmit the central heritage:-

All societies maintain themselves, by exploitation of a culture. Culture here means to a set of beliefs and skills, art, literature, philosophy, religion, music etc. that are not carried through the mechanism of heredity. This must be cultured. This social heritage (culture) must be transmitted through social organizations. Education has this function of cultural transmission in all societies.
(iii) For the formation of Social personality:

Individual must have personalities shaped or fashioned in ways that fit into the culture. Education everywhere has the function of the formation of social personalities. Education helps in transmitting culture through proper moulding of social personalities. In this way, it contributes to the integration, to survive and to reproduce the same.

(iv) Reformation of Attitudes:

Education aims at the reformation of attitudes wrongly developed in children. For various reasons the child may have absorbed a host of attitudes, beliefs and disbeliefs, loyalties and prejudices, jealously and hatred etc. This needs to be reformed. It is the function of education to see that unfounded beliefs, illogical prejudices and unreasoned loyalties are removed from the child's mind. Though the school has its own limitations in this regard, it is expected to continue its efforts in reforming the right attitudes in the child.

(v) Education for occupational placement:

Today education has become as an instrument of livelihood. It should enable the student to take out his livelihood. Education must prepare the student for future occupational positions; the youth should be enabled to play a productive role in society. Accordingly, great emphasis has been placed on vocational training.

(vi) Conferring of Status:

Conferring of status is one of the most important functions of education. The amount of education one has is correlated with his class position in the society. Education is related to one's position in the stratification structure in two ways. (a) An evaluation of one's status is partially decided by what kind of education one has received and (b) Many of the other important criteria of class position such as occupation, income and style of life are partially the result of the type and amount of education one has achieved.
(vii) Education encourages the spirit of competition:

The school installs co-operative values through civic and patriotic exhortation or advice. Yet the school's main emphasis is upon personal competition. For each subject studied the child is compared with their companions by percentage of marks or rankings. The teacher admires and praises those who perform well and frowns upon those who fail to do well. The school's ranking system serves to prepare for a later ranking system. Many of those who are emotionally disappointed by low ranking in the school are thereby prepared to accept limited achievement in the larger world outside the school.

(viii) Fosters Participant Democracy:

Education fosters participant democracy. Participant democracy in any large and complex society depends on literacy. Literacy allows full participation of the people in democratic processes and effective voting. Literacy is a product of education. Educational system has this economic as well as political significance.

(ix) Education Imparts values:

The curriculum of the school, its extracurricular activities and the informal relationships amongst students and teacher communicate social skills and values. Through various activities a school imparts values such as co-operation or atmospheric, audience, fair play. This is also done through curriculum that is through lessons in history literature etc.

(x) Education acts as an integrative force:

Education acts as an integrative force in society by communicating value that unite different sections of society. The family may fail to provide the child the essential knowledge of the social skills and values of the wider society. The school or the educational institutions can help the child to learn new skills and learn to interact with people of different social backgrounds (Kumar, 2011).
2.5 DELIVERY OF PUBLIC SERVICES AND PUBLIC-PRIVATE PARTNERSHIP

Government intervention in the social sector is not limited only to the financing but also in the provision and delivery of social services. The working of delivery of social services highlights the inefficiency in service delivery as a major cause of the low impact and efficiency of public expenditure vis-à-vis social indicators (World Development Report, 2004).

There are basically two directions in which the literature has proceeded. In terms of returns to the education debate, the scope of the discussion has widened from the quantity to the quality of schooling in explaining difference in labour market outcomes and economic growth. (Behrman, Ross, and Sabot, 2002; Hanushek, 2003; Hanushek and Kimko, 2000). The evidence points to an increase in wages linked to higher test scores in school, which is used as an indicator of school quality after controlling for innate student ability. Moreover, from cross-country studies, a strong relation emerges between quality of labour force and economic growth, in line with the endogenous growth literature.

On the other hand, in most countries there is preponderance by the Government in the provision of schooling, and in the management of the education system. One of the empirical facts highlighted from developing countries is that of dysfunctional or non-functional publicly provided school system, especially in the rural areas (Chaudhury et.al., 2006). While the rationale for public intervention in education is to ensure that opportunities for education are equitable across all socio-economic groups, the reality is far from it. The publicly run schools are plagued by inadequate infrastructure and teacher absenteeism mainly because of inadequate incentives and weak monitoring mechanisms, leading to lower quality for those who cannot afford private schools (Banerjee and Duflo, 2005; Duflo and Hanna, 2005; Das, 2005). The effectiveness of public expenditure on outcomes, therefore, is visibly reduced.

Deverajan and Reinikka (2004), investigate the mismatch between government spending and social sector outcomes, and identify four possible causes:
1. Governments may be spending on wrong goods or the wrong people.

2. Public expenditure may not reach the frontline service providers due to corruption and mismanagement.

3. Incentives to provide services as well as the monitoring mechanism are weak.

4. Even if services are provided, there is a lack of demand on the part of the household.

Bardhan (2004) however cautions against the policy of decentralization as an end in itself. While agreeing that decentralization can play a vital role in improving services delivery, he argues that the process should not be used for the government to withdraw from the responsibility of provision altogether. More importantly, decentralization has to be used to fix accountability for the delivery of social services, and in monitoring of the impact of such devolution of service provision.

Moreover, empirical studies need to be conducted on the change in impact using some baseline. In one example of decentralized programme implementation, Dreze and Kingdon (2001) have examined the contribution of mid-day meals in increasing school participation in rural India, especially among girls. Community involvement in implementation and monitoring seems to enhance the impact of the programme. However, impact of financial decentralization on school quality and attainment has not been studied until now.

The final point relates to the possibility of having a symbiotic (a relationship of different organizations living in close association) relationship between public and private financing schemes related to education. India’s education sector especially at the school level reflects the ‘state vs market’ paradigm (Kothari, 1999). Kothari argues that a voucher system similar to one in the United States is unworkable in the Indian context given the levels of poverty and under-development. His argument is for the direct provisioning of elementary education, and to stress on improving the quality in government schools.
More recently, the Planning Commission (2004) has explored the potential for public-private partnership (PPP) in improving access and ensuring quality of education at the elementary level. The report notes that ‘PPP is a suitable method for services commonly provided by the local governments and is generally applicable for most components of service delivery. The types of services that can be provided through PPP will however vary from one local Government to the other, based on their needs and priorities’. It lists out several schemes where the private sector has been involved mostly in improving the quality of infrastructure and service, along with involvement of the local communities. While evidence is subjective, the broad direction of policy in this regard is one that has to be studied carefully in exploring financing options for the social sector, especially education.

2.6 MEASUREMENT PROBLEMS OF RETURNS ON PUBLIC INVESTMENTS IN MEN

The physical capital investment can be measured by estimating the expenditure incurred to produce the physical assets. It is possible to estimate the investment in human capital on similar lines. But in the case of investment in human capital, an additional difficulty arises and that is of making a distinction between the expenditures incurred on consumption and expenditure incurred on investment. The expenditures that satisfy consumer’s preferences and do not enhance the aforesaid capabilities are the expenditures on pure consumption. Then there are expenditures that enhance these capabilities but do not satisfy any preferences underlying consumption. These can be called as expenditures on pure investment. And there can be expenditures that have both the effects. In fact, a clear line of demarcation cannot be drawn on the types of expenditures and since most expenditures fall under the third category of having both the effects, it makes the task of measuring investment in human capital extremely formidable (Nagpal and Mittal, 1993).

It is clear from the above that the educational planner moves back and forth from qualitative assessments to quantitative measurements. They are both necessary components of development strategy. Qualitative evaluation provides purpose and direction to quantification and gets back from it - accuracy, precision
and depth. Education as a process has been and continues to be a unified field of study which has been using both quantitative analysis and qualitative judgments. The “quantitative revolution” in educational research has now made it possible to measure phenomena with greater precision and accuracy; to develop explanatory mechanism of greater sophistication so as to make qualitative judgments of a higher order and to uncover or unfold deeper layers of meaning in objective phenomenon, which less sophisticated tools were unable to reach; and to facilitate the process of abstraction from empirical facts so as generate concepts and theories.

2.7 ROLE OF HUMAN CAPITAL

Human capital, a concept introduced by Nobel Laureate Theodore W. Schultz (1961) and elaborated on by Nobel Laureate Gary Becker (1964), is the notion that individuals acquire skills and knowledge to increase their value in labor markets. Experience, training, and education are the three main mechanisms for acquiring human capital, with education being primary for most individuals. Education facilitates the acquisition of new skills and knowledge that increase productivity. This increase in productivity frees up resources to create new technologies, new businesses, and new wealth, eventually resulting in increased economic growth. Education is a "public good" in that society benefits from increased education as well as the individual (Hall, 2000).

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Human capital refers to the man’s productive skills, talents and knowledge. It is measured in terms of the value of goods and services produced. Since consumption is the ultimate goal of our economic system, the value of human capital is the same as the value of consumption of goods and services that are produced by him. A rise in the value of goods and services raises the value of human capital and so does the fall in the value of goods and services result in fall in the value of human capital.

The concept of human capital is basically intellectual. It is now being increasingly realized that the problems of economic growth in egalitarian pattern of society owe their solutions to increase in skills, talents and knowledge of human beings (Nagpal and Mittal, 1993). Education as a form of human capital generates numerous direct and indirect economic and non-economic benefits to the individuals and the society. Some of the individual benefits of investment in education are higher lifetime earnings and the associated improvements in consumption, savings and investment, wider occupational and employment choices, faster career development, receptivity to new ideas, higher productivity and active participation in development process. Some of the benefits enjoyed by the society are the spill-over gains (externality) to both the present and future generations, increase in occupational and social mobility, growth and stimulation of research in science and technology, more lawful behaviour of the population, political socialization and national integration (Lakshmanasamy, 2004). Schultz (1974) has argued that human capital contributes to entrepreneurial ability also. The non-market benefits of human capital are so numerous, ranging from household production to socialization.

2.8 COST AND EXPENDITURE IN EDUCATION

Expenditure is an outlay of funds. Costs can be monetary or non-monetary. When an individual decides not to take a job in order to continue his studies, he incurs a loss of potential earnings which is for him a cost. Similarly, when a village community agrees to build a school without being paid for the work, it does not spend money, but incurs a cost represented by its time and labour. In both cases, we refer to the ‘opportunity cost’, for the individual or the
community (Nagpal and Mittal, 1993). This is a key concept in economics, since any production or consumption involves a choice among limited resources. It is an integral part of the theory of decision making, whether the decision is made by the state, the company or the individual. The state must plan the allocation of human and financial resources, because what goes to education is no longer available for other sectors. Similarly the company which allows its workers to attend training courses during working hours suffers a ‘loss of potential production’, but it hopes that this will be more than offset in the future by an increase in productivity. The need for children from poor families to work at an early age largely explains the wastage through dropping out observed in agricultural countries, even when education is provided free.

2.9 PUBLIC EXPENDITURE IN SOCIAL SECTORS

From around the mid 1990’s, a number of studies have investigated the effectiveness of public spending in education (and health) on social development outcomes, such as enrolment rates, infant mortality, life expectancy and other outcome indicators. The main justification of public spending on education is based on the social rate of return, with higher levels of basic and secondary education increasing the rate of return and creating conditions conducive for long-run growth. Similarly, public spending on primary health care is justified by increases in welfare that accrues from a reduction in the burden of disease, particularly because of large spillover benefits. However, in both cases, the effectiveness of Government spending goes down if allocations are skewed towards higher education and curative (tertiary) rather than preventive (primary) health care. Most of the studies mentioned above use cross-country datasets for their analysis. Due to the fact that the basic objective of public expenditure policies changes as national income increases, most studies concentrate on a particular region such as Africa. (Appleton, et.al.1996)

The results of these cross-country regressions are mixed. Most studies report that the direct impact of public investment on measures of education attainment is weak. Other variables such as per capita income, age distribution of the population as well as income inequality also turn out to be statistically
significant in cross-country regressions. However, after correcting for quality, Gallagher (1993) finds that public spending has a positive impact on education attainment. Similarly, using instrumental variable technique, Gupta et.al. (2002) report positive effect of public spending on education as a percentage of GDP and of the share of primary education in total expenditure. Urbanization also seems to play an important role in educational attainment in their results.

A similar analysis at the State level in India has been carried out by Kaur and Mishra (2003). For 15 non-special category states, their empirical findings from a panel data analysis of social sector expenditure and attainment indicates that public expenditure on education has been more productive as compared to health, and this relationship is stronger for relatively poorer states. However, the estimates are not robust to alternative functional specifications and hold only for random-effect in the panels. These estimates therefore, may not be very reliable.

To sum up, the literature on the effectiveness of public expenditure in the social sector indicates a larger impact on education compared to health in cross country or panel studies. Other socio-economic variables such as per capita income and its distribution, the demographic profile, urbanization also influence the effectiveness of such expenditure.

2.10 PUBLIC EXPENDITURE ON EDUCATION

Education is considered politically to be the social service, while educational expenditure is viewed as a welfare measure. Notwithstanding the fact that educational expenditure has theoretically been recognized as investment in human resources, expenditure on education, particularly higher education, has often been the soft target for the withdrawal of public support and the squeezing of the budgetary allocations, especially during the periods of resource crunch.

The discussion on the effectiveness of public expenditure on social sectors leads to an evaluation of the efficiency of such expenditure vis-à-vis an improvement in human development outcomes. Several studies have attempted to address this issue both in the context of developing and developed countries. The debate on the appropriate methodology and interpretation of the findings is still ongoing. Studies on efficiency of public expenditure on human development have
utilized both parametric and non-parametric methods, borrowed mostly from production theory. There are various types of studies that have been undertaken in this regard. First, some studies focus on comparing changes in efficiency associated with reform programmes in the public sector in specific countries. The comparability is limited, but they do provide some examples of best practices at the policy level.

Second, Government efficiency has been investigated using data on inputs of Government spending. In developed countries, these studies have dealt with health sector and social security reform, where the Government expenditure is the highest among the social sectors.

Third, some empirical research has been carried out to explain cross-country differences in social indicators which are used as proxies for Government output, after netting out the effects of income levels and distribution, as well as rate of economic growth (for instance Anand and Ravallion, 1993; Aturapane et.al. 1994; Karras, 1996; Bidani and Ravallion, 1997; Tanzi and Schuknecht, 1997). Differences in social indicators among developing countries have been attributed to variation in both the levels and also the efficiency of public expenditure (Kakwani, 1993).

Sharma (1998) discusses effectiveness of schools in developing countries. His observations may be summarized as follows. “Research on school effectiveness or, the attempt to locate ingredients of good and successful schooling, travelled from developed countries to developing countries in the late 1970s. In developed countries the socio-economic background of the students emerged as a major determinate of achievement at school. However, parallel research in developing countries found the variable of school quality far more significant. Generally, the difference has been attributed to two factors. One, that in developing countries population (i.e. people who follow conditional occupations like agriculture) tend to be less differentiated in term of socio-economic and educational backgrounds than in the developed world, making the pupil’s antecedents less varied and therefore, not a deciding factor for success at school. Second, there are wider variations in school quality in developing
countries than in developed countries. All schools have some minimum basic facilities in the developed countries. In contrast schools in developing countries can lack something as elementary and essential as a blackboard. Therefore, many researchers assume that the quality of the school, rather than socio-economic background of students is central to learning outcomes. Consequently, there have been many studies about impact of inputs such as libraries, instruction time home-work, text-books, teacher knowledge, teacher experience, laboratories, teacher salary and class-size. Further, Sharma observes that parents and public representatives in more developed areas are more concerned and vocal about children’s education, and consequently about the school. This is not surprising for modernization or development creates opportunities that can be exploited well by educated persons. The recent increase in the private, fee charging English medium schools in large, prosperous villages illustrates the process very-well. Moreover, development affects not only demand for education but also the capacity to translate the perceived need into action. In less developed areas even when villagers are concerned about the school, it is difficult for them to act upon this concern. The lack of a road can hamper in no mean measure the tendency to complain higher authorities and events such as an absconding teacher are rarely noticed by local newspapers in less developed areas where journalists and politicians do not go often. Teachers prefer to teach in schools situated in more developed areas that provide better living conditions and transport facilities. Therefore, ineffective and unsuccessful education should not be seen as a neutral or better-than-nothing phenomenon. It can very easily lead to misallocation and poor utilization of scarce resources. If school effectiveness is not given adequate attention there could be meaningless and redundant universal elementary schooling at great cost. Moreover, if improvement in school quality is undertaken without understanding and making room for the socio-economic context, than to a great deal of money could be spent without real results.

Some recent studies use information on both inputs and outputs (or outcomes) to calculate non-parametrically the efficiency of government expenditure in the social sector (Gupta and Verhoeven, 2001; Afonso et. al. 2003; Afonso and St. Aubyn, 2004). Previous examples of this approach are found in
the analysis of cost efficiency in health services, especially hospitals. (Wagstaff, 1989; Zukherman, 1994). These studies try to measure the efficiency of public expenditure in the social sector using Data Envelopment Analysis (DEA) or Free Disposable Hull (FDH) techniques that have been borrowed from production theory of the firm. Most of these studies are concentrated on OECD countries, while Gupta and Verhoeven (2001) try to extend the analysis to the case of education in developing countries in general, and Africa in particular, for three time periods. The study utilizes the FDH analysis taking government expenditure on education as the input and literacy, primary, and secondary enrolment as output. Their results show that there was an increase in efficiency in expenditure over time in Africa. However, it still lags behind compared to countries in Asia and Latin America. They also report that efficiency in public spending on education has increased in India between 1991 and 1995 according to their criterion. This claim however has not been investigated in detail in the study.

Afonso, Shuknecht and Tanzi (2003) construct measures of both public sector performance (PSP) and efficiency (PSE) with regard to social sector outcomes in evaluating 23 countries of the OECD. PSP aggregates economic and administrative indicators to rank the sample countries, while PSE weights the performance indicator with public expenditure. Using FDH methodology for 1990 and 2000, their rankings on the basis of PSP and PSE indicate that countries with smaller public sectors do better both in terms of performance and efficiency in achieving social outcomes.

The use of Government expenditure as input has come under criticism in cross-country analysis due to the fact that teacher salaries and cost of inputs vary across countries. Afonso and St.Aubyn (2004) uses non-monetary inputs such as hours in school and teachers per 100 students for a study of OECD countries. Moreover, they utilize both the FDH and DEA for efficiency evaluation, and note that the results differ for lower income countries such as Mexico, Hungary, and Poland. They note that this may be due to the imposition of convexity assumption in DEA, where as the FDH imposes no restriction on the shape of the frontier.
This recent literature on efficiency of public expenditure in the social sector has been critically reviewed by Ravallion (2005). He raises the question whether FDH or DEA techniques that are borrowed from production theory of the firm are suited for application to the social sector. Ravallion’s major criticism is focused on the lack of theoretical foundation for the empirical exercises, and the incomplete accounting of interdependencies between various types of Government spending that are related to improving social sector outcomes. The exercises of efficiency analysis need to consider (i) the appropriate sectoral allocation to total Government expenditure taking into account the complementarities between the outcomes; and (ii) efficiency within a particular type of expenditure, to account for the complementarities in inputs. Ravallion also suggests that the error term in regression analysis is likely to be highly correlated with both inputs and outputs, and proposes the use of lagged values as instruments.

Therefore, the literature on measuring the performance and efficiency of Government expenditures is varied, and new techniques and methods are being tried out with various databases for cross-country analysis.

2.11 CONCLUSIONS

Whether education in general and human development in particular is looked upon as a right, or from the goals of a social contract between the state and its citizens to enhance the well-being of all individuals in the society, it is evident that there is a significant role for public intervention. The responsibilities trusted upon the state in this regard necessitate expenditure on the provision and delivery of public services of a certain minimum quality. This is especially true in developing countries that suffer from high levels of poverty, inequality, and market imperfections (Mukherjee, 2006). Public interventions in education can lead to an improvement in the future income stream of individuals, enabling equitable distribution of wealth and help reduce poverty.

While the welfare-enhancing view of public expenditure on education is well-recognized, the complexity of the nature of education in terms of increasing both social and individual returns to investment makes the implementation of a
financing framework very difficult. It is seen in the review that as one progresses from the basic to higher levels of education, private returns increase faster compared to social returns. However, in most developing countries of the world, governments allocate significantly more public resources per student in University and higher education than in elementary or secondary levels. These large differences cannot be explained fully by scale economies in the provision of publicly funded school education system. Such differences are negligible for developed countries, indicating that possibilities for reallocation exist as a country moves from the low-income to the high-income group.

The literature on the effectiveness of public expenditure on education shows that there is varied impact across regions, as well as within countries at a similar stage of development. The efficiency literature points to institutional factors that affect the level and quality of public services. Recent research highlights the positive role that decentralisation can play in ensuring accountability and to undertake proper monitoring, especially involving the community. Community based initiatives are also being explored as alternative mechanisms for financing education through Public-Private partnership.

There is inadequate work done in India on the efficiency and effectiveness of public expenditure in different States and in India as a whole. There is one instance of a study examining the effectiveness of social sector expenditure for a subset of Indian States as mentioned above, but its findings are open to debate. On the efficiency aspect, recent research has introduced non-parametric techniques for social sector expenditure. However, such studies have still not been conducted for India at the State level. Another contribution in this field would be to separate out the private from public expenditure in social sectors, and differentiate between output and outcome indicators in evaluating efficiency of public expenditure, although unbundling the data may be a difficult exercise. This however, would give us a better picture of the effectiveness and efficiency of public expenditure in the social sectors.

What emerges from the review of the literature is also a point that has not been researched fully – that the efficiency and quality of public service delivery
are important from the equity perspective as well. In a mixed system such as India where education is provided both by the Government and the private sector, large differences in quality between Government and privately-run schools might not be effective in achieving an equitable distribution of the fruits of economic growth. The scope of the discussion of the impact of public expenditure on education therefore, goes beyond resource mobilization. Utilization of resources, its efficiency and its outcome in the form of quality of service delivery is crucial for achieving higher levels of human development both in India and other countries of the developing world.

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