Chapter 1

Introduction
Chapter - 1

INTRODUCTION

1.1. Introduction

Public expenditure is the sum of expenditure on current and capital account on the public sector and is by the definition equal to the sum of consolidated public sector receipts. It reflects the policy choices of governments and represents costs of carrying out these policies. Public expenditure plays an important role in economic development, it is in a large measure, governed by economic, political and social forces.

Public expenditure is one of the magic tools through which fiscal managers influence economic events which cause the necessary variations in consumption, saving and investment depending on the economic compulsion of the situation. Moreover, the influence of public expenditure on development is particularly clear when substantial increase or cuts take place. Thus, Public expenditure occupies the same place in the study of public finance as consumption occupies in the study of economics. While the consumption is starting point of economic activities, public expenditure is the summation of financial activities of the state. However, public expenditure is not the end; it is a means of rendering services to the community. With a view to understand as to how public expenditure serves as a central instrument in pursuit of fiscal policy goals, it is useful to know the classification of the various components of Government expenditure in terms of influence on various segments of the economy.

The central Government has adopted a new classification of public expenditure from 1987-1988 budgets. Under the new classification, public expenditure is classified into two heads namely, non-plan and plan expenditures. Non-plan expenditure is divided
into revenue expenditure and capital expenditure that consists of both developmental and non-developmental categories, which includes expenditure on defence and internal security, interest payment, grants-in-aid, subsidies, pensions etc. whereas, plan expenditure mainly includes expenditure on economic services (agriculture, industry, energy, communication, transport, science and technology, and environment) and social services (education, health, employment, nutrition, housing, and other general services).

1.2. Theoretical Background

Although the theme of public expenditure has attracted some of the best minds in the field of economic enquiry its importance and gravity has been recognised only recently. As it was pointed out by Gupta (1968), The study of public expenditure was more or less neglected till 1920's, the classical economists threw very little attention to study and analyse the merit of public expenditure, whereas much of the time was dedicated to understand the growth of public expenditure and the aspects of taxation. Thus, studies on the allocation, trends, and patterns of public expenditure have not been fully explored.

This neglect towards public expenditure can be explained in different Ways,

i. Earlier, the majority of the Governments had adopted a policy of laissez-fair, so the Governments in those days took little or no interest in developmental works.

ii. Many economists were of the opinion that public expenditure does not come under the scope of public finance writings.

iii. Most of the modern Governments undertake productive activities, which could as well be undertaken by private enterprises. Peacock and Wiseman in their study
have also considered this problem. To quote the duo "for our purpose it is most important conceptually at least, to distinguish those activities of the Government which arise out of collective demand for goods and services, and those which are part of the ordinary productive activities of the community".

iv. In the study of public expenditure, taxation as revenue generating mechanism attracts attention of researchers and administrators as its validity can be easily tested, whereas expenditure were unhelpful for certain specific purposes cannot be scientifically tested.

This neglect of public expenditure is not justifiable on any counts because Harris, Samuelson, Musgrave, Peacock, Wiseman, and others have initiated a discussion on the theory of public expenditure. Moreover, in recent years serious attempts were made for clear understanding of the concept, particularly paying more attention to the relationship between Government expenditure, taxation and the growth of economic activities.

However, as the Government interference on the desirability of the public expenditure increased, the nature and approaches of new theories of public expenditure have also taken new shapes. Now, the objective of the public expenditure have undergone qualitative changes in the sense that while acceleration of growth undoubtedly remains the paramount objective, the social and other aspects of public expenditure have also emerged as major policy objective. And, arguments among researches have paved the way to test various approaches, which deal with what expenditure should be made and why or whether certain types of public expenditure are beneficial to the country. Even though the study of public expenditure is growing and more attention is being paid to the
development of the study of public expenditure. The focus has been more on macro level public finance (cross-country analysis) and development of normative theories only. The studies of public expenditure on social services and its micro components such as education and health at district level have been neglected. Thus, an attempt has been made in this study to fill these gaps.

1.3. Importance of Social Sectors Expenditure on Human Resources Development

The concept of development has undergone radical changes in the recent past and human development has come to acquire importance in development thinking. In fact, human resources development is a broader term, which is associated with improvement in the quality of individuals in terms of their abilities and skills; it encompasses education and training, better health, nutrition, and family welfare programmes. Human development is not an end in itself, but also a means of economic progress to bring about growth with social justice. The social unrest caused by growing disparities can also be effectively checked by creating human capital before the economic growth takes-off, via the process of social change and social development of a region. This in turn depends, largely, on the performance of certain vital sectors that are collectively known as the social sector.

The term social sector is generally used to refer to all those sectors that are essential for improving the quality of life of the people. It encompasses sectors like education, health, and nutrition, as well as sectors concerned with eradication of poverty and other programmes of social welfare (Prabhu, 2001). From a broader Perspective, the
issues related to gender discrimination, environmental degradation, etc. also come under the purview of social sector development. The development of this sector is very crucial since it provides the requisite framework for attaining a desired level of sustainable development. The main asset of the poor is clearly their labour and, both education and health services improve the productivity and earnings of workers. Education is considered a major remedy for many problems faced by developing countries. For example, high fertility rates are adding to population pressures in several countries. It is widely accepted that female education helps to lower fertility rates. Moreover, educated parents are in a better position to look after the education and health needs of their children.

Similarly, the linkages of health to poverty eradication and long-term economic growth are strong. The burden of diseases such as HIV/AIDS can slow the economic growth of developing countries. Education and health are important tools to empower poor people and overcome exclusion based on gender, location and other correlates of poverty. According to the United Nations Development Program (UNDP), with limited education and limited access to health services, the poor are not adequately prepared to engage productively in society. Empowering the poor is a necessary ingredient of development, and gives them equal chances in participating in the economic development process. Human capital assets are considered as an important factor in the pursuit of sustained economic growth. The Millennium Development Goals set at the World Summit on Sustainable Development (held at Johannesburg, South Africa in 2002) also emphasize the importance of social sectors. Within the social sector, education and health are two vital areas that can be of great strategic importance in the process of human
development. A number of millennium development goals are directly related to education and health. These are to (a) achieve universal primary education, (b) reduce child mortality, (c) improve maternal health and (d) combat HIV/AIDS, malaria and other diseases. (e) ensure environmental sustainability (f) develop a global partnership for development. (g) Promote gender equality and empowerment of women; Most of other millennium development goals have strong linkages to education and health. On top of all these goals, the over-reaching goal is the eradication of extreme poverty, for which the development of human resources through education and health is key.

1.4. Early Attempts at Estimating Importance of Human Development

Adam Smith provided the first major contribution to the theme of education and health in economic growth. He put forth the idea that “whatever may be nation’s resources its wealth mainly depends in its productivity.” He argued that division of labour led to an improvement in dexterity and skill of workers thereby contributing to production in the economy. Among those authors prior to him, Sir William Petty referred to the concept of Human capital and he attempted to measure the monetary value of human beings through introducing wage bills and its impact on market rate of interests.

Dublin and Lotka (1930) used a more scientific procedure to calculate the present value of individual’s net future earning, and estimated a man’s economic value to his family. They asserted that some skills and abilities that are acquired at a cost should be classified as human capital. J.S. Mill (1938) paid attention to the acquired skills of human beings through education and health and classified these as indicators of human capital. He also recognised the value of human beings as capital and urged for an inclusion of
expenditures on education and health that raised labour productivity in human capital, so that it may eliminate social injustice. Later on, Kendrick (1948) stated, Education, and health are complementary in producing a better type of labour unit. “A more healthy man is definitely more productive than a less healthy one,” if education contributes to the knowledge of the worker, health contributes to his labour power.

Schultz (1961) introduces formal induction of human capital concept into the mainstream economic analysis. Becker (1962) added another dimension of on-job-training to the formation of human capital and influenced the analysis of firm-specific investments in education and health. A due credit may be given to Gunnar Myrdal (1964) for drawing attention to the fact that investment in human capital via, education and health provides some relief of social security to weaker sections of the population, and is essential for breaking vicious circle of poverty.

Strumlin (1966) while assessing the importance of investment on education as a quality improvement factor among workers in Russia estimated that primary education in Soviet Union has increased efficiency of labour by over 40 per cent, secondary education by over 100 per cent and an education completed with training at the tertiary level by over 300 per cent. It was concluded that the entire cost of extending the school network would be covered by the consequent increase in production and hence economic development.

1.5. Recent Studies on Importance of Human Development

In recent years a plethora of studies have been conducted to trace the importance of education and health on economic development. At the same time, there has been
greater emphasis on human resources development rather than mere economic development; because public expenditure on education and health is closely related to human resource development and is considered as public good particularly of the basic level since, they benefit a nation’s social and economic growth as a whole.

For the first time in India, the concept of human resource was introduced in 1973-74 budgetary classification. Before 1973, very few studies were conducted to analyse the expenditure on education and health but not on social sector as a whole. The Education commission (1964-66) headed by D. S. Kothari recognised education as an investment and its contribution to development, so he advocated for diverting a considerable investment towards education. Subsequently, many studies evaluated state as well as union Government expenditure on education and health namely, V.K.R.V Rao (1964, 1970), Singh (1967), Kothari (1966a), V. Pandit (1969), Woodhall (1969), Panchamukhi (1975) and Baghavati (1973). All the studies showed that public expenditure on education as well as health is very low, they suggested many policy measures, and supported the Kothari committee’s recommendations for higher outlay for education.

The importance of investing on human capital has become much clearer in recent years because, During the 1970s the strategy of “growth with social justice” was the popular slogan. But from 1980s onwards, i.e., from the onset of reforms the slogan of “equity with stabilisation” appears to have become more relevant in developing countries, which had paved the way for massive expansion of Government activities in general and particularly in the field of human resource development. After the UNDP publication of the Human Development Report in 1990, the studies on public expenditure on social sectors has increased considerably. A Study by Weil (1991) found that growth in human
capital is a centrally important contributor to economic growth. He used the fraction of the working-age population attending secondary school as a measure of human capital investment at any point in time. Whereas a model using only physical investment variables performed poorly in explaining economic growth, the same models performed well when human capital was included.

In several of his writings, Aamartya K. Sen (1995) argued that, “public expenditure on education and health greatly enhances human capabilities; in other words, it reduces the extent of deprivation.” Further, he argued that investment in human resource development is more important to bring about accelerated economic development with social justice than mere investment in physical capital. The most important factors, which lead to human resource development, are education and better health, which promotes factors of the ability that individuals have, to him education contained a high economic value so he advocated for diverting a considerable part of community’s wealth to education. In addition, being a source of enjoyment health status is also a valid indicator of human development. So every effort is being made to see that health and health related activities are systematically planned and coordinated at all levels.

Sen and Dereeze (1995) have identified education and health as two important “promoting” factors. They point out that education and health enhance intra personal achievement of person by inculcating in him factors contributing to the development of skills, efficiency and productivity of labour and hence creation of human capital. Further, they argued that these influences need not work for the person who received education and health care, but expansion of these can have influence that go much beyond the
immediate personal effects. Many studies were conducted to investigate the effectiveness of public expenditure in education and health on social development outcomes, such as enrolment rates, infant mortality, life expectancy, and other outcome indicators by Anand and Ravallion, (1993); Appleton et al. (1996); Filmer and Pritchett, (1997); Mingat and Tan, (1998); Gupta et al. (2002); Baldacci (2004); among others). Most of these studies use cross-country data sets for their analysis. Because the basic objective of public expenditure policies changes as national income increases, most studies concentrate either on a sub-sample of developing/transition economies or on a particular region such as Africa. The results of these cross-country regressions are mixed. Many studies have reported that the direct impact of public investment on measures of education attainment is weak and other variables such as per capita income, age distribution of the population as well as income inequality turn out to be statistically significant in cross-country regressions.

Prabhu S.K. (2001) stated, “The most valuable of all capital is that invested on human beings” via, health and education. Investment in education improves living conditions and reduces poverty. Whereas, investment in health is of great importance both from the point of view of the individuals and the nation as a whole by reducing production losses caused by workers illness. The idea that state should endeavour to eliminate poverty and inequalities, social and economic through deliberate policy measures of human resource development has been accepted as the prime objective of the state planning in developing countries and its benefits are strongest when crucial other areas of Public policy are equally well managed.

The following diagram (flow chart) explains the links of public expenditure on education and health with development aspect of the economy.
Chapter I

Introduction

Chart 1.1. Links of Public Expenditure

Source: World Bank, 2006
1.6. Economic Reforms and the Public Expenditure on Education and Health

Economic reforms, typically in the form of liberalisation, privatisation, and globalisation have far-reaching effects not only on the economy but also on the society of a country, and have now been amply appreciated. It should be emphasised that just as economic reforms have effects on the components of social sector, similarly the social sector developments would have implications for the economic reforms. Hence, it is desirable to have a clear idea about implications of these reforms on social sector in India for the purpose of meaningful policy interventions. In this section, an attempt has been made to examine the relationship between public expenditure on education and health and economic reforms in India. In 1991, India faced a macro economic crisis in the form of drastic fall in foreign exchange reserves accompanied by cut off in foreign private lending that swiftly followed the sharp downgrading of the country’s credit rating, and Inflation was high and rising. Both fiscal and current account deficit were unsustainably large.

The gulf war in August 1990 sparked off the chain of events leading to increasing prices of oil, while the causes of crisis have been exogenous, political instability, declining agricultural prices, rapid economic growth, and natural calamities within the country compounded the severity of the situation. (Krishnamurthy, 2006). The experience of several developing countries that have embarked upon a process of macroeconomic reforms during the last 20 years shows that the accentuation of reforms leads to reduction in public expenditure on basic services and programmes, directly related to social service
development or human resources development. (Mahbub Ul Haq, 2001) Even the European countries, which have experienced reforms, have had diverse experiences with respect to the social impact of reforms.

In this background, the new Government felt the need to introduce some measures in order to raise the tempo of the overall development of the economy in the form of stabilization policy (SP) and structural adjustment programmes (SAP). While framing the reform measures economists and planners believe that social sectors of the economy should receive prominent place, and every effort should be made to integrate economic sector with social sectors. Because in actual practice the social sector is treated as the residual sector in policymaking. The fiscal reform discipline and fiscal consolidation introduced under reform process have been the integral part of fiscal reform. While the expenditure compression is the sole reform measure under the stabilization policy (SP) with regard to expenditure reform, the structural adjustment programme (SAP) has much wider agenda including the expenditure targeting, improving the efficiency and productivity of public expenditure. The reduction of fiscal deficits is normally included in the conditionality of structural adjustment programme and consequently Government expenditure have to be cut in order to meet the targets of reducing fiscal deficits.

The policy makers generally feel that the effect of the measures of the economy in size of the budget or of the plan, the social sector appears last in the list to be considered (for additional resource allocation). As against this when the size of the budget or the plan needs to be reduced is what normally observed, then the social sector appears first in the list for slashing the allocations. This has also been pointed out by related studies by Cornea, Jolly, Steward (1987), Dev and Mooi (2002). In the same way when the non-plan...
Because education and health constitute nearly 90 per cent of the expenditures of non-plan, account meant for only the maintenance of the assets and the programmes. P. R. Panchamukhi (2000) While analysing the data from 1987-88 to 1997-98 for states as well as the Centre, P.R. Panchamukhi (2000) observed that the new economic policy contains an important fiscal component, i.e. bringing down the size of the budgetary deficits to the level of 5 per cent of GDP. The direct impact of this would be on social sector, which has to withstand the worst of deficit reduction, as the chance of this sector getting more funds increases. Thus, the state Government feels encouraged to create budgetary deficits when there are deficits in the central budget. This happens mainly due to direct relationship between Government deficit and Government expenditure. He also found that economic reforms were unfavourable to countries like India, as it increased the inter-state disparity in social sector expenditure in the country.

Another study by Prabhu and Charttarjee (2003), Using regression analysis, has tried to show impact of public expenditure on social services across Indian states, the study found that per annum growth in expenditure (in total as well as in per capita terms) on medical and public health and education, in case of poor states, has gone down during post economic reform period. For instance, expenditure on education except Punjab in the category of rich states—Haryana, Gujarat, and Maharashtra has shown poor performance during the post-economic reform (1992-2002) period. Similarly, the category of(BIMARU) poor states like Bihar, Madhya Pradesh, Rajasthan and Orissa have also shown poor performance in terms of expenditure on education during post-economic reform period. The declining expenditure of states on education and health especially
during the post reform period has adversely affected the level and structure of human
development among Indian states. The study suggested an urgent need to augment the
volume of state expenditure on social sector in order to ensure better standard of life.

Thus, what is generally glossed over is that the economic reforms in India and
expenditure compression are inter-related. Moreover, cutbacks in expenditure are likely
to impact more directly and heavily on allocation for social services in general and on
education and health in particular thereby adversely affecting human development. It is
from this angle, a study of public expenditure on education and health during the
economic reforms regime is important.

1.7. Empirical Studies on Relationship between Public Expenditure on
Education and Fiscal Outcomes

Role of education in nation building is not merely a question of social equity and
equipping persons for securing employment, it is much more than that, and this is
universally recognized. The human resources development revolution has also placed
investment in education on the priority list of Government across the nations, against this
back ground, it would be useful for the researchers, to understand this genesis for the
following reasons.

- One of the important objectives of this study is to find out the importance of
  expenditure on social sector. A brief review of the literature would enlighten us to
  know the importance of investing on education in the process of human
  resources development.
This well provide useful tool into the understanding the pattern of Government expenditure on education from macro-level to micro level and their inter-relationships with the human resources development.

The productive activities of the Governments have so much changed in size and character, over the period that comparable data on expenditure is very difficult to gather.

Education clearly is one of the most important factors contributing to the creation and development of human capital. It opens new horizons, raises the quality of life, and regarded as most powerful catalyst for poverty reduction.

Adam Smith (1937) recognised the importance of education in economic development; He included the acquired and useful abilities of all members of society in the definition of fixed capital. Further, he stated that this fixed capital generates employment and paves the way for progressive redistribution of income in favour of economically weaker sections of the society leading to economic growth. Alfred marshals (1961) stated, “The most valuable of all capital is that invested on human beings. He held the view that education contained a high economic value and advocated for diverting a considerable part of communities wealth to education”.

It is worth mentioning here a study by Schultz, (1961) on expenditure and development both for developed and developing countries, which found that differences in human resources explain a significant part of the variation in Gross National Product per-capita. Studies in USA show that less than two third of the growth of the GNP could be explained by the traditional factors like capital and labour. Most of these studies have
adopted the growth accounting approach, which tries to account for the residual growth not experienced by conventional factors like labour and physical capital. And most of the developing countries have a reverse trend of development compared to developed nations. He also observes that labours have become capitalists “not from a diffusion of the ownership of corporation stocks, as folklore would have it, but from the value. He rightly concluded that education is important investment in the advancement of a nation.

Gupta (1968) conducted a study to test “peacock wise man displacement effect hypotheses of united states, Canada, Sweden, U.K., and Germany. In this study, he had chosen effect of income on displacement effect and attempted to examine the income hypotheses, that ratio of Government expenditure measured in terms of per capita GNP. The reference period was averages of 15 years. He showed that the hypotheses of increasing share of Government expenditure in Gross National Product holds good only for low-income countries and the share diminishes as the level of economic development increases.

In 1974, an empirical study was made in West Malaysia by Donald Snodgrass. He examined the extent of expenditure on education among welfare of races, Regions, and income size groups. The principle conclusion was that the ability of LDC fiscal system to effect significant financial transfers has sometimes been underestimated. Jallade (1974) attempted to compare the benefit of education with tax burden for the year 1970. He analysed the financing pattern of education in Colombia, among income groups. The study found that benefits are always re-distributive in nature depending on economic conditions of the area.
Benavot (1985) studied the phenomenon of expenditure on growth for the years 1930-1980 across 110 nations, and found that education had a significant positive impact on the economic growth of 110 developed and developing countries. For the period 1945-80 Lau, Jamison and Louat (1991) found economic growth powerfully affected by primary education in twenty-two East Asian and Latin American countries and by secondary education in fifty-four East Asian, Latin American, African, and Middle Eastern countries.

Gallagher (1993) shows that, after correcting for its quality and efficiency, expenditure on education positively affects educational outcomes. Mehrotra (1998) concludes that high education attainment is associated with relatively high public expenditure on education and a relatively high share of primary education in total expenditure on educations. However, Filmer and Pritchett (1999) find that, once per capita income is taken into account, public expenditure on primary education loses explanatory power. Lopez, et al (2001), have studied the impact of public expenditure on education. They argued that any nation which accords greater priority to human resources development will be successful in enforcing better education to its citizens.

An attempt was made by Gupta and Verhoven (2001) to assess the effectiveness of public expenditure on the social outcomes during 1984-1995. They included not only social aspects but also teachers, salaries and other crucial inputs. They found that higher expenditure on education does not necessarily improve social outcomes unless the efficiency of Government expenditure so improved. Gupta (2002) has conducted a cross-sectional study of 50 developing countries, by taking into account enrolment rates in primary and secondary schools. Persistence through grade 4 and primary school dropout
rate. He tried to determine overall level of expenditure on educational allocation. His main intention was to trace reverse causality like expenditure more on primary education will lead to higher enrollments. But a higher demand for primary education is positively related to educational attainment.

An attempt was made by Tilak B.G. (2002) to examine expenditure outcome relationship on education. The study was based on data from 118 developing countries during 1971-2000. The study found that public expenditure on education directly results in increased better educational outcomes. A better analysis for tracing expenditure on educating for creation of human capital stock in China was made by Wang and Yao's (2003) during the period 1991 to 1995 by using new school graduates as flows that were added to the human capital stock. Data on average year of schooling were obtained from 1990 census. They found that due to the investment on education the average national growth of years of schooling grew substantially and had a direct impact on growth of human capital and which made significant contribution to China's economic growth. The impact of investment on education was studied by Roberts (2003); he found that most of the developing countries, public investment alone is not sufficient to improve the quality and quantity of primary education, further he found that there is direct relationship between primary school complication rates and educational outcomes.

Kaur and Misra (2003) uses cross-country data to analyse the intermediate school enrolment rates across 15 Indian states during 1985-2001, the study draws some interesting inferences relating to education, they are
Public expenditure on poorer states is highly productive compared to rich states.

The role of public expenditure on primary and secondary education has more positive results.

As the stages of education moves upwards, private funding plays greater role.

It was also found that, there is a direct relationship between expenditure on education and outcomes of education.

A study was conducted by Xiaoleiqian and Russell Smyth (2007), to analyse the impact of education on china's economic growth over period 1990 to 2000. It has been addressed essentially to examine linkages between aggregate real output of each province and inputs of capital and labour. To examine these concepts data's from provinces in 1990 and 2000 were taken into individual account. At the later stages human capital stock variables were constructed with the help of average years of schooling in each province, they found that the effect of expenditure on education has depended on education, capital and educational technical progress, which are complementary to each other further they found that education has a positive and significant effect on economic growth.

An empirical study to examine whether public expenditure on education is more effective in improving educational outcomes in countries with good governance was made by Raj Kumar and Swaroop (2008). The data on educational results was collected from 57 countries to test the hypotheses that education is egalitarian in nature. The survey covered 101 observations using annual data for 1990-1997 and 2003. They use governance variable share of public primary expenditure on education in GDP to estimate the impact of expenditure in education. Finally, it was found that it is only through interrelating expenditure and good governance the goal of education attainment can be achieved.
1.8. **Empirical Studies Relating to Rate of Returns of Expenditure on education**

In this section, the studies on rate of return of expenditure on education have been reviewed. It is a well-known fact that education-expenditure will always yield positive results. Many studies have been carried out both in developing and developed countries to estimate the economic returns to education. An outstanding work with regard to rate of returns of expenditure on education was carried out by Panchamukhi P.R. (1965) on educational expenditure in India. His study revealed that the total cost of university and professional education from 1950-51 to 1959-60 was about Rs 700 crore; of this the major share was taken over by the private cost consisting mainly the earnings forgone by the students. The relevance of both private and public allocations while analysing the respective allocative behaviour was clearly brought out in the study. Hansen (1970) has also contributed in this regard by estimating social and private rates of return for all levels for school education. He found that there was a consistent decline in returns as the level of schooling increases, but the overall returns to education were quite higher as compared to the alternative investment in physical capital.

An attempt on the rates of returns education in India was made by Harberger (1965). His estimates of social rates of return to education showed that the economic return to investment in physical capital is higher than the economic rate of return to secondary and higher education. For the analysis, he made an assumption of 100 per cent employment for all except primary level where he assumed an unemployment level of 6 per cent. He also did not make allowance for the ability factor though he was aware of the fact natural abilities explain partly the extra earnings of highly educated people. Same
kind of analysis was done by Kothari (1967) though he mentioned about unemployment and ability factors, he did not make any allowance for these factors, and as such, he estimated a very high rate of return to engineering education of about 22 per cent. Husain (1967) made adjustments for unemployment and mortality rates but did not take into account ability and growth factors, the study estimated social rates of returns for matriculates, graduates, postgraduates, and professional graduates. Nalla.G (1967) while calculating rate of return on education consider only the social rate of return to education, which yielded lower returns to education, at different levels. However, his study suffered from making proper adjustments for unemployment and rise in income due to economic growth.

The attempt by Blaung (1969) and others is considered a comprehensive work on Indian investment in education. They estimated both private and social rates of return to different levels of education after making adjustments for unemployment, wastage, economic growth factors, and ability factor. Three different values of alpha co-efficient have been used to indicate lower and upper limits of estimates. As for unemployment, sixteen months and six months figures have been assumed as waiting period before obtaining first job, for matriculates and graduates respectively. They found out that the social rate of return at primary and middle level to be higher than alternative social rates of returns. They also found out that the private rates of return to education for primary and matriculate level are higher than the alternative private rates of return. Pandit’s (1976) also conducted a study on rate of returns; he made several adjustments with regard to earnings and costs. His estimates also supported higher social rates of return at primary and Irwin Gillespie (1977) middle stages of education.
Brain McDonald and Brain (1980) have conducted a study on public education benefits for senior high school students in America; they found that benefits may vary for the same location depending upon the criterion used for expenditure. The study also found that benefits are more favourable in pro-poor, pro-black, and particularly pro-male in black dominated areas. The World Bank (1980) has conducted a study in Malaysia to study crop productivity among literate farmers; the study found that primary education results in increased crop productivity for farmers. This is because educated farmers are in a better position to adopt improved technology. Another study on same concept conducted by World Bank (1990) relating to Africa indicates that farmers with four years of education (the minimum for achieving literacy) produce about 8 per cent more than farmers who are illiterate.

The impact of Government expenditure was studied by Mishra (1982) for three taluks of Gujarat state, he chose three criteria, the first relates to finding out the group of people who received money spent by Government by way of supplying goods and services – that is, classifying the beneficiaries into producers of food crops, producers of cash crops and other items, agro based industry, manufacturing industry, property owners and government. The second relates to the money-spent employees in the form of wages, salaries, and other receipts. “The third relates to the money spent going to direct beneficiary groups. The net result of these exercises according to Mishra was that most Government expenditure (on education) ultimately reaches those in secondary and tertiary sectors and very little goes to producers of food crops who are the actual majority in the country.
The study by Atul Sharma and Tulsidhar (1984) has analysed the impact of various components of the Government expenditure. It has been addressed essentially to evaluate the sectoral sensitivity to changes in the Government expenditure on education requirements for the period 1971-72 in Andhra Pradesh. The study clearly showed that expenditure on education generated higher output effect than the other expenditures. With a view to assessing the distribution of education benefits amongst the various sectors of the population, Maitra (1986) had conducted a household survey in West Bengal during 1964-65. Maitra’s study took account of the taxes paid by the household by using estimates of incidence of indirect taxes by levels of consumer expenditure. The study found the impact of expenditure on education has had widespread effects in West Bengal.

An attempt was made by Reddy and Sudhakar (1989) in Andhra Pradesh to answer whom did Government expenditure benefit? During the period 1975-76 to 1984-85? For study purpose, NSS data of 1975-76, were taken as the base of estimate the benefits. This study had taken the view that all expenditure; current and capital confer benefits in the year in which they were incurred. In the choice of criteria, the deductive approach, “where the hypotheses are formulated on the accrual of benefits from different categories of expenditure and tested empirically if necessary and assumption made on that basis” was followed. The assumptions thus made were applied to distribute expenditure benefits. The study find both in terms of per household benefits and in terms of effective benefit incidence, high-income group benefited most during the study period.

Chandawat (1992) conducted a random sample survey of households in a revenue district (Jodhpur) of Rajasthan State in the year 1977-78, to analyses the beneficiaries of Government services. Households were selected on the basis of the probability proportion
of households in urban and rural areas. The flow of benefits from Government expenditure on education were considered, and was divided among various beneficiaries of these services. It was assumed that the current flow of benefits from past and current capital expenditure was equal to the level of capital expenditure in the particular year. For study purpose all, the members irrespective of the age group were covered in the study. For identification of beneficiaries on education, the quantum of benefits was estimated on the basis of number of children of that household going to school in the year of reference. The members of the family who had education earlier than the reference year had not been considered while calculating direct monetary benefits from education.

The total expenditure on education by rural and urban was divided by the number of children going to schools to arrive at per-student expenditure in education. Per student, expenditure on education was multiplied by the number of school going children in a family, in the year. The per-student benefits in each income group was calculated on the basis of dividing total benefits received by all the households to total number of households. The results of Chandawat's study indicate, from Government expenditure on education in the relevant year and in study area were greater in urban areas than in rural areas. It was clear from the data that the benefits from public expenditure on the education were not equally distributed among various income groups in urban as well as in rural areas. It indicated that the rich households had received more benefits from expenditure on education than the poor households in rural areas had.

Though the researchers have established a relationship between increases in educational expenditure and economic development, fears have been expressed about an exact causal relationship between the two. This may be due to the data limitations as well
as the influence of other factors like social class, potential trainability, employer’s preferences, parental wealth etc.; nonetheless, if one cannot exactly separate out the contribution of education in this regard, these factors altogether cannot nullify the impact of education in fostering economic development.

1.9. Empirical Studies Relating to Public Expenditure on Health

While the studies reviewed selectively until now belong to the education. In this section, similar studies attempted on health are reviewed. It should be noted at the outset that, both policy makers and administrators have recognised the importance of education in fostering not be neglected. Dreze and Sen (1995) have rightly pointed out that education and health combined together will bring about valuable contribution to the economy.

Being a source of enjoyment health status is also a valid indicator of HRD and consequently economic growth, so investment in health has multiple dimensions. The provisions of basic needs will improve the quality of human resource. The poor workers, who generally are in a spirit of resignation, will become healthy and more productive and thus, participate more effectively on the development efforts. Moreover, higher level of living will increase the survival rate at births, which eventually reduce birth rate and thus reduce the growth rate of population as well. The main purpose of investing in health according to Streeten, (1980) is to reduce the risk of mass deprivation and to provide an opportunity to everyone lead-on healthy life.

It would be useful for the researchers, to understand this genesis for the following reasons.
One of the important objectives of this study is to find out the importance of expenditure on social sector. A brief review of the literature would enlighten us to know the importance of investing in health, which is a part of social sector; in the process of human resources development.

It is well known that expenditure on health in India is dominated by private expenditure. The greater reliance on private delivery of health infrastructure and health services therefore means that overall these will be socially underprovided by private agents, and denies adequate access to the poor.

Too much reliance on private expenditure has adverse outcomes not only for the affected population but also for society as a whole. It also affects current social welfare and labour productivity, and of course harms future growth and development prospects.

This is why the perceptions that Government expenditure on health has been further undermined, and need to be investigated. The literature available on health economics in general and public expenditure on health in particular is very vast and extensive it may be difficult to highlight all the studies in a micro-level study of like this, hence the studies which are relevant to objectives of the study are reviewed below.

Selma Mushkin (1960) in his study on investing in health found that, investment in health would accrue tremendous benefits, he feel that malnutrition and under nutrition have negative impact on labour productivity. By removing these deficiencies the physical stamina can be improved, which increase working time and productive potentials of workers. Haq (1980) in his study on international comparison of poverty and basic needs
found that, the only asset the poor worker possesses is his hands. The returns from such asset are determined by the status of his health, which can be enhanced by public expenditure. As his health improves due to expenditure, he is likely to engage himself in relatively hard task or for longer hours or both.

Nichter (1980) conducted a survey of South Karnataka. He made an empirical examination of 82 poor rural families who benefited from public expenditure in the study area. He divided study into 3 divisions and developed the hypotheses about the expenditure benefits. He found that families benefited from public expenditure always spend 2% of an average family income. Whereas, the families who are not benefited from public expenditure, spends relatively more. Grossman (1985) made an analysis of demand for health investments. According to him, health and wealth are inter-related. Individuals consumed health care not because they valued health per-se but because they improved their stock of health which is used as a productive resource in valuing health as a consumption good if sick time is reduced (disutility is reduced,). With a view to assessing the benefits of the expenditure on health amongst the various sectors of the population, Chatterjee (1988) found that health infrastructure, but not expenditure had a positive and significant effect on expenditure on health to have a positive impact on health attainment. There is good reason to expect expenditure on health to have a positive impact on health status through direct and indirect effects. However, to capture the precise nature of the impact in quantitative terms, it requires rigorous and intricate modelling exercises.

A study conducted by Suchetana (1989) in Jalgaon district of Maharashtra to estimate expenditure on health found that the per-capita out of pocket expenditure always
exceeds the public expenditure. Generally, per-capita expenditure on health increases with the increase in income which shows people are less dependent on public investment. The benefits from medical services reveal that rural household receive lower benefits from medical facilities than their urban counterparts. It was also found that the upper income groups have received more benefits than lower income groups in urban areas, and the lower income groups have received comparatively more benefits in rural areas. To examine the public expenditure effects on health status a study by Bhatt (1991) observes that Government expenditure has a significant effect on post-natal mortality rate, he found in India rich, and middle-income groups always prefer private health facilities. So the poor are always fond of Government health facilities.

A study conducted by Chandawat 1992 in Gujarat to analyse investment in health. Found that expenditure on health services enhances the productive capacity of the individuals concerned. They would earn more and this affects the distribution of income. Which in turn enhances human development the benefits from medical services reveal that rural household receive lower benefits from medical facilities than their urban counterparts. In current prices, the benefits from public health, Sanitation and water supply were comparatively more equitably distributed. It was found that Public services provided by Government were fewer in rural areas than in urban areas. Illiterate villages thought that whatever Government provided was better than nothing. It was also found that private costs were real constraints for poor families. Hence, poor people availed themselves of less educational, medical and health service facilities as compared to the well to do people.
Focussing exclusively on public expenditure on health, Reddy (1992) observes that Government expenditure on health in India stands at 2.36 per cent of its GDP in 1990-91, which is rather impressive by developing country standards. Eighty four per cent of the entire public expenditure on health is incurred by state and a Union Territories (UTs) Government, as health is on the state list. Both the state and the union Governments give top priority to medical and public health, which accounts for 49 per cent of the government's health budgets. Tulasidhar (1993) has shown that per-capita public expenditure has a significant effect on post-natal mortality rate. Jolly (1986) found that the performance of the family planning programmes was explained more by socio-economic variables, notably literacy, rather than programme input variables.

Duggal Peter (1996) in his comprehensive study on the public expenditure outcomes of health in eight states of India, selected forty districts samples consisting of 160, towns covering 1,20,000 populations on and including taluks and rural areas (to test variations . by using populations density, employment tertiary sector and family in come as outcomes of expenditure on health . He found Punjab Kerala and Tamil Nadu have the highest expenditure on health in eight states and for most of the common function of expenditures health states, and also found wide differences in the results of expenditure across states. The major finding of his study is that health care provisions are heavily based against the rural sector and in favour of the urban sector. The extent of disparity varies from state to state. States with a high disparity in health provisions also display a high disparity in expenditure on health between rural and urban sectors.

Ahuja (1996) analysed the benefits from public investment on health among households in India, she adopted a subsidy approach. Where, public expenditure is regarded as social good, and in the absence of a better indicator. The distribution of
public expenditure was done according to the number of urban and rural households. The study assumes that each household benefits equally from the public health services; it was also observed that in general, expenditure on health was regressive, i.e., poor-poor on the whole poorer households benefit more than richer households do. William (1999) estimated losses of earning due to poor health in developing countries and its relationship with public expenditure. His study shows that health status is significantly related to earning of workers, including labour force participation, weeks worked poor year, hours worked per week and earning per hour, which depended on expenditure on it.

Bhatt R (2000) estimated that public expenditure on health, in Karnataka. He conclude that, some areas has poor health outcomes due to unregulated private sector and high prevalence of Communicable diseases in those areas, the inaccessibility of public health facilities, The long waiting period and the delays caused due to non-availability of services under one roof, the bribes which need to be paid. This prompts the people to seek private Health Care Services.

Vaidya (2000) found that half of the differences in per-capital income between rich and poor countries are due to the differences in their human capital. Which is the outcome of good human health? He held that public expenditure plays an important role in the determination of components of earnings like, labour force participation, hours worked per year and hourly wage rate. They estimated that the aggregate loss in earnings is due to various diseases through both morbidity and mortality, which can be easily controlled by public expenditure on health. A study on the public expenditure on health in Kerala was made by Sadananda.R (2001). The main overall conclusion of the study is that the impact of public expenditure on health in Kerala was unequally distributed, the public expenditure actually reduced income disparities, and it is actually pro-poor.
In order to determine the beneficiaries of public health programmes in India Sen. G.A and George (2002) conducted a study, they used the results of survey taken on a national level by NSS 1986-87 and 1995-96" the sample consisted of 9,287 households .the data allowed to determine Which income groups had access to service provided by the National Health Services during that year. It was assumed that the situation did not change in 1986. The results implied that the benefit per family in absolute-term is larger for low income than for high-income households. The distribution of benefits for the public sector as a whole has a strong progressive pattern, both in relative and current prices, it was also found that the distribution of total benefits turns out to be pro-poor all along the income scale.

Mehta (2008) attempted to analyse the pattern of health care expenditure in India. For the purpose of study RBI and NSS data of 55th round, pertains to the year 1999-2000 were used. The sample consisted of 120 thousand households covering rural as well as urban areas. This was a large Consumer Expenditure Survey (CES).

The Survey found that even though India spends 6 per cent of its GDP on health care, more than 70% of it comes from private sources out of which most of it is out of pocket expenditure. Further, due to political compulsions and variety of reason Government expenditure tends to favour urban and richer groups. Allocation of Government expenditure which affects the poorer states, unorganized sector and particularly urban poor.

1.10. Research Issues

Since the planning era, both the central and state Government have been incurring expenditure on education and health on a massive scale. Thus, public expenditure on education and health are of paramount importance in a country like India. Although
education and health fall under the state list, they are guided by the policy of the central Government towards social sector. Hence, it would be of interest to study how the money is being allocated and spent on education and health in Karnataka.

Introduction of economic reforms in the country in 1991 necessitated Karnataka Government for proper allocation of resources to different sectors in order to accelerate the process of economic development. Success of reforms required Government to make heavy investment in physical as well as social infrastructure. Thus, as the expenditure pressure mounted the state instead of taking steps to mobilize resources through tax and non-tax reforms and to cut down unnecessary expenditure resorted to borrowings. Result was fiscal stress leading to reduced allocations to social sector and retardation in economic growth.

Trends of public expenditure especially during the reform phase suggest that the proportion of money spent on the revenue account has been far higher than that of capital account all along. In addition, these trends clearly reveal that a huge component of revenue expenditure is committed in nature (such as salaries, pension, payment, etc.); hence, any reduction in such expenditure is possible only when the level of committed expenditure is reduced. The main cause of worry is that the state Government has not been in a position to meet this expenditure out of revenue receipts. It is noted that the share of social and community services and economic services were higher than that of general services until 1990’s., but the same trend is not seen in the subsequent period (Panchamukhi, 2000).

However by 1991, the states had identified this problem, some even resorted to corrective measures also, as recommend by the eleventh finance commission a fund called “Fiscal Reforms Facility” was created by the central government. This marks the
beginning of state level fiscal reforms in India, having concern on the Deteriorating fiscal situation the Government of Karnataka entered into MOU (Memorandum of Understanding) with central Government and embarked on the fiscal reform path, and finally in the year 2000 the Government decided to bring out a white paper on state finances. This document brought out the fiscal crisis that the state was undergoing.

In 2001-02 the fiscal reforms were introduced and a 'Medium Term Fiscal Plan' (MTFP) was presented covering the period 2001-02 to 2004-05. Further, to correct the fiscal distress in 2002, Karnataka was the first State to pass the Fiscal Responsibility and Budgetary Management (FRBM) Act. The state achieved the stipulated targets of eliminating the revenue deficit, and lowering the fiscal deficit to below 3 per cent of the GSDP even before the proposed deadline of 2006. Karnataka can therefore be cited as a role model for all the other states which have embarked on a similar path of fiscal consolidation endorsed by the Centre and the Finance Commissions. Apart from the various incentives it received from the Union Government based on this success, the State has also been performing extremely well on the revenue front with tax collections exceeding expectations, and an increase in transfers from the Centre. Thus, Karnataka's fiscal position over the last few years has been quite rosy.

The ultimate aim of these reforms has been to restore fiscal balance, improve the standard of physical and social infrastructure and to ensure a competitive advantage to the state. But restoring fiscal health in state totally depends on compressing expenditure and proper prioritization of expenditure to enhance efficiency in public expenditure. But, the matter of serious concern now is how to enhance allocation to education and health in order to improve the status of human resource development (Arabinda Mishra, 2000).
Chapter – I

Introduction

The question of human resource development is important in Karnataka because of the findings in the first state Human Development Report (HDR) that in most of Karnataka, the levels of human development as measured by literacy, health and income are very abysmally low. Improving human development therefore became a major acknowledged objective of all state Governments since 2000. But this was also a time of fiscal stringency, and the state had to meet these goals while correcting fiscal imbalances. Economic reforms get success only when the benefits of reforms result in the improvement of the quality of life of the people. Further, the reform process will receive popular appreciation, only when the benefits of development reach even the last man in our social set up. To what extent, people are benefited from policies, depends on the way, money is allocated and spent. In this connection expenditure, policy of Government plays an important role.

Many studies on efficiency of public expenditure on education and health, the trends and pattern of public expenditure on education and health, inter-state disparities in expenditures, and also the impact of economic reforms on social sector expenditure have been conducted and Most of these studies have produced mixed results.

Some studies find that the relationship between public expenditure on education and health and its outcomes are weak, and that factors such as per capita income, parental perceptions of costs and benefits, and intentions of the authorities matter as well. Whereas some studies found very strong and outstanding development outcomes due to expenditure.

1 Planning Department, Government of Karnataka, Bangalore, Human Development in Karnataka, 2000.

There have not been as many comprehensive and/or conclusive studies on education and health expenditures and its outcomes at the state level, especially, at the district level. Further, no studies on inter-districts disparities and growth rate of expenditure on education and health across various districts of Karnataka have been done for economic reforms periods. Thus, an attempt has been made in this study to fulfil this gap with regard to examination of the impact of public expenditure on education and health during economic reforms period in Karnataka and for post-economic reforms period across various districts of Karnataka.

Keeping in view, the above issues, in the present study, the following research question are deemed to hold great significance to the understanding of health and education sectors performance in the various districts of Karnataka, and drawing up an appropriate policy responses on questions like,
1. What has been the pattern of public expenditure on education and health?

2. What is the impact of economic reforms on public education and health expenditure in Karnataka?

3. Is the State really giving enough importance to its vital sectors of health and education?

4. To what extent the allocated amount has resulted in development of outcomes of education and health.

5. How important is the public expenditure allocations in explaining differences in education and expenditure on health across various districts of Karnataka?

6. Has Karnataka, by virtue of investing in education and health, achieved targeted Millennium Development Goals?

The study, also tries to understand as to how the expenditure on education and health have changed in the reform period vis-a-vis the post-reform period in Karnataka and during post-reform period in various districts of Karnataka.

1.11. Objectives

- To study the importance of social sector expenditure in human resources development.

- To analyse the trends and pattern of public expenditure on education.

- To analyse the trends and pattern of public expenditure on health.

- To examine whether the financial allocation to education and health sectors has increased in real terms over the years.

- To carry out an analysis of expenditure on health and education at the district level in select revenue divisions.
1.12. Hypotheses

It is proposed to test the following hypotheses.

- Whenever Government faces financial crunch expenditure on education and health become an easy target.

- Allocation of resources to education and health sectors over a period of time has contributed to growing inequalities in the state.

- Expenditure on education and health has declined over a period of time in real terms.

- Expenditure on education and health is positively associated with human resource development and has positive impact on economic development.

1.13. Methodology

The proposed study is both descriptive and analytical based on secondary data. Hence, in this section, tools and techniques, coverage of period, data source, and selection of the districts as well as limitations of the study are analysed. The impact and relationship between per capita education and expenditure on health and their relevant indicators with human development index are examined by using simple correlation technique. Appropriate statistical tools like mean, Standard deviation, growth rates, Coefficient of variation, and CAGR, (Compound Annual Growth Rate (%)) have been used in the study.

Most of the studies carried out so far analyse education and health expenditure using GSDP (Gross State Domestic Product). But in this study an attempt has been made to analyse expenditure on education and health by using NSDP (Net State Domestic Product) and NDDP (Net District Domestic Product).
1.13.1. Selection of Districts

An attempt is made here to select Districts that were similar in terms of socio-economic status and received similar levels of public expenditure on education and health. Hence, two major revenue divisions (Bangalore and Mysore) of Karnataka state covering 17 districts have been chosen for the analysis as these two divisions account for more than sixty per cent of the state's population.

1.13.2. Coverage of Period

For the purpose of the study of Karnataka's trends of public expenditure, the time period considered has been from 1990-91 to 2009-10. (10 years of reform period i.e. 1991-2000, and 10 years of post-reform period i.e. from 2001-10). The main reason for selecting this period is that two appropriate divisions can be done for before and after economic reforms for Karnataka as a whole. The time period considered for analysis of trends of public expenditure on education and health in various districts of Karnataka is from 2000-01 to 2009-10 (10 years of post-reform period). The main reason for selecting this period is that the exact period of economic reforms in Karnataka cannot be traced and district level data for economic reforms period has not been defined properly. It needs to be mentioned here that restructuring of state's public expenditure received adequate attention only during 2002.

1.13.3. Data Source

The study is based on secondary sources of data. The required data has been obtained from following sources: Department of Economics and Statistics Government of
Chapter - I

Introduction


1.11. Organisation of the Study

The study has been structured into six chapters. The First chapter deals with the introduction, theoretical background, importance of social sector expenditure in human resources development, economic reforms and the public expenditure on education and health, literature review, Research issues, Objectives and hypotheses. The Second chapter deals with public expenditure on education and health in Karnataka. The Third chapter is devoted to analyse the expenditure pattern on education in various districts of Karnataka. The Fourth chapter is devoted to analyse the expenditure pattern on health in various districts of Karnataka. The Fifth chapter consists of relationship between human resource development, education, and expenditure on health. The Sixth chapter sums up the findings of the study and offers conclusions.