Chapter – I

INTRODUCTION
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1.1. EDUCATION AND ECONOMIC DEVELOPMENT

The generalisation that investment in human capital promotes economic growth dates back to the time of Adam Smith (Kiker, 1968), who emphasised the importance of investing in human skills. Schultz (1961) and Denison (1962) showed that education contributes directly to the growth of national income by improving the skills and productive capacities of the labour force. The early attempts to measure the contribution of education to economic growth were based either on the growth accounting approach, used by Denison and others or on the rate of return to human capital, an approach adopted by Schultz and others. These works led them to find that a considerable proportion of the rate of growth of output in the United States was due to investment in Education. This was also very well established by Psacharopoulos (1985).

While there is widespread interest in education as a means of furthering economic development, there has been remarkable findings about various channels through which education promotes economic development. Education may influence economic development through changing the attributes relevant to economic development or it may influence economic development in its capacity as a relevant economic input. In the former case, education may alter the attitude to work, consumption preferences, savings propensities, innovativeness attitude towards family size and various social attitudes relevant from the economic point of view. In the latter case, that is as an input, education is considered to be a process of skill formation and in this aspect it is treated at par with the process of capital formation. It is obvious from these studies that the correlation between educational development and economic development is very well established.
On the basis of the idea that education and economic development are correlated, Harbison and Myers (1974) in their "Education, Manpower and Economic Growth", have examined the pattern of relationship between human resource development and stage of economic growth. They have constructed indices of human resource development on the basis of the enrolment ratios at various stages of education in different countries and have arrived at various policy conclusions like education improves the productive capacity.

Sen (1969) has provided an important methodological criticism of their approach. In the first place, according to him, the enrolment ratios do not indicate at all the stage of human resource development. The stage of human resource development is indicated by the stock of educated work force. Current enrolment ratios merely indicate the additions made to the stock. Secondly, if the objective is to throw light on the desired directions of educational development, we should be able to find out definite relationship between these variables. It was the observation made by Sen.

Mukherji and Rao (1967) have provided the relationship between investment in education and economic growth in India using various educational and economic indicators. For this purpose, the annual enrolment figures, educational expenditure of the government and per capita expenditure have been used.

Edward Denison's Production Function approach views education purely as an input. An improvement in the quality of labour force is turned into a quantity augmenting variable. Here it must be mentioned that the results are sensitive to the share of labour in national income. The larger the share, the larger will be the effect of a given percentage increase in the quality of labour. In line with Denison's approach, as a part of his wider study Dholakia (1974) tried to quantify the contribution of education to economic growth.
In general, there is a well-established proposition that education is an investment and it is more than an input. By and large, the benefits of education lie in the future either in the form of acquisition of skills and capabilities which may enhance future earnings and productivity of labour or in the form of improved ability to enjoy a better cultural life. In the former case, it may be compared with the investment in producer's goods and in the latter case it may be compared with the investment in consumer durables. In one case it yields future income; in the other it yields future utility. The two components may be inseparable in practice but in so far as education consists in the creation of future earnings and future utilities, we are justified in treating it as an investment activity.

While discussing about investment in education, it becomes relevant to mention some of the pioneering works. Early studies by Bowman and Anderson (1963), Kaser (1966) and others certainly demonstrated a correlation between level of per capita income and level of education development. However, the fact that rich countries have high levels of literacy and spend more on education than poor countries could mean that education helps countries become rich, or it could mean that rich countries can afford to spend more on education.

There is ample evidence that education makes both a direct and an indirect contribution to economic growth, but the chicken-and-egg relationship between education and growth can never be fully established. Nonetheless, strong support can be found for the notion that the most likely causal link is from education to economic growth, rather than the otherway round. For example, when Easterlin (1981) examined the relationship between education and economic growth in twenty-five of the largest countries in the World, he concluded that the spread of the technology of modern economic growth depended on the greater learning potential and motivation arising from the development of formal schooling. Thus, economic history, together with recent econometric research, confirms the belief that investment in education can contribute to economic growth.
1.2 DEMAND FOR EDUCATION

It is evident from the above discussion that education leads to improvement in individual's productive capacity as well as economic growth of the nation. This fact implies that education is demanded by people to acquire more skill by that improve the earning capacity. In economics of education, demand for education means that availing the educational facilities provided by the government by the people. Generally education is treated as a consumption good as well as an investment good. But the human capital approach views education as investment rather than consumption as it enables the person who had education to derive a future stream of benefits.

However, parents and guardians send their children and wards to the educational institutions to enable them to acquire knowledge and skills which may help them in earning income. In this sense, the expenditure on education is considered as an investment.

The demand for a given level of education may therefore be presumed to depend on the size of the expected private return to that level of schooling. Moreover, the demand for education depends upon two types of prices, a) Supply price b) demand price. The supply price is the price at which the supply of education can be offered to the public. The demand price is the price at which the consumers are willing to purchase education. The demand price is closely associated with the costs of education as borne by households.

In the case of education the supply should not be limited by demand. Demand for other things is largely a function of income (Arumugam 1983, Loury 1987, Prakash and Sumitra 1992, Sreenivasan 1996). No doubt, many parents have a demand for education for their children and are prepared to cut expenditure elsewhere to send them to schools.
But several parents cannot afford to do so. Some may not like to be deprived of the income which their children could earn. Hence it becomes the duty of the government to create a demand for and supply of education. Generally it is in the form of social goods.

1.3 THE NEED FOR STATE INTERVENTION IN EDUCATION

The role of state in education has been recognised from the earliest times. There had always been state patronage for education in ancient India. State aid was given to the educational institutions. It has now been recognised 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 apostle of national 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.

Because the functioning of market mechanism helps to provide goods and services to satisfy the demands of the consumers. But all the needs of the consumers cannot be satisfied through the market. The inherent and inbuilt limitations of market mechanism as a guiding principle for economic decision making have called for government's intervention in various fields even in the advanced market economies.

There is an increasing realisation that these are certain goods and services such as defence, law and justice, that have some characteristics which makes it altogether impossible to provide them through the market (Musgrave, 1959). These types of goods and services, often referred to as 'social goods', are consumed in equal amounts by all and it is not possible to exclude anybody from enjoying them. There is another set of goods and services called 'merit wants' which are "subject to the exclusion principle and are satisfied by the market within the limits of effective demand". But price mechanism cannot fully measure their true social values and costs, and private decisions based on the market
prices will not provide optimal results. Hence, to ensure optimal allocation of resources, both these 'social' and 'merit' goods have to be satisfied through state intervention.

Education is considered to be one of the important merit goods. It is likely to be under-consumed in a free market economy because of externalities and ignorance. The value of education to the society is, "so meritorious that its satisfaction is provided for through the budget over and above what is provided for through the market and paid for by the private buyers". Even in the history of economic thought state involvement in education in one form or the other has been favoured for social and economic improvement (Vaizey, 1962). After reviewing earlier views on education, John Vaizey concluded that "... there is a long and honorable tradition from Adam Smith to Alfred Marshall which assigns to publicly supported education a major role not only in promoting social peace and harmony, and self-improvement, but in the process of Wealth creation itself".

Education is being given a prominent place in the process of development of many traditional societies which have opted for modernisation of their economics on the basis of planned economic development. The strategy of 'growth with social justice' adopted by these developing countries paved the way for massive expansion of government activities in general and particularly in the field of human resource development.

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 its state planning in these countries. The mobilisation of human resources and its development is the process by which knowledge, skills, and capacities of all the people are increased. The expenditure incurred on the development of human resources is seen as a form of investment in human beings and is known in the field of economics of education as investment in human capital" (Schultz, 1961).
The state intervention in the development of education takes many forms and varies widely across countries. In communist countries the state owns all the educational institutions and possesses complete control over the supply of educational services. In some countries state intervention is limited to selected areas of education (such as the conduct of examination) and all other aspects are in the hands of private sector. But the most common form of intervention in the development of education is through the public financing of educational system.

1.4 SIGNIFICANCE PUBLIC EXPENDITURE ON EDUCATION

Public expenditure or Government expenditure on education for economic development in general and for the provision of education to the society education system in particular has come to assume a crucial role in modern times.

There is a general apprehension about the public expenditure on education as a tool of public policy. But the importance assigned to education in the overall development, has posed the problem such as: How much a nation should spend on education? What are the methods of financing education? Who has to share the burden of Costs of Education? What is the impact of raising resources for education from different sources - taxes, fees etc? How the resources should be distributed at different levels, etc? Because the government has to meet the competing ends with limited resources.

These are all issues of crucial importance and the understanding of which will help to serve the policy ends better. As such, instruments of educational policy are limited in number, and financing is one among the few available for influencing the policy objectives (Noah and Sherman, 1979). The public financing of education can influence the quantity and quality of education and also its distribution at different levels. But it depends on how effectively the government makes use of its and ultimately how it affects the development objectives themselves.
Education being a merit good, is financed by the government as well as by the receivers of education in most of the countries. The degree of state involvement in financing education varies among the countries depending on their political, economic and social systems. In general, there are two ways of financing education: direct intervention by the state through its institutions and through grants to educational institutions and loans and other financial assistance to the receivers of education (Prest, 1965).

Education is one of the important services provided with the help of the government and it has grown rapidly both in terms of public expenditure and the number of persons educated. The expenditure on education has grown both in absolute terms and in relation to the GNP in both the developed and the developing countries with different political and economic systems.

1.5 DISTRIBUTIONAL ASPECTS OF PUBLIC EXPENDITURE ON EDUCATION

Most of the Public finance operations, including public expenditure on education are justified mainly on the grounds of either 'efficiency' or 'equity' or both.

The conventional allocative efficiency argument for government support of education is that significant externalities are produced as the individuals seek to enhance their educational levels. It means that the market system supplied education to the extent that it satisfies private demand and produces less than optimal quantity of education and consequently society as a whole suffers. Further, it is assured that the measurement of these benefits and identification of the beneficiaries are very difficult, no particular group can be asked to pay for these benefits. Hence the only way out is to finance them collectively so that private and social rates of return could become equal.
The most frequently stated equity justification is that since many families cannot afford to pay the costs of their children's education, the government should provide financial assistance so as to guarantee equal participation from all sections of society. Without subsidies for education, it is argued, access to education may spread unequally among the people. The strength of this argument assumes significance when it is recognised that "... education influences the future level of earnings, so that to distribute it in accordance with the purchasing power is to perpetuate inequalities of income" (Woodhall, 1975). Hence, the most important and obvious way of equalising educational opportunity is, to remove financial barriers that may prevent children of poor families from entering and completing any course of education.

The goal of equalising opportunities in economic and social life through education has gained importance at a time when the contribution of education to economic growth has become a subject of much controversy. In recent years the 'equity' criterion has dominated over the 'efficiency' criterion in the educational planning of developing countries (Smith, J.A, 1974). Hence, distributional considerations based on equity have come to play a dominant role in the financing and supply of education services in the developing countries like India.

In recent years policy-makers and researchers have focussed on the crucial issue of financing of education. Accordingly, various arguments have been put forwarded in favour of and against the public intervention in general and public expenditure on education in particular. Those in favour of public expenditure argue that if a service like education is provided by the government at low or no cost, its consumption is likely to spread more evenly among different sections and regions of a country than if it is given to the market mechanism. It is believed that public financing permits education to act as an equalising agency by providing an equal access to all and consequently allowing all individuals to rise up the social ladder irrespective of their socio-economic background.
1.6 PROBLEM AND NEED FOR THE STUDY

Independence has added new dimensions to the educational system in India. As in other developing countries, the goal of social justice has influenced our development planning such that no plan or budget has been formulated without making any reference to it. The idea that educational system should provide equality of educational opportunity and should be used as a vehicle for socio-economic transformation of the society had become an integral part of the overall development strategy in India. It was thought that expansion of education - general and technical - for all classes of people irrespective of their paying capacity would will act as a potential equaliser over a period of time (Schultz, 1963). Provision has been made in the constitution of India for free and compulsory education upto the age of 14 years and also for the establishment of democratic system of education offering equal opportunities in education to all the sections irrespective of caste, creed, sex or economic position. Further, special efforts have been made to raise the achievement and academic potential of children belonging to the weaker sections such as scheduled castes and scheduled tribes and other backward communities. This all necessitated to give importance to public expenditure on education.

Though public expenditure on education is advocated on the grounds of its favourable distributive effects, doubts are also expressed regarding its effectiveness in achieving the desired objectives. The expansion of education in the last five decades did not prove that it has achieved the objectives. The distribution of access to education, despite the growth of public expenditure, is found to be favouring relatively high socio-economic groups. At the same time, public expenditure on education has also been used to subsidise the education of middle and upper income groups at the cost of the poor. And the expansion of education as a result of public support is associated with the rise in the educated unemployment and income inequalities. All these problems associated with public expenditure on education need a careful examination.
In this regard, the researcher is also interested to understand the nature of demand for education. Because the government policy and the socio-economic background of the people are highly responsible for the determination of demand for education. In this context, it becomes essential to understand the pattern of demand for education. It could be relevant to study the demand for education, benefits of education and benefits of government expenditure on education.

Despite the fact that public expenditure on education in India has grown rapidly, only few attempts have been made to examine the demand for education, influence of public expenditure on the distribution of access, costs and benefits, and its impact on the distribution of income. These issues of public expenditure on education have strong bearing on public policy.

Public expenditure on education has essentially become a distributional problem in three different but interdependent ways. The first distributional aspect will be the differential access to education. The second aspect of the distributional problem is basically the issue of the distribution of costs and benefits among different segments of society. Because it is viewed as a series of transfer of purchasing power among the different groups of population as it affects the real incomes of those families on whose behalf the expenditure is made. Thirdly, when education is viewed as a productive asset, the public expenditure on education becomes an investment in human capital. Through changes in the distribution of human capital, it influences the distribution of economic opportunities like employment and income. Hence, public expenditure on education becomes a distributional problem in the long-run.

The above three aspects are not independent of each other. Distribution of income or earnings depends on the distribution of costs and benefits which themselves are determined mainly by the differential access. The differential access will also reflect the
distribution of benefits and costs, and earnings. Hence, integration of all these three aspects will form the basis of ultimate distribution - the distribution of welfare. These aspects must be taken into account while evaluating the equity aspects of the public expenditure on education.

The present study on the demand for education and the distribution of benefits of government expenditure on education in Coimbatore District, Tamilnadu is undertaken with such a perspective. In the first stage of our empirical analysis, the demand for education is undertaken to measure the factors influencing the demand for education. And then the distribution of education among different income and social groups is undertaken. The distribution among rural and urban households is also studied.

At the next stage of empirical analysis, the distribution of government expenditure on education among different income and social groups is examined using per capita government expenditure, the distribution is analysed. The following are the specific objectives of the study.

1.7 OBJECTIVES

1. To study the growth of education and educational expenditure in India and Tamilnadu.
2. To know the factors which are influencing demand for education in the study area.
3. To study the pattern of distribution of benefits of education among different income and social groups in the study area.
4. To study the distributional pattern of public expenditure on education among different income and social groups.
5. To study the distribution and influence of government assistance on education among different income and social groups.
1.8 HYPOTHESES

In order to study the objectives of the present study, the following hypotheses have been framed and verified.

1. The demand for education is positively influenced by the family size, father's education, mother's education and parent's occupation. And it is negatively influenced by the household income at lower levels of education.
2. The benefits of lower levels of education are pro-poor and higher levels of education are pro-rich.
3. Financial assistance provided by the government to the students has positive significance on the enrolment.

1.9 METHODOLOGY

To study the demand for Education and distribution of benefits of public expenditure on education, the present study has used both primary and secondary data. The study was carried out in Coimbatore revenue district of Tamilnadu.

The study area has been classified into three division viz Coimbatore, Pollachi and Tirupur (details in Table 3.14). Each of the three divisions consist of 3 taluks and so there are nine taluks. All these nine taluks have more or less similar socio-economic characteristics. These nine taluks consist 21 blocks and 134 revenue villages.

In order to examine the demand for education and distribution of benefits of government expenditure on education, the sample households were selected from 3 taluks out of the nine taluks of Coimbatore district using multi-stage stratified random sampling.
1.9.1 DESIGN OF THE SAMPLE

As the present study needed information on socio-economic background and educational details of the households, the primary survey was conducted. In order to conduct the survey, the sample households were selected in stages. In the first stage, Coimbatore district was selected purposively as it is the district where the researcher has been working for about twenty years. In the second stage, out of the nine taluks 3 taluks were selected viz. Coimbatore North, Coimbatore South and Palladam. Though there are little heterogeneity between these taluks in terms of the development of agriculture industry and education, all these nine taluks have almost similar socio-economic characteristics. These taluks represented the characteristics of the rest of the other taluks except more urban characters in Coimbatore North. When we attempt to capture the rural and urban sample, it becomes necessary to include urban sample area which differ in degree. In the third stage, revenue blocks were selected. In order to have equal representation, households were selected from all the 8 blocks (3 from Coimbatore south, 2 from Coimbatore North and 3 from Palladam).

In the fourth stage, 36 villages and 10 town areas were selected out of the total 134 revenue villages which also include 29 town area. In this case, some remote villages and forest and hilly regions were deleted from the sample frame. The selected villages were 3 from 11 villages of Perur block, 5 from 18 villages of Madukkarai block, 5 villages out of 18 from Thondamuthur block, 4 out of 16 in S.S. Kulam block, 5 out of 18 in P.N. Palayam block, 5 out of 21 in Palladam block, 4 out of 20 villages in Sultanpet block and 5 from 21 villages of Sulur block. These villages were selected randomly.

In the final stage, households from each sample village was selected by making the sample size as 550. The sample size consisted around 8 per cent of the total households. The details of the households in each of the selected villages were available with the
village Administrative Officer according to caste, and occupation. With the help of the officer and local people a list of households having school going children was prepared. They consisted both enrolment and drop-out. Out of this list households sending children to unaided schools were dropped and households sending children to government and aided school/college alone were retained in the list. Households having enrolment during 1995 and 1996 in government and aided schools and colleges were included in the sample size irrespective of the levels of education. The samples were distributed among the villages almost equally. From the final list identified households were selected as samples randomly.

1.9.2. DATA COLLECTION

The pilot survey was conducted to test and finalise the questionnaire which was used in the present study. Thereafter, the primary data were collected for the specific purpose of this study between March 1996 and May 1996 using the questionnaire (Appendix - B). In this study information related to household income, expenditure, asset, demographic characters, working hours of parents, employment details, number of children receiving education, drop-outs, household expenditure on education, government assistance on education received by each child in the family etc. were collected. The study included all levels of education which is commonly classified as primary (1-5 standards), middle (6-8 standards), high/higher secondary (9-12 standards) and higher education (above 12 including technical education) while studying the demand for education and distribution of benefits of government expenditure on education, the analysis was made according to these four levels of education. Details about the nearby schools and colleges, fees structure in government and aided institution, concessions provided to students according to their social status, free uniforms and books were also collected. Apart from these the researcher established good rapport with the people of each village and explained the nature and purpose of the study to get the reliable data. They co-operated and helped in all possible ways for getting the reliable data.
The data pertaining to individual households were collected by the interview method from the head of the household. Mostly the interview was conducted during afternoon and evening hour and it was done according to their convenience. While collecting information about households income, expenditure, private expenditure on education and government assistance received by each child, the researcher used recall method. In order to get maximum accurate data, the researcher posed repeated questions, in friendly manner. For instance, to avoid biased data on household income, the researcher had also collected data on household expenditure and then checked the validity of data. Like wise, the researcher had some difficulties in getting information on private expenditure on education and government assistance received. Some households were boosting the private expenditure on education and tried to hide government contribution. To know the real situation and collect the correct data, the researcher had also talked to other members of the family and with the school going children. In assessing the value of uniforms and noon meals, the researcher had some difficulty. However, he managed to get the correct values of uniforms and noon-meals by contacting the noon meal organiser and government officials. The completed questionnaires were checked the next day for response and non-response error. In case of omissions and ambiguous or in consistent answers, another trip was made to collect correct information from the same household. All possible efforts were taken to get the accurate information as far as possible from the respondents.

The secondary data related to literacy, enrolment of students, educational institutions, educational expenditure at national and state level were collected from government reports like hand book of educational and allied statistics, Education in India, Demand - 17 - Education, Tamilnadu - An Economic appraisal.

1.9.3. ANALYSIS

Using the primary data collected from the households, the researcher estimated the demand for education. Most of the studies of this nature were made by using the
OLS method to estimate the demand for education. In the present study the demand for education was estimated by using three methods viz., OLS, Probit method and Logit model. These models have been used to estimate the factors influencing the demand for education. While using the OLS and Probit method, the ratio between actual enrolment of students in a particular level of education and the age eligible children in respective level among the households was taken as the dependent variable.

In the case of Logit model, households having enrolment and households having dropouts were considered as two sets and using these information the analysis was made. Distribution of benefits have been estimated using the mean enrolment rate among social and income groups of the sample. The mean enrolment rate was considered as an appropriate technique in identifying the beneficiaries (Dasgupta and Tilak, 1983). In this method the households were classified according to different social groups and income groups. Considering the lower level of income among the sample and highest level of income, the households were classified into five income quintile (Lowest quintile, 2nd quintile ... Highest quintile) according to their income. These classifications were made according to total household income as one measure and household per capita income as the another measure. Because the researcher wanted to verify whether there is any deviation in the mean value between these two measures (results are presented in chapter V). According to the total enrolment in each income group the mean enrolment rate was calculated.

Another method has also been used in this study to estimate the distribution of benefits of government expenditure on education (Dasgupta and Tilak, 1983). In this method, the researcher had taken per capita government expenditure on education for each level of education on the one hand and mean enrolment rate in educational institutions according to income group/ social group on the other hand. When these two
values are multiplied using a simple model constructed for this purpose (the model is presented in chapter V), the rate of distribution of benefits of government expenditure on education were estimated.

In India, only a few studies have been conducted on demand for education and also in the distributive aspects of government expenditure on education (Studies listed in chapter II). The present study has been undertaken with a view to estimate the demand for education and then distributive aspects of education. Because the researcher strongly believed that the quantum of government expenditure on education was directly as well as indirectly depending upon the demand for education. Hence, identifying the factors influencing the demand for education had become essential from the point of view of distribution of benefits of government expenditure on education and consequently it had strong influence on the policy issues of the government. With this idea in mind the present study has been undertaken.

1.9.4 LIMITATIONS OF THE STUDY

1. The primary data were collected through interview method which is subjected to recall bias. However, sufficient care was taken at every stage to reduce the error through cross checks.

2. Families having enrolment in educational institutions were considered as beneficiaries. Though the households had enrolment at different levels of education, they were all treated as beneficiaries having equal benefits.

3. Households having drop-out children were identified with the help of nearby school records. However, there might have dropouts in far off schools. But, due to practical difficulties, those households might be left, if there was any.
4. Selection of sample households in the corporation area was very challenging. As the area had around 73 wards, it was difficult to identify the households according to social groups. However, having preliminary enquiries in the specific area, the researcher tried to reduce the bias in sample selection.

5. Ordinary Least Square (OLS) was traditionally used in many studies to estimate the demand for education. Hence, the study had made use the alternative methods such as Probit and Logit analysis and the results were compared.

6. Though the study had also aimed to study the benefit incidence, the measurement of net benefit of a particular type of government expenditure could be possible only when we were able quantity the quantum of tax paid by a particular group and benefits received by the same group. But, in India we do not have the data related to the quantum of tax paid by a specific group. Hence, we have not measured the net benefit incidence.

1.10 GENERAL PLAN OF THE STUDY

Chapter I presents the problem, the need for the study, objectives, methodology and research design of the study.

Chapter II is devoted to review theories and previous studies related to the problem and presents a summary of each of the studies.

Chapter III analyses the data relating to the growth and development of education and educational expenditure in India and Tamilnadu.

Chapter IV analyses the factors influencing demand for education in the study area.

Chapter V analyses the distribution of education and educational expenditure in the study area.

Chapter VI presents the summary of findings and presents some policy recommendations.