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Economics of Education: Developments in Recent Years

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INTRODUCTION

Economics of Education, which emerged initially as a response to a number of major puzzles in developmental economics, international economics and labour economics, in particular, has now transcended the boundaries of economics itself and has incorporated aspects that are normally covered under other branches of social sciences. In this sense, this discipline has evolved as an important part of the disciplines of sociology, political science and of course, economics. In fact, the discipline of education is considered incomplete now if there is no discussion of economic aspects of education. In India too Economics of Education has grown rapidly, having a wide coverage both in terms of issues examined and also in terms of geographical areas covered in the empirical studies in this connection. As the earlier trend reports on economics of education brought out by NCERT in the past show, this discipline has been developing with much research literature emerging around a number of practical issues.

The discipline of economics of education though having a sound empirical base right from the time it came to be recognised as providing an important approach for studying certain issues, has always remained as subsidiary to the mainline economics, such as developmental economics, labour economics or agricultural economics or international economics. Even under the discipline of education, economics of education has been treated as an adjunct rather than the main body. This point needs to be kept in mind while reviewing a large body of literature developed relating to economic dimensions of education.

It is also worth noting that in the initial stages of development of this discipline, say, late 50s and early 60s of the previous century, the main leaders of research in this field were generally the scholars with a long standing in the research field in economics in general (consider for example, the seminal contribution from Prof. T.W. Schultz, who was a senior professor in Chicago university at that time) Subsequently, the interest in this new field picked-up at all levels and a number of research studies even at Ph.D. level in different universities in India and abroad were also completed and all these contributions have enriched the perspectives of those interested in understanding the economic dimensions of education. Even cross border interests started developing and scholars from other disciplines took interest in economic dimensions of education. Such cross discipline interactions developed vigorously, particularly in the West, as is revealed from the articles in professional journals abroad. For example, studies on educational reforms and educational change sponsored by the World Bank, Washington,

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during the mid 70s of the previous century involved eminent economists, educationists, sociologists and political scientists, indicating that the studies on education were then becoming the subject of interest of scholars from different social sciences rather than only from education and that in all these new studies the economic and social dimensions of education were prominently focused. Though the studies in the current period and also those undertaken in India do not reflect explicitly this integrated multidisciplinary approach they do bring out clearly the need for such an approach in the studies on education.

Another notable point here is that most of the literature developed particularly in India has been basically empirical in nature. The conceptual observations, made in some studies, were based upon the deductions from the empirical data analysis. This is observed in the studies undertaken during all the years in the past. Hard core theoretical studies in the field of economics of education are missing in the literature.

The quantitative growth of research in economics of education is not that large as in the case of researches in the field of pedagogy or pure education. However, it should be emphasised that on account of the interest of social scientists particularly of economists and sociologists in education, literature in education became richer with newer dimensions and approaches. While it would be improper to designate most of the studies reviewed here as belonging only to pure economics of education, since these studies consider different social and politico cultural aspects, as they need to be considered even while studying economic aspects, it is still possible to distinguish these studies having a more dominant economic focus than others.

The number of studies in economics of education in India in particular, during the 1980's was relatively more than those during the recent past. A relevant question in this connection is as to why there is a visible decline in the interest of the researchers/research work in this area. It may be difficult to give a unique and unequivocal answer to this question. In fact, a number of explanations may be put forth for this. It might be due to the lack of interest on the part of the researchers in this particular area, lack of scope in the employment market for those who would specialise in this field, lack of financial incentive to take up this type of research work, etc.

Normally, researchers in the field of economics of education are found to look into a particular problem in isolation mainly from the narrow economic point of view. But in actual practice, the research in economics of education should not remain either as the domain of economists or the educationists only. The research in economics of education should be looked in terms of a multi disciplinary perspective. In this background we have chosen to review below the research studies in economics of education which have not only concentrated on economic aspects of education but also on other aspects that are amenable to economic analysis. Economics of education covers the areas like, cost, return, financing and planning, etc. and education's linkages with different dimensions of socio-economic development. Since inter-sectoral linkages play a significant role, the relevance of health and nutrition aspects, regional problems, gender issues, environmental issues, etc. for educational development deserve to be studied. Such issues of inter- sectoral linkages have to be studied both at the conceptual level and also at the empirical level. However, as stated earlier, the studies undertaken in India in the field of economics of education so far are largely empirical in nature. This obviously is a notable gap in the Indian researches on economics of education.

The review of the studies undertaken here has the following objectives:

(i) This report should raise the conceptual issues on economics of education in the context of the studies conducted during the period under consideration, i.e. 1993-2000;

(ii) It should present a critical review of the studies during the period 1993-2000; and

(iii) The Report should suggest possible areas for future research.

Following important themes, which have received attention of the researchers during the period under review, are discussed in the present research survey trend report;

(1) Economic perspectives of education
(2) Economics of inequality in education
(3) Cost and Financing of education
(4) Planning of education.

This presentation is divided into five sections. After outlining the major issues of economics of education in a historical setting the third section presents a brief critical review of the recent literature according to the major themes of economics of education, the fourth section brings out the major areas for future research. The concluding section summarises the major conclusions.

ECONOMIC PERSPECTIVES OF EDUCATION: A BRIEF HISTORICAL INTRODUCTION AND SCOPE OF ECONOMIC PERSPECTIVES OF EDUCATION

The economic aspects of education cannot be considered without considering the socio-political and cultural dimensions in which education is provided and received. The economic value of education has been recognised since the times of classical economists such as Adam Smith, Ricardo, Marx and others. Even in the Indian context, the thinkers and poets with social orientation had appreciated the economic value of education. There are references to this effect in the Indian classical literature of poets and dramatists of yester years. There are also references to economic dimensions of social welfare services including education in the writings of Kautilya.

There were a large number of research studies in the area of, what is now termed as economics of education, after 1960s with a path breaking article of T.W.Schultz on 'Investment in Human Capital'in the *American Economic Review* (1961, March). Many studies examined the role of education (by level and type) in economic development and the role of economic development in the development of education. Considering the positive externalities of education, almost all the studies concluded that education contributes significantly to economic development. This again has been proved only by considering the rate of growth of income as the economic development indicator. Income, however, is a function of many socio-cultural-political variables, out of which education is only one. It is obvious that income of a person is not only due to the educational qualification alone but it is also due to social, cultural and political background of the recipients and his parents. Similarly, educational achievement is also influenced by the above said factors. Hence, we cannot conclude by interlinking the earnings of an educated person to his/her education that education is the only contributing factor to development. *Besides, the positive externalities that education has, it has negative externalities too. The negative externalities, which result particularly in the case of higher education, have not yet received the due attention of the researchers.* Such negative externalities depend upon the contents of education, the level of maturity of the people receiving education, the socio-economic and politico cultural circumstances of the society and economy of the country and such other factors. The seriousness of the issue of negative externalities has been felt after the economic reforms have been introduced, which seem to have led to a large scale unemployment of the educated youth. Education is fast becoming irrelevant on account of quickly changing technologies in economic activities particularly in the background of opening up of the economies. Further, due to the negative externalities the social costs of education seem to be increasing. Hence, if these dimensions of education are not carefully studied and their significance quantified then there is likely to be an exaggeration of the benefits of education.

Issues as Offshoots of Economic Perspectives of Education

Most of the research studies on the contribution of education to economic development estimated the economic contribution through the rate of return from

education. The rate of return is either computed through earning function using regression model or IRR method without a multivariate analysis of earnings. But the rate of return method has its own limitations. It overlooks the equity aspect and only provides the guidelines for efficient allocation of resources.

Following issues may be of interest in this connection.

- Is it possible to clearly confirm that economic development prospects are due to educational development or vice versa? What are the dimensions, other than earnings or income, which influence educational development? Can education in general and UEE (Universalisation of Elementary Education) in particular, act as an anti- poverty measure? In what way does educational development contribute to economic development particularly at a time when the country is moving towards IT era in the second generation of economic reforms? Is it possible to develop our education system to cater to the labour market of specialised jobs, which has emerged in the course of and due to economic reforms?
- Does economic inequality cause educational inequality or vice-versa? Why is there inequality in access to and utilisation of educational opportunities?
- Why is there inequality in education between different regions, between different social groups of population in a particular region, between gender within a particular group of population, etc.?
- Generally, the terms costs and expenditures are used/understood interchangeably, which, obviously is not proper. Is education costly to the households or to the institutions or to the state/country? Why there is a variation in cost of education by region, by gender and by social groups of population? What are the factors responsible for high cost of education to the households/ Institutions? What should be the share of resources for education by the household sector/Public sector? Is the state financing or private sector financing or a mix of both or any alternative sources of financing to education needed to maintain the present level of costs/expenditures?
- How to plan educational development in a country like India, which has adopted an approach of decentralised decision-making? How far has educational planning been considered as a part of economic planning? Should there be different planning for education either annually or for five years? Is the plan of education made at the lower level? Is it made at the school level? Does planning, as implemented currently, correctly represent the aspirations of the people?

Some of these issues deserve attention of scholars in this field. In the following paragraphs we present a thematic and critical review of the studies in this connection.

A CRITICAL THEMATIC REVIEW OF SELECTED STUDIES DURING 1993-2000

Though the studies (1993-2000) reviewed here do not touch upon all the above issues they do suggest some useful insights. The following thematic review does not claim to be comprehensive and exhaustive in its coverage of the studies. However, important issues raised in the literature are presented below by way of giving a preliminary idea to the reader about the development of the subject in recent years and motivate him/her to refer to the original studies and also other studies not referred to in the review.

A Discernible Shift from Conventional Themes to New Areas

There appears to be a shift from the studies on rate of return to studies on cost and financing of education. A good number of studies were taken up during this period on the costs, finances and expenditure on different levels and types of education. Of course, in view of the financial constraints in the educational sector after the introduction of economic

reforms, these studies assume great significance. These studies provide different dimensions of the financial structure, magnitude of cost, pattern of allocation of resources and the present status of finance, etc. of the educational institutes. There do exist some studies on the conventional themes also but with different data sets.

Is Investment in Education Profitable? And for Whom?

Within the education sector, which level of education is more profitable? Is education of females more profitable than that of males? This question is important from the point of view of the decision of a family to invest its limited income either in education or in some thing else. The members of the family have to decide their investment in terms of the returns to such investment. There have been some studies regarding this issue during this period.

The profitability of education is generally estimated, as stated earlier, by using the rate of return approach to different types and levels of education. In recent years scholars in India have evinced less interest in conducting rate of return studies as compared to the past. A study on return to female higher education in Kerala by Clara, M.D. (1997) showed that the return to education of males was higher than that of females, for all types of graduates. This is somewhat an interesting finding specially in the context of an educationally developed state like Kerala. This might raise a question such as : Is there over investment in women's education in Kerala causing lower rates of return on investment in their education? Though on account of conceptual and practical difficulties associated with the use of the concept of rate of return from policy point of view generalisations cannot be drawn, such questions are bound to be raised and hence it is better if such results are interpreted carefully.

A more clearer picture regarding the contribution of education to economic development emerges from the study in West Bengal (Pandit, Gayatri, 1999), which estimated the return to higher education for Bardwan district of West Bengal, which according to different educational indicators has been described to be an educationally less developed state. The study did not provide any significantly different results from those of the earlier studies on rate of return. A study conducted in Maharashtra (Dandekar Bandana, 2000) estimated the rate of return to all types and levels of education for one sector of population, i.e workers in sugar co-operatives for Sangli district. This study also showed similar pattern of rate of return as in the case of earlier studies. This indicates that *the development status of the states does not have any impact on the rate of return to education. This issue needs to be pursued further. The study also highlighted the usefulness of developing an idea of returns from education from different types of activities, such as sugar cooperatives and in semi-urban and rural situations. Such studies need to be conducted for different economic activities in order to understand to what extent the present educational system is really advantageous to the recipients of education and also to the economy of the region. Some of these studies do not clearly highlight the private and social returns from education.* It should also be pointed out that so much of ambiguity shrouds around the concepts of private and social returns from education and hence studies to be undertaken on these aspects in future need to clearly define the concepts, work out the operational guidelines for translating these concepts into actual estimates and actually present the estimates for selected regions, for selected economic activities and for gender categories, etc.

Do Economic Returns for Education vary for Regions and Why?

Now the question is how far has education contributed to economic development of different regions of the country? Does this contribution vary from region to region and for different categories of education ?

A study by Loh (1995) estimated the contribution of education by using macro data

at the all India level over a period of time, i.e.1961-1991. Another study by Joseph (1998) used cross section data at the household level to compute the contribution of education to economic development in Kerala. Both the studies have their limitations in using the income data for reflecting the level of development, as income is not the only indicator of development. The study of Loh found that the contribution of primary education to economic development is more significant than the overall level of education. The effect of education on economic growth was insignificant during the period 1961-71 while it was substantial during the period 1971-1991. Joseph's study observed that the relationship between education and earnings was not direct but recursive. One interesting observation of Joseph's study was that education had a tendency to reproduce inequality since the equity aspect of education was constrained by parental background and other intervening variables. Loh used production function approach while Joseph used multiple regression model to assess the contribution of education to economic development.

Besides the variables included in the above studies there are many other variables, which deserve our attention while analysing the contribution of education to economic development. Of these variables, the prevailing labour market conditions assume great importance. Factors like the nature of discrimination in labour market, the restrictions on entry and mobility of personnel from one region to another and also from one sector to another, extra efficiency factors such as bargaining power, caste and community considerations, etc. play a crucial role in assessing the contribution of education to economic development. But, no comprehensive study seems to have been done on these aspects.

Economic Reforms and Returns from Education

Also, another issue in the present context is how would education's contribution to economic development been affected by the currently on going economic reforms. More than a decade has passed since the introduction of economic reforms in 1990s and even the impact of second generation reforms is also being felt in the economy. Hence, the role of these factors needs to be studied with micro level data bringing in the impact of reforms as well. *Studies with in-depth analysis of the contribution of education to economic development in the process of reforms need to be undertaken in order to develop firm insights.*

Process of the linkage between Education and Economic Returns

Actual 'process' of the effect of education on economic development has not received any attention of economic researchers. What happens to the individual when he or she receives education ? Although the erstwhile studies on screening hypotheses did point out a number of the likely effects of education on individual behaviour no systematic and comprehensive attempt seems to have been made to identify all the processes of changes occurring both for the individual and for the society/economy as a whole. Such a study would be essentially a multidisciplinary exercise involving psychologists, sociologists, political scientists, economists and experts in the field of education. *A study of economic effects of education should not be treated merely as a number game. It is essentially a study of the processes.*

Socio-economic Determinants of Education

Different aspects of education of an individual depend upon the several socio-economic factors. The performance of a student in the course of his/her education, employment and earnings of an educated person, savings and investment from out of the earnings, etc. are influenced by his/her social background, parental education, income, occupation, type of school and so on. The entry of a child into a particular school or course is also due to all these factors.

Reciprocal Linkages

We should appreciate that there is a *reciprocal relationship between education and some of the socio-economic variables also.* For example, education of a person influences income, health, social status, which in turn would bring many other changes in life. All these aspects of education need to be analysed when one examines the economic aspects of education. The major questions in this respect may be: Is it possible to identify and estimate the influence of these factors on education? Can one estimate the relative significance of these factors on education? Does education influence the labour market situation and other aspects of the personal circumstances of the educated? Similarly, another issue worth examining is: can the effects of these reciprocal linkages be estimated? Does education wield influence on the rest of the society including the socio-economic aspects of the life of the illiterates, less educated individuals and the economy as a whole and how to estimate the extent of such influences? In other words, is it possible to identify and measure the externalities – both positive and negative – from education of an individual? What concrete measures are needed to maximise positive externalities and minimise negative externalities? The studies available in the literature of the present period have addressed to some of the above issues.

So far as the effect of socio-economic factors on education is concerned, some of the studies in the past attempted in this connection found that educational attainment was lower in the less developed regions and among the backward population like Scheduled castes and Scheduled tribes and within the backward population among the females. Even parental education is found to have a positive effect on the educational attainment of children while it was inversely related with the birth order of the child. [Psacharopoulos and Mattson (2000) and Panchamukhi (2000)]

The educational attainment of a child and its continuance in the school is greatly influenced by the socio-economic status of the household, as is reported in many studies. Duraisamy (1998) in a study of Tamil Nadu rural households, for example, observed that parents' education and household income mattered much in the schooling of a child. She found that parents' education and household income positively influenced the schooling of children while the demand for children's time at home and distance of school negatively affected the schooling of children in general and of girl children in particular. The occupation of parents also is assumed to have a significant influence on the schooling of the children in rural Tamil Nadu. The wage and salaried class parents not only invested more in child schooling but also allocated resources fairly between girls and boys as compared to parents in other occupational groups. Mother's education came out as a very significant variable in influencing the education of girl children. A similar finding was also reported in an earlier study done for the rural areas of a less developed State of Orissa (Sailabala Debi, 1996). Using the census data the study showed that irrigated land, non-farm employment and adult literacy rate influenced the child schooling positively while the work participation rate of females and children influenced the schooling of children negatively in rural Orissa. If the females participate in the labour market, children particularly girl children remain at home to take care of sibling and the old persons and hence they are either withdrawn from or never enrolled in the school. Similarly, when the households' demand for children's time at home is needed, they go for earning in the labour market, which affected their schooling. Some studies [say,Rajaram (2000)] showed that the housing condition like a *kaccha* house without electricity and land among the minority group (Muslim), SC and ST headed households affected the attendance and continuation of child schooling. Education of the adult member particularly the females had very significant impact on the schooling and the continuation of education of the children. Sex of the child was an important decisive factor in schooling and their continuation in the school.

Influence of Education on Socio-economic Variables and Reciprocal Linkages: Micro Perspectives

Studies on the effect of education on economic growth were essentially exercises using aggregative magnitude. However, so far as the effect of education on socio-economic factors at the micro individual is concerned, very limited work has been found. The studies in this connection have mechanically estimated the impact of education on earnings by fitting an earnings function. But, we have not come across any serious conceptual or theoretical work examining the effects of education on different socio-economic factors. Madheswaran and Shroff (2000) showed that there was a significant earnings differential between the two sexes of scientific and technical personnel with equal qualification in the private sector. They observed that the differences were not due to labour market alone but due to the existence of a pre market discrimination practice in the household resources with respect to education, health and nutrition between the two sexes. The socio- economic status of the households also influences the entry of students into a particular branch of education. For example, Ajith Kumar et al., (1997) observed that in Kerala, children who were not able to take admission in regular courses got admission in self-financing courses. They observed that social background mattered less in taking admission into these courses. The students mostly from middle income households pursued professional education courses in Kerala.

The studies relating to the socio-economic determinants of education examined the effect of various factors on education. However, considering the differences in regional characteristics, differences in races and castes, the studies arrived at different conclusions regarding the nature and extent of the influences of these factors. In view of this, the studies cannot be expected to draw a firm and uniform conclusion about such relationships.

Review of studies on the effect of education on economic variables and the reciprocal effects of socio-economic variables on education only goes to highlight the complex simultaneity of inter linkages between education and socio-economic variables. Unfortunately, such interlinkages, which ought to be studied with the help of simultaneous equations approaches, have not been the subject matter of systematic and comprehensive studies during the period under consideration. Even during the earlier period such issues have not received adequate attention of the researchers. *Linkages of education and socio- economic variables using simultaneous equations approach would thus be a potential research theme for future studies.*

Inequality/Disparity in Education

The problem of inequality in education assumes great significance in the context of a country having a highly stratified socio-economic set up. In fact, it is said that a classroom is a replica of the socio-economic structure of the society itself. Indian educational set up presents a picture of glaring inequalities in access, in performance and in utilisation of the facilities.

These inequalities may be by space, by gender, by community and by family. Thus, educational inequality is a function of socio-economic factors. A general conclusion of many studies is that the relatively less developed regions of the country suffer more from inadequate facilities than the relatively more developed regions. The unequal access and utilisation of the facilities are also found in these regions. The educational opportunities are not distributed equally among the population of different socio-economic backgrounds. It is largely due to the reason that the people in the lower socio-economic strata do not put that much priority to education as they give for the other basic necessities such as food, clothing, housing, etc. Some of the important issues that have received some attention of researchers are the following:

(a) Does economic inequality cause educational inequality or vice-versa? Why is there inequality in access to and utilisation of educational opportunities?
(b) Why is there inequality in education between different regions, between

different social groups of population in a particular region, between gender within a particular group of population, etc.?

Some of the studies have highlighted only aspects of these issues. For example, the inequality in literacy between different districts of a less developed State (Orissa) is found to be higher among females, SCs and STs than their counterparts (males, non-SCs and non-STs). The gender disparity in literacy is relatively more serious among the SCs and STs than non-SCs and non-STs as well as in backward regions (Sailabala Debi, 1996). There is inequality in growth of enrolment across various states of the country which clearly brought out the fact that the achievement of UEE became a far reaching goal (Shah, Maya,1994). The states that experienced a decline in enrolment were Haryana, Kerala, Punjab and Uttar Pradesh for boys and Assam, Bihar, Gujarat, Kerala, Punjab and Uttar Pradesh for girls over a period of 25 years for elementary education. This fact was confirmed with the firm observation of the Probe Team (1999) that the schools in India were in transition and in a vicious circle of neglect with endless problems. This is mainly due to the reasons that the society has shown relatively less concern about elementary education as, it is perceived as a threat to privilege and power of vested interests. Also, for the political leaders gain from elementary education is negligible. Obviously, this neglect increases the inequality in access to and utilisation of elementary education opportunities. The social conditions, traditional family practices, etc, have led to educational discrimination for female members both at home and in the school. In fact, lack of adequate schooling facilities in neighbourhood have added to the difficulties in female education. This is brought out from the focus group discussions in a number of States. [for M.P. this point was sharply brought out in the FGDs (Panchamukhi 2000)]. The disparity in female male gap in literacy in India is higher than for many other developing countries except Bhutan, Syria, Togo, Malawi and even Mozambique. Across the States, Rajasthan alone has a higher female male gap in literacy and the Probe team noted that no country in the world has a higher female-male gap than Rajasthan.

Cost and Financing of Education

Another major area that has received some attention of researchers is the area of costs and financing of education. A study of costs and financing of education is important from the point of view of allocation of resources at the governmental level. The direction of investment in a particular level and type of education will be properly taken care of if one estimates the cost of that particular level of education. The cost of education consists of private direct and private indirect cost of education, which the households bear. The other component of cost is institutional cost, which can be further divided into current and capital cost. If the private and institutional costs are added one gets the social cost of education, which constitutes the total resource cost of education. Many scholars have undertaken the studies relating to the cost of education covering almost all the levels of education.

Sources and Uses of Funds for Education: Towards Educational Sector Accounting System?

The funds flow to education from domestic, public, private and foreign/external sources. An interesting schema of presentation of public and private sector finances for education was developed in one of the recent studies, which raised a number of conceptual issues in this connection. (Panchamukhi, 2000) Generally, four main aspects of financing of education may be considered. They are adequacy of finances, built in flexibility, equity in their availability and efficiency of their utilisation. If these criteria are fulfilled, then it can be said that the allocation is proper. Accordingly, the following issues may be raised in this connection. Are the resources allocated to different levels of education in particular and educational sector in general adequate? Do they vary during the year according to the needs of the individual institutions of education?

Are they allocated equitably to all the sectors and in all the regions fulfilling the objective of prioritisation of educational investments? Have the resources been properly utilised to achieve the desired objective of educational investment? If the resources are not flowing in accordance with the objectives then the plans and programmes in education will not be successful. The flow of resources from the public sector depends on the financial condition of the government, and the political will power to allocate resources to education. The private sector resource flow depends on several factors among which the important ones are the capacity to spend of the entity in the private sector, the type of management of the institution, type and quality of education, the performance of a particular institution, etc. The resource flow from the households depends on the financial condition of the household, education and occupation of the head of the household, perception of parents about education, etc. External sources of funds generally keep an eye on the labour market potential of a particular type and level of education or the profitability of the education to itself, or on whether there is a possibility of getting loans on reasonable terms, etc.

Educational Financing in a Federal Framework

Obviously in a federal framework of India, funds from the governmental sources come from all the layers of central, state and local governments. With education being put in the Concurrent List of the Indian Constitution, possibility of funds coming from the union government has significantly increased. Also, the passage of the 73rd and 74th amendments to the Constitution with decentralised units taking a special role in the programmes and activities this link of the union government has become stronger. The funds from the government are both on plan and non-plan account. By and large plan funds relate to new programmes and activities, whereas the non-plan funds are meant for the maintenance of the already existing activities. In the present framework of federal financial arrangements the plan funds for the union, state and decentralised units have to be sanctioned by the Planning Commission and non-plan funds by the Finance Commission. As indicated earlier, the plan funds are used for the growth of the system and the non-plan funds are used for the maintenance of the system. Hence, both types of funds are significantly important for the development of the education sector. During the reform period, the entire social sector seems to have experienced budgetary compression both on the plan and non-plan accounts, which is a matter for serious concern. Generally, very stringent economy measures are recommended by the policy-makers to keep the non-plan expenditures under control. Since in the case of education more than 75 per cent of expenditures are by and large on maintenance of the existing activities and hence on non-plan account such economy measures are expected to adversely affect the very functioning and efficiency of the sector.

Government Financing of Elementary Education

Many of these issues have been studied by the scholars both at the micro and the macro level. In an exhaustive study of government financing of elementary education Bashir Sajjita (2000) analysed the utilisation of funds for different aspects of elementary education over a period of 90s in different Indian states. A comprehensive data base has been developed on elementary education expenditures as a part of this study.

Financing of Higher Education

Salim (1993) in his study of costs of higher education in Kerala found that the burden on the government for providing technical education was much higher than that for general education. Most interestingly, it was observed in his study that the private cost of technical education at the post-graduate level was substantially lower than that of general education. The students pursuing higher education belonged mostly to high income group and since higher education was heavily

subsidised, this group of people enjoyed subsidies, which resulted in further increasing inequalities. In Goa, the private expenditure in proportion to public expenditure in higher education was found to be very low. It was interesting that the per pupil cost of education in professional colleges was lower than that of general colleges during the economic reform period mainly due to the high growth in enrolment in these colleges during this period in Goa. There was no evidence to show that the private cost of college education in Goa was determined by socio-economic background of the students or parents. The subsidy component in professional education was found to have declined while for general education it was found to have increased (Seema J. Kavari, 2000). This indeed was extremely incongruous in the face of declared policy of encouragement and promotion of professional education. Such findings only go to show that many inconsistencies are likely to be found in policy pronouncements and policy executions.

Utilisation of Finances in Education

Tilak and Qamar (1994) in a micro level study discussed the utilization of financial resources to school education in Guntur district of Andhra Pradesh. Most of the schools were found to be below optimal level for which the total cost turned out to be much higher than desired. This was also the case in Orissa (Panchamukhi and Debi, 1999) and Madhya Pradesh (Panchamukhi, 2000). Teachers' salaries took away more than 95% of the expenditure, which left very little resources for any other expenditure. The authors suggested to raise resources from the community as an alternative source to meet the problem of inadequacy of resources.

Community Resources for Education

This brings us to an important issue of how much can be raised from the community for the purpose of education? Would the community have similar responses to all levels of education? What concrete measures are needed to mobilise these community resources? How much resources, both in cash and kind, are currently contributed by the community for the purpose of different types and levels of education? Such issues are of immense practical relevance, particularly in the present context of tremendous resource crunch.

Some studies attempted to examine some of the above issues. The community contributions were found to be substantial in case of Karnataka for each level of education (Panchamukhi and Debi, 1997). The proportion of community contribution in terms of financial donation was found to be higher for primary level while the share of physical resources (land, building, etc.) to education was higher for higher level of education. *Studies about community resources for education need to be initiated in different states as a part of an all India research programme, for such studies would be able to suggest measures for raising community resources for education, which at present is facing a serious resource crunch.*

Resource Crunch

Different approaches have been visualised for handling the problem of resource crunch for education, of which community contributions is only one such approach. Other approaches might look to the less costly delivery systems of education. Thus, in the background of the general argument that funds should be diverted from higher education to elementary education higher education sector might face particularly severe resource problems. In view of the resource crunch in the University education for the regular courses, therefore, the spread of distance education was suggested to be an appropriate alternative and it deserved to be strengthened (Datta, Ruddar, 1994). Another approach might be to aim at improving the internal efficiency in higher education and thereby achieve better mileage for the limited resources. One of the methods for improving internal efficiency might be by achieving optimum enrollment levels in the educational institutions. Enrolment and costs are found to be highly correlated in the case of

regular colleges while the reverse relationship was found in case of distance education. The relationship between enrolment and cost was negative but significant implying that the distance education institutes were able to reap the economies of scale (Datta, 1994). *Size cost relationships in educational institutions at different levels is another area where studies can be initiated in different regions and for different categories of institutions as these relationships vary according to different personal circumstances of the educational institutions. This area offers significant opportunities for policy-oriented studies.*

Issues of Internal Efficiency: Wastage and Stagnation

Another way of handling the problem of resource crunch for education through the channel of improving internal efficiency would be by reducing wastage and stagnation in education. Unfortunately for all sectors of education studies of wastage and stagnation are not available even though the initial research efforts during 60s and 70s of the previous century had devoted some attention to this problem in relation to higher educational institutions as well. In such studies the major problem is one of settling the methodology of estimation of the extent of wastage and stagnation. A methodological study reviewing the current methods and suggesting an approach deserves an attention. (Srivastava 1999). It should be admitted that a number of studies relating to wastage and stagnation in elementary education conducted all through the years have provided insights about how the educational institutions at the elementary stage are performing. During the period under review a major national seminar organised at ISEC (full) Bangalore on *Costs and Wastage in Primary Education* some studies using empirical insights for Rajasthan, Tamil Nadu and for other states made interesting analysis of the problem of wastage and stagnation. For example, in a study relating to T.N. (Doraisamy and Doraisamy 1999) found that only 26 per cent of the registered children completed their primary education on schedule and interestingly larger per cent of girls rather than boys were on schedule. This indeed is a significant finding indicating that internal inefficiency of primary education is not due to education of girls while girls do not necessarily get an equal opportunity for enrollment. This is what is noticed even for rural areas of T.N. About 28 per cent of pupil years are found to have been wasted in the country on account of repetition and dropout of children. (Naidu and Joshi 1999). The same study estimated the monetary cost of wastage incurred by the schools, for 1988 to 92 which placed the inefficiency cost to the extent of as a high a figure as Rs.1283 crores, amounting to more than 11 per cent of the total recurring cost of the primary schools! *This is an important area for initiating state specific studies with a focus on wastage and stagnation of children from different socio-economic categories and also for boys and girls separately. Such studies would provide significant insights for policy making particularly from the point of view of retaining children in schools and making education more joyful so that they can complete the stage without any major hurdles.*

Too much of restriction of expenditures cannot be suggested as a way out for the problem of resource crunch, as this could be counter-productive. Some studies have brought out this subtle relationship. The expenses/costs/finances were found to have a strong bearing on the achievement level of students (Sharma, 1995). The schools with higher per capita expenses performed better than the schools with lower per capita expenses. The achievement level of students was influenced by the size of the school, region (rural and urban), expenses and type of management.

How much Costly is 'Free' Elementary Education ?

Apart from the size of enrollment, technology of educational delivery, etc, on what other factors does cost of education depend ? This is a crucial issue worth examining. The cost of education was found to be influenced by

several factors. The general notion is that primary education continues to be provided free of cost to all children in India. According to the Constitution elementary education has to be provided by the state free of cost and all the eligible children have to be compulsorily enrolled in the elementary schools. Contrary to this, it is found that the expenditure borne by the households for primary education was quite substantial (Panchamukhi and Debi,1999 and Tilak, 2000). In two contrasting districts of a less developed State of Orissa, it was found that the cost of primary education was higher in the developed region and among the forward caste population. Across the items of cost private tuition was found to claim the highest share. Of the total cost households spent 1/3rd and the government spent 2/3rd on primary education. Of the factors responsible for the household expenditure on education, the per capita income and asset were found to influence the cost positively and significantly while birth order of the child and sex influenced negatively the household expenditure on education (Panchamukhi and Debi, 1999). The household cost was found to be high not only in the case of primary education but it was found to be quite high in the case of higher education too.

Subsidy in Higher Education

The institutional cost in the case of higher education formed only 27 per cent while the rest 73 per cent was borne by the households in Mizoram (Vannlachhawna, 1999). It was further observed that in Mizoram, the growth rate of public expenditure was higher than the growth rate of public expenditure on education over the period 1973-93. Of the total private cost the government subsidy accounted for only 12 per cent. Again in Assam it was found that the financial management of the universities was far from satisfactory as it was not based on any norm (Goswami,1999).

Determinants of Costs of Education

The states vary in their commitment to elementary education. The states, which demonstrated increasing financial commitment to elementary education were Himachal Pradesh, Karnataka, Maharastra and Rajasthan and the states which showed least interest were Madhya Pradesh, Andhra Pradesh and West Bengal (Sipahimalini, 2000). Households met as high as 43 per cent of the total cost of elementary education. Obviously high household cost of elementary education might act as a deterrent for the demand for elementary education. Due to lack of proper allocation of resources in different regions it has become difficult to achieve the UEE. In Madhya Pradesh (Panchamukhi, 2000) the household cost on elementary education was found to be substantial in both rural and urban areas. The opportunity cost was also quite high in both rural and urban areas, which implied that the demand for students' time at home was too high to be overlooked. One interesting finding of the Madhya Pradesh study was that the first born child was in the lower educational propensity trap. Tilak's study (2000) observed that lower income households spent higher proportion of their income on education than the rich but the rich households spent more than the poor and middle income households on education in rural areas. A lot of variation in household expenditure was found between several states irrespective of their relative status of economic development. The elasticity of household expenditure on education was nearly unity and the households expenditure was determined by household income, education of the head, size of household and type of school and level of development of the village.

Government of India and various state governments have undertaken various schemes to promote enrolment and retain children in elementary schools. One such scheme was Operation Black Board Scheme, which aimed at providing for adequate accommodation in the schools in terms of classrooms so that the congestion in the school does not act as a deterrent to enrollment and retention. The scheme provided for additional teacher input wherever inadequate number of teachers were available. Similarly, for making teaching and learning enjoyable the scheme

provided for the Teaching Learning Equipment (TLE) consisting of science kits, geography teaching learning kits, books for general reading and language learning, etc. The overall performance of this scheme, examined (Panchamukhi et al, 2000) in the context of seven Indian States consisting of developed states, medium developed states and less developed states, brought out certain interesting insights about the functioning of the scheme. It showed that the funds for the school rooms were never utilized for this purpose. Such diversions of funds remained unnoticed until the audit objections were made. There was a large gap between the amount of fund required and made available, timing of release of funds, uncertainty of its availability, etc. The TLE component was not supplied in full to the schools. Wherever they were supplied the administrative constraints and assignment of responsibilities almost discouraged principals and teachers of schools to open the kit of TLE and actually utilize for the teaching purposes. *A number of studies in this connection showed that performance of different components under OB scheme was found wanting in almost all the states. The findings also emphasise the need for undertaking in-depth studies on the performance of individual components of OB scheme particularly from the point of view of enrollment and retention of children.* Such studies are felt necessary in the background of apprehensions in some quarters about the philosophy behind the entire scheme, viz, performance is hindered by the paucity of facilities. The reservations about this philosophy are based upon the contention that performance is driven by the inner urge to achieve rather than the availability of facilities.

Educational Planning

Planning occupies an important position in the development of education. Even during the period of liberalisation, privatisation and globalisation education needs to be planned, for, the crucial sector of education cannot be left to the vagaries of competitive forces. In the interest of equitable distribution of educational opportunities across regions, across communities and gender, etc a conscious intervention seems to be necessary. Similarly, for improving efficiency of the entire educational system–both internal efficiency and external efficiency, well thought out intervention is needed. That education has a short term, medium term and long term out reach cannot be overemphasised. For example the saying ' if you want to plan for a year sow corn, if you want to plan for decade plant trees and if you want to plan for life then train and educate children' brings out the long term cultural, literacy, numeracy related and value-based effects of education. Education creates relevant manpower for the production processes of the economy, which might be termed as short term and medium term effects. In the context of fast technological progress education has a special role in equipping and re-equipping the manpower with relevant skills, producing trainers of the newly emerging skills, etc. *Subtle aspects of this role of education in the context of economic reforms deserve special attention from the researchers.*

Planning of education might consist of planning of the physical, manpower and financial resources relating to the educational sector. In India planning of all these aspects is done both at the central level as well as at the state level. With the passage of the 73rd and 74th amendments to the Constitution significance of planning at the decentralised levels of panchayats, zilla parishads and municipal government levels has come to be recognised as planning committees have to be constituted at the decentralised levels as per the above Constitution amendments. In the past decade when the country initiated the reform process, the role of the state has been gradually declining and the market dominance is increasing in all sectors including education. This seems to be the basic thrust of the reform process. Education, which was considered as a state subject for a number of years after independence was put under the concurrent list of the Constitution enabling the Union government also to take initiatives in respect of even school education. In spite of this if total expenditure on education is showing a

declining trend then this should be taken as a cause for concern. According to some studies the plan and non-plan share of education has got squeezed. This might affect the physical as well as the financial plan of education. But, a *relevant question in this connection is whether the aggregative budgetary compression has led to readjustments in the expenditures of the individual institutions of education and whether this readjustment has led to any adverse effects so far as the individual institution's performance is concerned. However, there is no serious study in this regard dealing exclusively with educational planning at the micro institutional levels.* A study relating to two Universities in Assam indicated that there is no proper planning in the financial management of the Universities for which they are facing the financial problems (Goswamy, 1999). This type of management of the Universities without following any norm affects the growth of the system. Also, no serious study has been done in analysing the grant-in-aid of both the higher as well as the school level education. Almost all the studies concentrate only on the expenditure aspect only without considering the crucial issues relating to physical and manpower planning. *The research interest in these areas needs to be strengthened so that the macro-micro linkages functioning in the case of educational sector are properly understood.*

EMERGING CONCERNS AND GAPS

The above account of major strands of research in Economics of Education has indicated a number of potential areas for future research with a focus on economic aspects of education. By now the multi-disciplinary character of economics of education has come to be accepted. This has thus opened up many areas for inter-disciplinary collaborative researches on different aspects of education with a major focus on economic aspects. The following list of areas can be considered only as illustrative of the vast area in which researchers can take interest

i. It is generally argued that economic development provides a boost to all the sectors of the economy. However some studies have shown that returns from education do not depend upon the level of development of the state. More in-depth inquiries are needed to examine the question of these linkages. Does the development status of the states not have any impact on the rate of return to education ?
ii. That the development status of the states does not have any impact on the rate of return to education, which has been highlighted by some studies needs to be pursued further.
iii. Linkages of education and socio-economic variables using simultaneous equations approach would be a potential research theme for future studies.
iv. Studies about community resources for education need to be initiated in different states as a part of an all India research programme, for such studies would be able to suggest measures for raising community resources for education, which at present is facing a serious resource crunch.
v. Size cost relationships in educational institutions at different levels is another area where studies can be initiated in different regions and for different categories of institutions as these relationships vary according to different personal circumstances of the educational institutions. This area offers significant opportunities for policy-oriented studies.
vi. The question of internal efficiency is an important area for initiating state specific studies with a focus on wastage and stagnation of children from different socio-economic categories and also for boys and girls separately. Such studies would provide significant insights for policy making particularly from the point of view of retaining children in schools and making education more joyful so that they can complete the stage without any major hurdles.

vii. The findings of studies relating to different components of operation blackboard and similar promotional schemes emphasise the need for undertaking in-depth studies on the performance of individual components of OB and other schemes particularly from the point of view of enrollment and retention of children.

viii. *Subtle aspects of the role of education in the context of economic reforms deserve special attention from the researchers.*

ix. Another relevant question deserving the attention of researchers in this connection is whether the aggregative budgetary compression during economic reforms has actually led to readjustments in the expenditures of the individual institutions of education and whether this readjustment has led to any adverse effects so far as the individual institution's performance is concerned. Serious studies in this regard dealing exclusively with educational planning at the micro institutional levels need to be undertaken.

x. Since almost all the studies in the field of educational planning concentrate on the expenditure aspect only without considering the crucial issues relating to physical and manpower planning the research interest in these areas needs to be strengthened so that the macro-micro linkages functioning in the case of educational sector are properly understood.

xi. The role of private sector in education particularly after the economic reforms assumes great importance. The studies in this area are very few and more and more studies on the private sectors role in education need to be undertaken in order to provide more insights about the private sector's potential in educational development.

xii. Most of the studies on higher education relate either to financing of higher education or rate of return to higher education. But research interest relating to the linkage between WTO and GATT and higher education need to be strengthened during the reform process.

CONCLUDING OBSERVATIONS

Economics of education has now assumed a role of being a crucial component of different disciplines in social sciences. While a large number of areas relating to economic aspects of education have been explored by researchers there are still many unexplored areas crucial for our understanding of the functioning of the educational sector, functioning of the interrelationships of education and other disciplines from within the field of social sciences and also other disciplines. These unexplored areas are crucial for the policy making initiatives in education. A close look at the authors and themes covered under this discipline reveals that more or less the same researchers have been clinging to this field and very few new scholars have taken interest. Also, the themes chosen by the scholars are more or less unchanged with minor changes with regard to the geographical coverage and hence one gets an impression that unless special efforts are made the field looks as if it is now saturated. Young scholars do not seem to be taking much interest in the area. This may be due to lack of opportunities in identifying the area of research due to lack of proper guidance to the young scholars. In a way these trends might indicate that economics of education is facing a period of transition. Even with regard to sociology of education, politics of education and other related fields concerning education similar observations may be made. These developments might also emphasise the urgency for a closer interaction among different social scientists and planning of multi-disciplinary and inter- disciplinary research initiatives relating to education.

There is also much to be desired so far as the dissemination of the existing research work in economics of education in particular is concerned. While there are few professional journals on economics of education brought out from abroad, it is a pity that high standard journals as a mouthpiece for the researchers in economics of education are not brought out in India. Some of the Indian journals in the field concentrate on only some aspects of the subject and contain largely empirical studies. There is a need to have an organised approach

to promote this discipline by providing suitable incentives for young scholars in the field. In the past such special initiatives were taken by the University Grants Commission by starting Research Units in Economics of Education in selected universities, (one such unit was started in Bombay University). The Indian Council of Social Science Research instituted an young social scientist award specially meant for education. The National Council of Educational Research and Training (NCERT) had sponsored special all India seminars on economic aspects of education. However, such promotional initiatives seem to be on decline in recent years. Interestingly, some of the new initiatives taken up by some of the apex bodies should go a long way in helping further development of research interest in this field. For example, Educational Data Banks have been instituted in one of the social science research institutes (Panchamukhi (Ed) *Bulletin of Educational Data Bank*, Vol. I, 2002 Elementary Education), special committees of eminent economists have been constituted to estimate resource requirements for different levels of education and for different schemes in education, etc. However, much more needs to be done. While some efforts are needed to arouse interest in the new research areas still more efforts would be needed to sustain the aroused interest in the field. It is also necessary to coordinate efforts undertaken by different institutions and researchers to promote research interest in this field. At present, no such serious initiatives seem to have been taken. Annotated research documentation of studies as well as compilation of the relevant data and developing micro level data base should act as a major promotional initiative for researchers in this field.

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