Higher Edncation and Socio-Economic Development: A hrief discussion with reference to Bangladesh

Carmen Z. Lamagna*
Shibly S. Abdullah†

Abstract

This study discusses the correlation between education (particularly higher education) and development, in the light of different studies conducted previously on this ground. For better analysis, Bangladesh has been taken for empirical examination purpose where investment on higher education yet to produce expected outcome. This study attempted to identify the factors through which education speeds up the development process of a country. Finally the theoretical concepts have been compared to the results from Bangladesh.

Introduction

Discussion regarding the role of education has been getting enormous importance from the beginning of the persistently expanding theory of economic thoughts. Adam Smith, Ricardo, Marshall and many other classical economists emphasized on human resource development, and undoubtedly the major way of human resource development is education. Initially the neo-classical economists did not give much importance to education in the study and analysis of economics. In the decade of 1950s one of the major part of economic theory was "Harrod-Domar Growth Model". According to this model economic growth depends on capital, and in respect of existing technology most important source of growth is capital accumulation. At around this period, importance and impact of Dual-economy Model by Arthur Lewis was increasing among the economists. The foremost theme of this model is: labor surplus exists in the agricultural sector of underdeveloped and developing countries and if without harming agricultural production, these surplus labor is shifted to the industrial sector, economic development can be further activated. As in all these countries main hindrance to the industrialization was capital accumulation, in light of this model all the economic policies were taken

* Vice Chancellor, American International University-Bangladesh (AIUB).
† Lecturer of Economics, School of Business, American International University-Bangladesh (AIUB).

and implemented towards the capital accumulation. But, when aggregate growth was analyzed considering the summation of factor earnings, it was observed that a major part of the aggregate growth was remained unexplained and undefined with the help of capital or wage earning. This unidentified-undefined part of the growth was named 'Residual' source by eminent economists like Abramovtiz, Solow etc. In 1961 Schultz showed that education is the focal part of this residual source. (Becker 1964, Blaug 1965)

Education and Socio-Economic Development

The growth of capital in the global economy is increasingly dependent on knowledge based on a range of disciplines in humanities, commerce, social and natural sciences, and on information and communication technologies. The integration of knowledge is necessary to deal with the complex socio-economic problems of modern societies. The increasing generation and accessing of knowledge has led to what is often referred to as the 'knowledge-society', promoted in the main by higher education institutions. Such knowledge production is especially important for developing countries where the return on investment in higher education is much higher. In many countries a considerable proportion of intellectuals, and knowledge production, dissemination and application is located in higher education institutions. The development of a knowledge-society could contribute significantly to managing and mediating the impact of globalization.

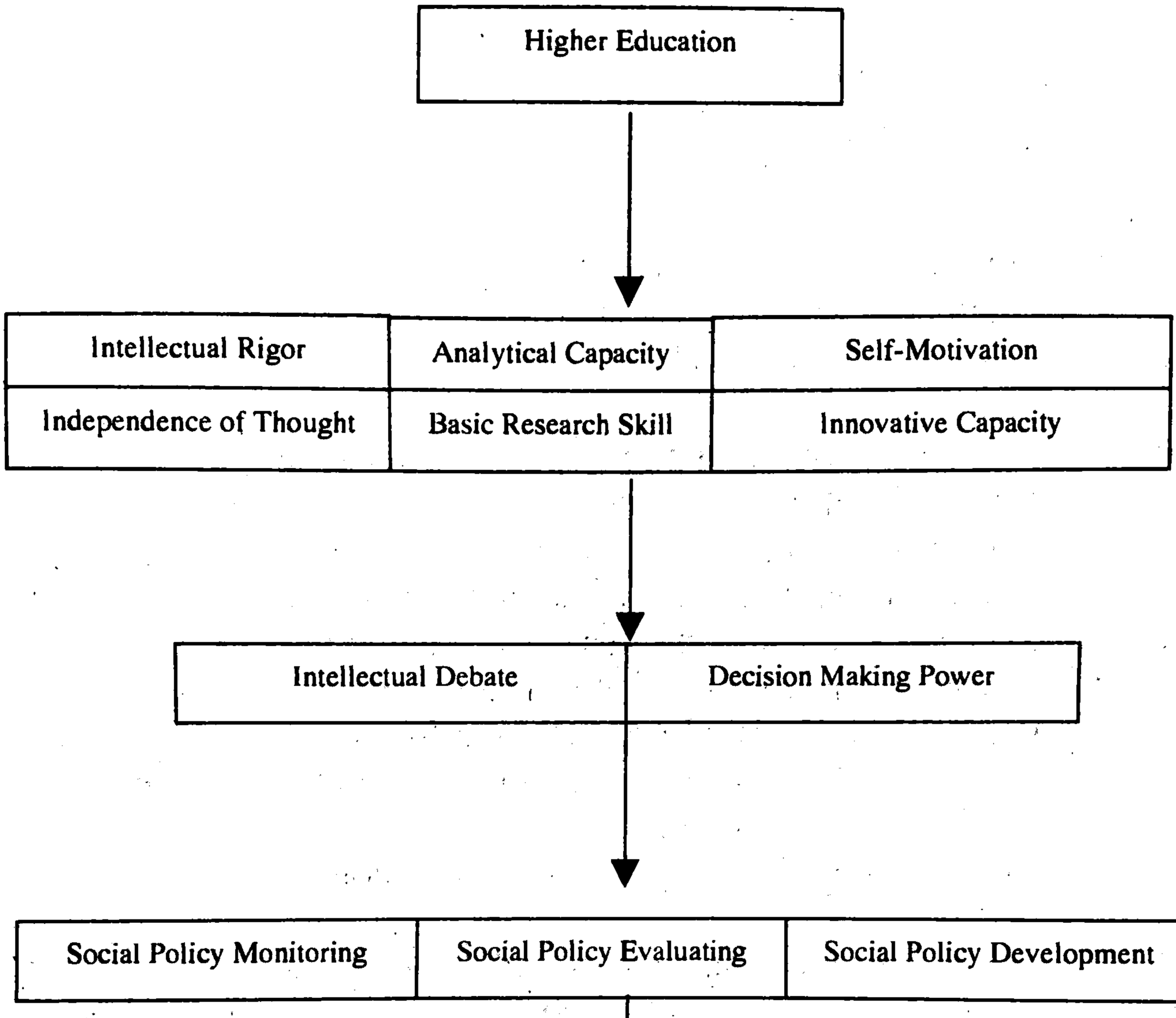
Education and particularly higher education plays a significant role in the process of development of a country. The social scientists and economists agree that the sectoral role of education on development should not be seen only from an economistic point of view. An educated person benefits certainly in terms of income-generation by improving his productivity and innovation, but no less important is that he gets significantly transformed in terms of his aptitudes, sense of hygiene, sanitation and health, civility, positive attitudes towards life. In both cases, economic and social impact of education, it takes time to observe the change. In the case of economic impact, the change should be obvious. On the other hand, in the case of social impact, only a keen and perceptive observer can identify the change due to educational intervention.

In case of Bangladesh or any poor socio-economic context, the income-generation aspect becomes more important than the behavioral and social aspect. In the medium and longer run, both the aspects become equally important. All countries have committed themselves to a better life for all. Already some important improvements in the quality of life and the collective well-being have taken place. Much remains to be done and ongoing social and economic transformation remains central challenge. The long history of inequality, injustice and oppression in many countries continue to present an enormous challenge to the goals of societal reconstruction and development.

Dramatic and far-reaching improvements in the quality of outcomes throughout the educational system are a crucial part of solving the complex problems arising in many countries. Generally every level of education and particularly higher education has a vital role in generating the knowledge, producing the socially committed graduates and providing various services for enabling the country to pursue social equity, justice and higher standards of living for all and contributing to the revitalization of the continents. A monumental effort is required by the government, educators and by society as a whole to address challenges with creativity, courage and determination.

Education and higher education especially, has immense potential to contribute to the consolidation of democracy and social justice, and the growth and development of the economy, despite the problems and challenges it faces. These contributions are complementary. The enhancement of democracy lays the basis for greater participation in economic and social life more generally. Higher levels of employment and work contribute to political and social stability and the capacity of citizens to exercise and enforce democratic rights and participate effectively in decision-making. The overall well being of nations is vitally dependent on the contribution of higher education to the social, cultural, political and economic development of its citizens.

Figure 1:



The evolution of mankind witnessed the developments in the society and in the quality of life of the people, initiated through higher education (i.e. university level education) by developing attitudes, values, capabilities: both of knowledge and skills. It is higher education, which provides

strength and resilience to people to respond to changing situations and enables them to cause and contribute to societal development. Human resources play a crucial role in the development of nations. And the development of human resources is the main function of higher education. The concept of societal development includes economic development for furthering the material well being of people, social and political development for living harmoniously and promotion democratic and just society and intellectual, cultural and aesthetic development for enrichment of the quality of life.

Education attains unprecedented economic importance as a source of technological innovation, and the educational diversity is bent on increasingly to the source of the labor force, acting as a vast apparatus of occupational recruitment and training. Then education becomes a major sector of investment for the economy as a whole, and old educational forms turn themselves willingly to the new purpose of the modern economy. Through empirical research it can be proved that investments in education promote economic growth. Various studies have been conducted by economists in the West to assess the contribution of higher education in economic growth. According to Todaro, "Education" contributes to economic growth in the developed and developing countries in the following ways:

- It helps in creating a more productive labor force and endowing it with increased knowledge and skills;

- It helps in providing widespread employment and income earning opportunities for teachers, schools and construction workers, textbooks and paper-printers, school-uniform manufacturers etc.

- It helps in providing basic skills and encourages modern attitudes in the diverse segments of the population; and

- It helps in creating a class of educated leaders to fill vacancies left by departing expatriates or otherwise vacant positions in governmental services, public corporations, private businesses and professions.

Other schools of economics puts forth the idea that education affects economic development in both ways: directly and indirectly; directly through productivity, employment, composition of labor force, division

and mobility of labor etc. and indirectly through savings, limitation of the size of family and by inculcating the right kinds of attitudes and skills and by removing some of the obstacles to social change and progress, and in the socio-economic development of the nation. Knowledge increases the power of reasoning and the ability to analyze and relate facts and events in their peculiar sequence, to draw inferences and to apply the conclusion of given or new situations. Higher education affects the composition of labor force as the adult worker replaces the child labor and the more educated worker replaces the less educated worker. It also affects the industrial and occupational distribution of the gainfully employed persons.

Further, by promoting division of labor and specializations, higher education brings about an optimum combination of the factors of production. In any public or private sector undertaking today, we find specialists dealing with accounts, auditing, sales, advertising, production, supervision and management, just as we find specialists within each group or line of economic activity; this implies that labor can no longer be treated as a homogeneous commodity, as was done by the classical economists, since every unit of labor is different form the other unit by training, skills, and specialization. Higher education also contributes to greater mobility of labor among different occupations and geographical areas. It is through mobility of labor that the entire mechanism of a market economy, including consumption, production and distribution functions effectively.

Thus, higher education contributes to the quality improvement in labor from two counts: firstly, there is the upgrading of the workforce. Over the years, we have experienced a relative growth in the skilled and professional occupations and decline in the ranks of unskilled and uneducated workforce. The internal change in the composition of the workforce has been accompanied by a second factor contributing to growth, the rise in productivity of workers at all levels of skills. Although, it is difficult to measure the quantitative importance of higher education in these two factors. The tie between higher education and workforce upgrading is obvious. Professionals and business executive have grown in size along with the expansion of college and graduate instruction. The trend towards universality in high school competition

has led to the expansion of the skilled workforce and concomitants decline among the unskilled.

Further, higher education brings with it knowledge and trains the mind to inquire and to seek new ways of answering old questions, whether they are philosophical or more mundane problems, more closely related to rising productivity and growth, such as how to better mousetrap. In short, growth is aided by the application of higher education and training to the development of new techniques, production methods, and improvements on machinery, all of which raise the productivity of labor, land and capital.

In short, higher education being the major constituent of the factors of human resource development, contribute at large to the process of economic development; it further dignified the economic process to high mounts with the developments in the knowledge and skill required for the technological revolution and finding new ways and means for the agricultural and industrial production, generates the greater mobility, division and immense composition of labor, for the optimum utilization of the human resources. Further higher education makes people more receptive to the new ideas, which changes the old tradition and value system of the society. It entails that education is for the overall development of the society, nation and the individual, who is the hero of the development planning.

Many studies were conducted on the relationship between education and socio-economic development. Schultz and Harris (1) attempted to find out the correlation between education expenditure and GNP over time. But Bowen (2) counter argued that the economic effect of an increase in educational expenditure should not be sought in the year of its disbursement. Svennilson, Edding and Elvin (3)'s effort was to establish inter-country correlation between per capita GNP and enrolment rates. David McClelland (4) attempted to use a dynamic approach to cross country analysis that allows for the introduction of the time lag. He compares the enrolment rates in one period with growth rates in later period. Grouping the countries studied by an electric power index he observes that countries with higher university enrolment rates in 1950 achieved greater increases in per capita in 1950s. These differences allow him to calculate an annual rate of return on extra university education of

12 percent. Countries with higher secondary enrolment rates in 1930 grew more rapidly during the 1950s than countries than lower rates.

The correlation between education and GNP is mainly through the impact of education on productivity of the labor force. Several studies support the hypothesis that education results in higher output. A survey for the World Bank of eighteen student which measure the relationship in low income countries between farmers, education and their agricultural efficiency (measured by production of crop) concluded that if a farmer had completed four years of elementary, his productivity was, on the average, 8.7 percent more than that of a farmer with no education (5). This survey also found that education is more beneficial if complementary inputs are available. Further evidence supporting contribution of in raising farmers' productivity appears in World Bank Student of Republic of Korea, Malaysia and Thailand (6).

Positive effect of education on productivity in industry is supported by a number of studies. Results of research in show that there is a positive effect of education and training on output, particularly when it is on-the-job training (7). Study of academically and vocationally educated workers in Chinese automobile factories also shows a small, but statistically significant, increase in productivity associated with more education (8).

Context Bangladesh

After the liberation war in 1971, the Peoples republic of Bangladesh became an independent nation free to choose it's own educational destiny. Many forms of education were permitted to co-exist. The formidable British system was and still is, largely practiced. In fact, presently education system in Bangladesh is divided into three parts Students are free to choose any one provided that they have the means. These branches are: 1) English Medium, 2) Bengali Medium and 3) Religious Branch. After 30 years of independence Bangladesh could not meet the demand of the people thirsty for higher education.

Table 1: Number of bigber educational institntes in Bangladesb and their uumber of students.

Type of Institutes	Number of 1nstitutes	Number of stndents
Public University	14	323946
Private University	18	66611
Madrasa (Kamil)	141	116332

Source: Ministry of Education- Bangladesh economic survey' 2001.

Realizing the positive link between education and development Bangladesh aimed at increasing public expenditure on primary, secondary and higher education. Recently the foremost emphasis is given on mass level primary education. But the education sector of Bangladesh continues to suffer from many problems including low teacher-pupil contact, poor quality of teaching and unsatisfactory physical facilities. Despite these problems and primary level dropout, huge numbers of students are passing SSC and HSC examination every year. It became hard for the government to accommodate them all for quality higher education.

Table 2: Bangladesh: Statistics of Passes iu SSC and HSC Exams.

	S.S.C		H.S.C	
	No. Appeared	No. Passes	No. Appeared	No. Passed
1985-86	336,181	241,092	263,249	148,578
1986-87	360,502	251,661	232,249	110,276
1987-88	408,476	225,382	293,128	131,054
1988-89	432,737	185,805	312,979	78,375
1989-90	435,918	138,317	294,391	87,419

Source: Bangladesh- in Statistics 1991-Bangladesh Bureau of statistics.

A comparison between table-1 and table- 2 proves that all passed in the HSC cannot get the scope in quality higher education. More than 50% students are not getting chance in desired higher educational field. Without which they may remain unskilled or half skilled that serves little purpose of industrial and manufacturing sector of our economy. When it

is considered that TK. 1033.00 of tax-payers money is spent per secondary student per year, the extent of wastage can, to some extent, be comprehended. The unsatisfactory state of affairs in the education sector requires more expenditure in the field of higher education.

Table 3: Expenditure on education in different five year plans of Bangladesh.

Five year plan	Expenses (in crore Taka)
1st Five year plan (1973-78)	316
3rd Five year plan (1985-90)	1370
4th Five year plan (1990-95)	3289
5th Five year plan (1997-2002)	128681

Source: 2nd FY plan, 3rd FY plan, 4rth FY plan and 5th FY plan Bulletin.

On the other hand, education is provided, at the cost of taxpayer, which does not help to cure a job. At the end of 1993 out of 11.28 million unemployed people, 4.07 million were educated unemployed of whom 159000 were at least graduates. Of the unemployed, there were 1060 medical doctors, 2820 engineers and 530 agriculture graduates. There are instances of first class engineering graduates remaining unemployed and doing odd jobs (e.g. part time private tuition) for survival. The saddest part of the thing is that for each university student the taxpayer is spending TK. 22,205.00 per year (Statistical pocket book, 1993, Bangladesh Bureau of statistics). Operating expenditure per student is higher for Agricultural University, i.e., TK.41, 829.00 per year. After spending so much on them the society is unable to get appropriate return because of their unemployment.

Table 4: Bangladesh: Public University Student Operating Cost and Tuition Fees Per Year-1990.

Institution	Operating cost per Student / year	Tuition fees per year For under graduates
Dhaka University	Tk. 14, 409. 00	Tk,160.00
Agriculture University	Tk, 41, 829.00	Tk,120.00
Engineering University	Tk, 17,768.00	Tk. 180.00

Source: Bangladesh Education in Statistics, 1991, Bangladesh Bureau of Statistics.

We have seen that directly Government is able to absorb only one million or about 2% out of fifty million civilian labor forces. Therefore, 98% of civilian labor force has to be accommodated in the private sector. But the private sector is unable to employ the whole lot because it is unwilling to invest.

The absence of need-based education is also reflected in the skill composition of manpower export. One of the reasons for gettion lower pay is lower skills and pre-dominance of unskilled workers that has contributed to the slow growth of remittances from abroad. In spite of this unsatisfactory state, still in Bangladesh employment opportunity is greater for educated people than uneducated. And that is why middle class and lower middle class families are not very much reluctant to spend on education. Besides, due to governments different development projects trend of literacy rate is uprising.

Table 5: Recent trend of Literacy rate.

Year	Literacy rate
1991	35.32
1995	47.3
1997	51.01
1998 (Estimated)	56.00
1999 (Estimated)	58.00
2000 (Estimated)	64.00

Source: Primary and mass education department, Bangladesh economic review ' 2001.

One of the major objectives of fifth five-year plan is to attain about 70% literacy rate by 2002 in order to achieve 100% within 10 years. If we compare the literacy rate and other economic indicator with the neighboring countries we can see Bangladesh is not lagging much behind them.

Table 6: Comparative indicators of neighboring conntries.

Countries	Literacy rate (% age)	Popuiation (million)	Per Capita Iucome ($)	Growth rate (%)
Bangladesh	35	132.9	307	5.5
India	48	1024.5	459	4.4
Pakistan	35	142.2	450	3.3
Nepal	26	23.4	241	6.4
SriIanka	88	19.1	844	1.3

Source: Literacy rate- World Development Report 1993, World Bank
Other- Asia week November 23, 2001.

The above figures shows that the Bangladesh economy has kept abreast with its regional neighbors though it is slightly lagging behind Asian average growth rate i.e., 8.6% in 1997 (International Financial statistics Year book 1998 by IMF).

The macroeconomic development in the last decade was the upturn in economic growth. Behind this growth rate service sector performed weII but the contribution of agricultural sector was impressive. In the last decade, growth rate in agricultural sector was around 6%. This is obviously the fruit of the introduction of higher education in agriculture. In addition to higher education in agriculture GOB also introduced several other training institute to teach and serve personnel who serve agricultural sector. This training- result reflected in this sector impressively.

Table 7: Growth rate of agricultnre and agricultnral suh sector

Sector/ Suh- sector	9I/92	95/96	99/00
GDP	5.04	4.62	5.94
Agriculture	1.4	2.0	6.9
Fisheries			8.9

Source: Ministry of Finance, GOB, Bangladesh Economic Review, 2001

This success is due to the increase in productivity in agricultural sector. And this productivity increased because of the improvement of the

Harvesting process, quality seeds & fertilizer and so on. But the contribution of agricultural education and training cannot be denied in the achievement of satisfactory growth rate in this sector.

Lastly, higher education is being considered a very useful social and political tools, even by different UN agencies and donors of the developed countries, to achieve piece and stability, congenial for economic development in developing countries where anarchy, extremism and superstition reins in supreme. Introduction of only befitting education has changed the whole lot of the many countries and areas of Asia, Africa and Latin America inhabited by aborigines and disadvantaged communities.

Concluding Remark

A short-term priority and a long-term policy imperative are the development of socially committed institutions and individuals with the critical intellectual capabilities to produce, disseminate and apply knowledge and technology. Reconstruction and development depends on producing well-educated and trained graduates with a range of competencies and skills. Without investment in human resource development and expanding opportunities for both young and adult learners, sustainable growth and socio-economic development will be difficult. It is believed today those countries will be the winner in tomorrows global competition who invest the most time, energy and resources in expanding higher education.

It is true that the costs of higher education are much higher as compared to lower levels of education. Especially in circumstances where the school system is in great need of resources to enhance quality, the relative costs of higher education affects the choices made by government in the allocation of limited resources. The case for greater investment in higher education is not made on the grounds of equity and redress alone, although these are extremely important goals in their own rights.

No country has succeeded in generating sustainable socio-economic development without long-term investment in human resource development. Country's success depends on investment in its human resources. An equitable, good quality, efficient higher education system

has a major role to play in producing the required high-level human resources. In Bangladesh the current system has numerous shortcomings. Far-reaching changes in higher education are overdue, urgent and unavoidable. The failure to undertake such changes could have unfortunate consequences for the public higher education system and choke its potential as a powerful "engine of national development".

The reconfiguration of the system and institutions should occur without over-zealous intervention or excessive regulation by government. At the same time, inappropriate and defensive appeals to institutional autonomy and academic freedom in the face of the imperative of reconfiguring higher education to meet socio-economic goals should also be avoided. The autonomy of institutions has to be reconciled with the need to account for the use of public resources. The right to pursue intellectual and academic goals has to be exercised within the framework of complementary social goals.

Very important advances have obviously been made. During the past decade, and very important steps were taken to redefine education policies, so as to introduce new methodologies and raise the academic level of graduating students. This progress has been possible because economic reforms and the emphasis on openness and liberalization have generated an increased demand for better education. It has also been possible because fertility rates have declined and because democratization in the region is facilitating the growth of organized civil society groups. higher education has attracted the interest of great many persons and has taken a more clearly defined place within the development process.

Notes:

I. Shultz, T.W. 1961. 'Education and Economic Growth' in Nelson B. Henry (ed.) the Sixtieth Year book of the National Society of the Study of Education, Chicago, University of Chicago Press.

2. Bowen, William G. 1964. Economic Aspects of Education: Three Essays, Princeton, Princeton University.

3. Svennilson, I., Edding, F., and Elvin, L., 'Targets for Education in Europe in 1970' in the Policy Conference on Economic Growth and Investment in Education.

4. McClelland, David C., ' Does Education Accelerate Economic Growth?' in Economic Growth and Cultural Change, Vol. XIV. No. 3, April 1966.

5. Lockheed, M., Jamison, D and Lau, L. "Farmer Education and Farmer Efficiency: A Survey" economic development and cultural change (29) 1, 1980.
6. Jamison, D and Lau, L. Farmer Education and Farm Efficiency, Baltimore, Johns Hopkins University Press, 1982.
7. Fuller, W., Training and Worker productivity: Study of skilled workers in two firms in south India, Stanford university, 1970.
8. Min, W. Impact of Vocational education on productivity in the specific institutional context of China: A case study, Stanford University 1987.

Bibliography

Abramovitz, M. (1956). "Resource and Output, Trends in the United States Since 1870," *American Economic Review*.

Ahmad, Q. K., and Alam, M. "Priorities for Educational Research in Bangladesh in the Nineties" in *Educational Research in Policy Perspective*. Dhaka: NAEM.

Alam, M. (1992). "Secondary And Higher Education In Bangladesh, Its Growth And State Expenditure: A Time Series Analysis Of 1981-90" Chr. Michelson Institute, Dec. 1992. *Cmi-Derap Development Research and Action Programme Working Paper*, December 1992:10.

Bangladesh Economic Review. Ministry of Finance, GoB 2000.

Basar, M. (1999). *Family Investment and Gender Disparity in Educational Sector*, Dhaka, BIDS.

Becker, G.S. (1957). *Human Capital*, New York, Columbia University Press.

Becker, G.S. (1964). *Human Capital: A Theoretical And Empirical Analysis*. With Special Reference to Education. University Press, Reprinted In M.Blaug (Ed). Economics of Education, Penguin (1963).

Chowdhury, S.A. (1986). "The Correlation Between Education And Development" in *Invitation to Educational Planning*. Dhaka. UPL.

Domar, E. (1947). "Expansion and Employment". *American Economic Review*.

Farid, S.M. "Education Wages and Employment" in *Educational Research in Policy Perspective*. Dhaka: NAEM.

Fuller, W. (1970). *Education, Training and worker productivity: Study of skilled worker in two firms in South India*, Stanford University Press.

Gustavsson, S. (1990). *Primary Education in Bangladesh-For whom?* University press Limited, Dhaka.

Huq, M. S. (1983). *Higher Education and Employment in Bangladesh*. The University press Limited, UNESCO.

Min, W. (1987). *Impact of Vocational Education on Productivity in the Specific Institutional Context of China: A Case Study*, Stanford University Press.

Oshima, H. T. (1990). "Employment Generation: The Long Term Solution to Poverty", *Asian Development Review*, Vol. 8 No. 1

Planning Commission, GoB. *The Fourth Five year Plan 1990-95* (Revised Draft).

Planning Commission. GoB. *The Fifth-Five Year Plan (1997 - 2002)*.

Psacharopoulos, G. (1981). "Education, Employment and Inequality in LDCs" *World Development*, January.

Sanyal, B.C. (1987). *Higher Education and Employment-An International Comparative Analysis*, The Falmer Press.

Statistical Yearbooks, various issues, Bangladesh Bureau of Statistics.

Tan, J. and Mingat, A. (1992). *Education in Asia-A Comparative Study of Cost and Financing*. The World Bank.

Ahmed, Q.K. (1980). "Utilizing Resource and Efficiency in Education in Bangladesh". Paper presented at a workshop in Educational Planning and Development, Institute of Education and Research, Dhaka University, December 1980.