

Impact of Higher Education on National Economic Development

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Article History

Received: 29.09.2017

Accepted: 10.10.2017

Published: 30.10.2017

DOI:

10.21276/sb.2017.3.10.2



Abstract: Education is nationally and internationally recognized as one of the most important ways and means for promoting economic development. Here arises a question on what type of education to be imparted for the national development in terms of primary, secondary and tertiary education. Knowledge-based challenge within a globalized economy is accelerating a fresh consideration of the role of higher education in economic development and its expansion. In the past, it was seen that the higher education was very much costly and at the same time, it was really inefficient public service which could only benefit the wealthy and privileged class. Importance of education has now been realized to be successful in the field of economic development. A short look upon some recent research findings indicates that higher education is a determinant of increasing income. Additionally, the higher education may create awareness about how to increase tax revenue, boosts savings and investment, improve a nation's health, contribute to reducing the rate of population growth and enhance the adoption of technology in order to strengthen the governance. Colleges and Universities have an important role to play in regional and national economic development efforts through producing quality graduates. Undoubtedly, the higher education and economic development complement to each other. To gain national economic development, colleges and universities must be the key partners throughout the development process of the country.

Keywords: Tertiary Education, Economic Expansion, National Economic Development

INTRODUCTION

After the World War II, the theory of “Human capital” was first introduced by the several renowned economists namely Friedman, Gary S. Becker and Jacob Mincer.

They examined a lot about the benefit of education in human society but they neglected higher education as a means to improve the economic growth nationally with a view to alleviating the poverty. By comparing their theories, some recent researches indicate that the higher education is surely a determinant and can be a result of income which produces the public and private benefit [1]. Higher education must be an important investment in the development of human capital. Actually, it can be considered as a high level or a special form of human capital, the contribution of which is very significant in every economic development. According to Manuel Castells, the higher education is also considered as the “engine of development of the new world economy”. The contribution of higher education can be of many aspects which always help to accelerate the overall national development. Economically, it helps to the rapid industrialization and capitalization by providing skilled manpower of technical and managerial skills with high professionalism. At present, by transforming nations into knowledge economies and knowledge-based societies, the higher education provides not only educated workers but also skilled workers to add a significant rate of growth to the national and international economy. It helps to create positive attitudes among the mass. It also helps to make attitudinal changes which are very important for the socialization and modernization and overall transformation of the societies. Most importantly, it can be said that higher education helps through its teaching and research in the formation, assimilation and distribution of knowledge. It also helps forming a strong nation-state and at the same time helps expanding globalization. Finally, higher education allows the total humankind to enjoy an enhanced ‘life of mind’ offering different benefits in the society both culturally and politically [2].

The role of higher education in terms of the economic development has been well established around the world. Furthermore, this role will certainly be helpful in increasing various changes in the field of research and technology. It also helps expanding the globalization and demographics impact of the U.S.A. We like to be remained competitive with these changes to improve our productivity and try to adopt an innovative spirit. In this circumstance, higher education has the ability as well as capacity to help achieve these goals in reality.

HIGHER EDUCATION AND ECONOMIC GROWTH

The higher education nowadays has largely been contributing in the economic growth and development of a country especially Bangladesh in particular. It is supposed to occur through some distinctive interacting functions. The higher education can contribute greatly in the national economic growth and development through the production of knowledge and skilled manpower. In this connection, people are able to find out the barriers or obstacles and are also able to help resolve the problems through the higher education. Actually, teachers and students of some major universities around the world including Bangladesh are actively involved in the innovative research activities to develop their own nation. Their relentless services towards the growth and development are no longer confined within a few issues rather they have been working together to promote the human development index by introducing different theories of economic development. Their advance knowledge and experience, innovative research and creative activities will certainly be helpful to accelerate the rapid economic growth and development of nation [3].

Through the proper distribution of knowledge and experience, colleges and universities can contribute a lot to the overall growth and development of a nation. The contribution of the faculties, students of different fields as well as the staff of those colleges and universities in the field of economic development cannot be avoided anyway. Finally, it is highly appreciated as well as accepted that the post-secondary institutions do contribute to the “transmission of knowledge” with their extensive and diverse teaching capabilities.

THE RELATIONSHIP OF HIGHER EDUCATION TO ECONOMIC GROWTH: PRACTICAL EVIDENCE

Macroeconomic Approaches

Nowadays, it has been said that the tertiary education is certainly one of the major elements in terms of economic competitiveness which is now nationally and internationally recognized. This tertiary education is very important than ever in the industrialized as well as developing countries. The most convincing way to develop the overall situation of the economic growth and development is to focus or concentrate on the effect of higher education. There are a lot of ways and means to analyze and describe the relationship between higher education and economic growth. However, the most natural approach as may be suggested that the growth in output is the function of the growth of inputs of labor and capital including an unknown residual or error term. The residual items may be required to investigate that how the growth in output can be greater than the increase in labor and capital in the economy. In this context, the unexplained residual can be decomposed into a portion explained by the increasing of the human capital which has usually been considered by the average period of schooling. And this schooling is now commonly attributed to the technological change [4].

Microeconomic Approach

Traditionally, the contribution of higher education to national and international economic development has largely been analyzed and developed in terms of education-earnings relationships. More conveniently, it also depends on the rates of return. The rates of return are nothing but the summary statistic of the relationship between earnings of a man in his entire life and the costs of schooling of their children [5]. After adjusting for direct costs associated with the subsequent stages of educational achievement (for example, tuition and fees), and taking account of the fact that the value of any given sum of money will surely give a variation depending on the time at which it is spent or received, the (economical net) earnings differentials can be expressed in classic “rates-of return” terms. Rates of return are considered as private if they are based on differences in take home pay and the costs of schooling that come out of the pockets of students and their families.

If the private and social rates of return are calculated, it becomes easy to calculate the difference between these rates. It shows how much the society is benefited above and beyond the private return. These differences always provide an economic justification for the governmental or national issue. If the social return exceeds the private return, it tells us about the unregulated operation of private markets (so-called “laissez-faire”) will not produce as much education as is desirable from the point of view of society. (This is because private markets base their decisions on private returns, whereas society should base its decisions on social returns.) Moreover, if the social rate of return to primary school exceeds that for higher education, this, in turn, suggests that primary school is a better social investment than higher education in any country.

Such analyses were undertaken and concluded that the difference was greater in primary education than in higher education, and therefore that government action was more justified in the former than in the later. But the standard rate-of-return analyses stopped there, consistently failing to reflect that the benefits of higher education extend well beyond the incremental earnings accruing to those individuals who receive it [6].

Psacharopoulos (1973, 1985, 1994, 2004) provides an international survey of rates of return to education. Conventional rate of return analysis shows higher education in a less favorable light than it shows primary and secondary

schooling. Psacharopoulos and Patrinos reviewed 98 country studies and found that social rates of return to investment in primary education are the highest (% 18.9), followed by secondary education (%13.1). The returns to higher education are the least (%10.8). This pattern is more or less true in general with respect to private rates of return also. Such evidence is extensively used to discourage public investment in higher education and to concentrate rather exclusively on primary education [7].

Though the rate of return to higher education is less than that to primary education, it should, nevertheless, be noted that higher education does yield an attractive rate of return to the society (above 10 per cent) and to the individual as well (19 percent). The highest returns are recorded for low-income and middle-income countries [8].

Overall, the average rate of return to another year of schooling is 10%. According to Psacharopoulos and Patrinos, average returns to schooling have declined by 0.6 percentage points for over ten years. At the same time, average schooling levels have increased. Therefore and according to the theory, everything else being the same, an increase in the supply of education has led to a slight decrease in the returns to schooling [9].

WORLD BANK REPORT ON EDUCATION IN BANGLADESH

According to a recent report of World Bank, around 1.6 million of tertiary students in Bangladesh have been enrolled in around 1,700 government and non-government colleges affiliated under National University. This statistic indicates that there is a huge economic opportunity in the context of the development of the national or Bangladesh economy in particular. And this will help us in becoming the middle-income country within the next few years. A highly developed company or multinational companies in particular always require the graduate manpower for their organizations. The demand for those graduating employees with higher cognitive and non-cognitive skills and job-specific technical skills has been mandatory in any middle or higher level of both private and public level of business organizations in the country. This also requires an improvement in the quality and relevance of tertiary education to ensure graduates have more market relevant knowledge and skills. The National University student enrolment size combined with its sheer number of colleges network all over the country make it the critical sub-sector for making a qualitative dent in the higher education system.

Local tertiary colleges make higher education accessible for them without the need for relocation. The tertiary college subsector still has a long way to go in delivering world-class programs that produce globally competitive graduates. With very large enrolment and college numbers, effective management and monitoring of the subsector becomes a challenge at national and institutional levels in absence of a long term national strategic plan. The quality and relevance of college education in terms of learning outcomes and employability of graduates have also become a growing concern. Except for a few large metropolitan colleges, the majority suffer from inadequate teaching-learning facilities, shortage of qualified teachers and dilapidated infrastructure, which create a challenging classroom environment. Financing to this critical subsector over the past years has also been grim. Compared to public universities, funding to the public tertiary college subsector has been particularly low and declining as the share of public financing to government colleges decreased from 7 percent in 2008–09 to 4.3 percent in 2014–15.

GOVERNMENT OF BANGLADESH – WORLD BANK COLLEGE EDUCATION DEVELOPMENT PROJECT

The World Bank helps us to tackle these challenges by taking initiative to develop the College Education Development Project which was approved by the Board on June 3, 2016. This \$130 million (IDA US\$100 million and GoB US\$30 million) investment will focus on overhauling the National University college sector over the next five years. The aims and objectives of the project are to improve the planning and management of the overall college subsector as well as enhance the quality of college education. Through activities such as institutional development grants and teachers' professional development program, the Project aspires to provide students with an improved teaching/learning environment for better learning outcomes. The Project will also facilitate the development of the first Strategic Plan for the college subsector in providing direction and guidance to policymakers and the college community in achieving quality education outcomes relevant to the needs of the country in the years ahead. Concerted efforts to revamp the college subsector for high quality education has been much anticipated among the college community. Any investment in education creates opportunities for better graduates, improved jobs and stronger economy.

HIGHER EDUCATION AND DEVELOPMENT

After some analysis, case study and personal observation, it indicates the fundamental significance of the higher education in terms of overall development of a country in particular. The higher education helps promote the following:

Innovating Technology

In a knowledge economy, higher education can help economies keep up or catch up with more technologically advanced societies. Higher education graduates are likely to be more aware of and better able to use new technologies. They are also more likely to develop new tools and skills themselves.

Income Growth

The vitality of higher education is a fundamental—and increasingly important—determinant of a nation's position in the world economy. It contributes to labor productivity, entrepreneurial energy, and quality of life; enhances social mobility; encourages political participation; strengthens civil society; and promotes democratic governance. It does this by creating public goods such as new knowledge, and by providing a safe space for the free and open discussion of the values that define the character of a nation's development. Economic growth is a powerful determinant of poverty alleviation and improvements in people's lives. Higher education's contribution to growth, therefore, means better living standards for people at all levels of a society.

Their knowledge can also improve the skills and understanding of non-graduate coworkers, while the greater confidence and know-how inculcated by advanced schooling may generate entrepreneurship, with positive effects on job creation.

Enlightened Leaders

Higher education can give leaders the confidence, flexibility, breadth of knowledge, and technical skills needed to effectively confront the economic and political realities of this century. It also generates cadres of well trained teachers for all levels of the education system.

Expanding Choices

Development is fundamentally concerned with expanding the choices people can make. As such, an accessible higher education system—offering a wide range of quality options for study—is a major achievement, bolstering social mobility and helping the talented to fulfill their potential.

Increasingly Relevant Skills

Higher education is absolutely necessary for training scientists, engineers, and others to help invent, adopt, and operate modern technology in all sectors. When scientists in developing countries are inspired to define and address local problems, they are likely to contribute to appropriate solutions in such vital areas as environmental protection, the prevention and treatment of illness, industrial expansion, and infrastructure provision.

BENEFITS OF HIGHER EDUCATION

Higher education can lead economic growth through both private and public channels. The private benefits for individuals are well established and include better employment prospects, higher salaries, and a greater ability to save and invest. These benefits may result in better health and improved quality of life, thus setting off a virtuous spiral in which life expectancy improvements enable individuals to work more productively over a longer time further boosting lifetime earnings. Public benefits are less widely recognized, which explains many governments' neglect of higher education as a vehicle for public investment. But individual gains can also benefit society as a whole. Higher earnings for well-educated individuals raise tax revenues for governments and ease demands on state finances. They also translate into greater consumption, which benefits producers from all educational backgrounds.

PECUNIARY AND NON-PECUNIARY BENEFITS OF HIGHER EDUCATION

The benefits of higher education, both private and public, can be partitioned into pecuniary and non-pecuniary benefits. Pecuniary returns are anything that improves the financial well-being of individuals and the public. These would include the increased tax receipts collected from educated citizens. In addition, this larger and deeper tax base would reduce the tax pressure on the lower-income members of society at the same time as reducing the number of people that would require support from all levels of government [10].

A rather substantial pecuniary benefit of higher education that is almost universally ignored in economic research as well as the debate on higher education funding is called the "financial option" return of educational investments. Part of the monetary value of completing an education is that passing through various schooling thresholds provides one with the opportunity to obtain still more education. If students are unaware of this option value at the time of making their investment decisions (and this might be especially prevalent among students from disadvantaged families or families with lower average education levels), public subsidies can help avoid systematic underinvestment. Though it is easy to see why the option value is largest for more elementary levels of education, the changing technological and economic conditions of the twenty-first century are inflating the option value of a college education. The non-pecuniary

benefits of higher education are all of the nonmonetary benefits that accrue to individuals and society. The difficulty in attaching a dollar value to most of these types of benefits (and in many cases, recognizing) is likely responsible for the dearth of economic studies that focus on measuring the public returns to higher education and for the apparent understatement of the benefits in those studies that do exist. Other recognizable non-pecuniary benefits include promoting educational opportunity, promoting growth and economic productivity, supplying trained men and women to the economy, achieving specific social objectives such as income transfer or equalization, developing an educated citizenry, creating knowledge, and stimulating learning. There is a growing literature in human ecology that finds that female and maternal education affects children's health, female mortality, female fertility, birth rates, and the "quality" of children [11].

Education may also increase productivity in nonmarket activities, such as home production; it may make parents into more efficient producers of children's human capital; and it may lead to more informed and effective consumption decisions. Other research shows that more educated individuals live longer—which itself has substantial economic value—and they report better health at any particular age. Finally, education is itself often a consumption good, which, in turn, enables the consumption and enjoyment of human capital goods such as information, literature, and ideas. All of these benefits of education are enjoyed directly by the educated person, so they are elements of "private" returns that people would be willing to pay for [12].

EVOLVING ROLES

Previously, colleges and universities focused on one main objective - educating students in various subject matters for playing different roles in society. In many cases, colleges and universities taught students and awarded degrees based upon the programs that had been in place for many years. The programs were driven by what the university wanted to teach and what students were interested in. While there is nothing necessarily wrong with this type of approach, it was usually not very responsive to the needs of private sector employers. As a result, many students would graduate with a degree in a subject matter area that did not translate into a good job in a growing economic sector.

Over the years, colleges and universities have evolved their roles into a broader mission that better support companies and economic development efforts. While the education of students is and should be the primary objective, other roles have become and are more important to better support business and economic development initiatives. During the past twenty years, research & development activities at universities and colleges have become much more important. Educational and governmental entities have plowed more dollars into research related activities. This change has been driven by the evolution of the United States economy, the demands of the business community and the need for universities to find additional funding sources.

Universities and colleges have also recognized the need to help nurture entrepreneurs through technical and financial assistance programs. These efforts have resulted in the survival of many young businesses that otherwise might fail due to a lack of capital, access to research and management expertise. Universities and colleges recognize the need to help these companies survive for a variety of reasons.

If these entities can help entrepreneurs survive and succeed, they are making a significant contribution to the geographic area they are serving, can use their success to market the university or college to new students and business partners, and in some cases, secure a financial return for the university.

More recently, many universities and colleges have recognized the need to become intimately involved in regional, state and national economic development initiatives. Part of this increased role in economic development efforts can be traced to economic development organizations doing a better job of reaching out to higher educational entities, and the desire of universities and colleges to help contribute to the "public good" in a region, state or country.

EFFECTIVE WAYS FOR HIGHER EDUCATION TO SUPPORT ECONOMIC DEVELOPMENT

Whether public or private, universities and colleges need to determine the best way to participate in regional, state and national economic development initiatives. It is important for higher educational entities to look for the ways that can best leverage their assets to help support their mission and the economic development goals of a geographic area or industry sector.

Where should higher educational entities start when it comes to deciding the best ways for them to participate in the economic development process? Colleges and universities should begin the process by completing a comprehensive inventory of all activities that have a material impact on economic development initiatives. This process will allow the institution to identify its key assets which can be leveraged to help grow the regional, state and national economies.

The next step in the process is to take the key assets of the college or university and match them up with regional, state and national economic development initiatives which present an opportunity for the leveraging of people, facilities and capital to support economic development efforts. This “mapping” process allows for a more efficient use of public, private and not-for-profit human and financial capital.

CONCLUSION

Students have been getting interested in taking more or better schooling because they would like to earn more by getting better jobs, on an average, with more or better schooling. Appropriate timing of schooling can be an ideal source of social mobility. Moreover, regions are interested in raising the average level of schooling among their general mass because they think that doing so will certainly help improve the productivity, increase economic growth and raise the quality of jobs in the national economy of Bangladesh. It will also help reduce the poverty and inequality among the population. Some of the earliest works in the economics of education argued that a major effect of better of quality education is to improve labor’s capacity to produce highest production. Because more highly educated workers are more beneficial for any organization. Because, they quick learner and have ability to do multi-disciplinary works with their respective knowledge and skills. Further, they should have better work habits, particularly a greater awareness of time and more internalized norms that would make them more dependable. Nations with more educated labor forces are characterized by higher output per worker, but typically these nations also have more physical capital per worker. Exactly how education increases productivity, how important it is, and it what ways it is important are difficult question which economists have been unable to answer definitively. Controversy also surrounds the level of education that contributes most to growth; primary, secondary, or higher education, although we will argue that the case for higher education as a key factor in economic development has grown stronger in recent years.

One of the clues that education does contribute to growth and how much it may contribute is that countries with higher levels of economic growth have labor forces with higher levels of formal schooling. Such a macroeconomic approach to the relation between education and economic growth emphasizes the correlation between the stock of human capital and the increase in economic output per capita. This may just indicate that as individuals earn more income, they purchase more schooling for their children. In that case schooling would be primarily consumption good, not an investment good. However, economists have been able to show that, on average, countries that have sustained high levels of economic growth are also those who have higher levels of literacy and have invested steadily in raising the education of their labor force. With the shift to an information economy, globalization, and flexible organizations of production, economists have taken these arguments about human capital in the production process a step farther. Theories of development now argue that developing nations have a better chance of catching up with the more advanced economies when they have a stock of labors who have the skills to develop new technologies themselves or to adopt and use foreign technology. The claim that educated workers adjust more effectively to rapid change in opportunities and technology implies that in today’s more rapidly changing and more competitive markets, the payoff to education should rise. The growth of science-based industries also means that economic development depends increasingly on highly educated and scientifically trained labor. Yet, more than simply increasing the demand for scientifically trained labor, economists argue that the new types of production reward innovation and learning-by doing on a broader scale, even among non-scientifically oriented workers. In this kind of model, more education in the labor force increases output in two ways: (a) education adds skills to labor, increasing the capacity of labor to produce more output; and (b) education increases the worker’s capacity to innovate (learn new ways of using existing technology and creating new technology) in ways that increase his or her own productivity and the productivity of other workers. The first of these emphasizes the human capital aspect of education (education improves the quality of labor as a factor of production and permits technological development); the second places human capital at the core of the economic process and assumes that the externalities generated by human capital are the source of self-sustaining economic growth process—human capital not only produces higher productivity for more educated workers but for most other labor as well.

The fact that individuals with more education have higher earnings is another indication that education contributes to growth. The education-higher earnings connection reflects a microeconomic approach to the relation between education and economic growth. Greater earnings for the more educated in this approach represent higher productivity—hence; an increase in educated labor in the economy is associated with increased economic output and higher growth rates. The positive economic payoff to individuals with more education in the form of higher earnings suggests that their economic value to the society is higher than those who have lower education. Economists estimate the payoff to more education relative to the cost of that education just like they would estimate the payoff to any investment. They calculate what the amount invested in education yields in higher earnings over the lifetime of those with more education. This rate of return to the investment in education is generally positive in almost every country. A positive rate of return to education suggests that investing in education contributes to economic growth. The higher the rate of return, the more likely that investment in education contributes to growth. And those levels of education associated with higher

rates of return should be the levels in which additional investment produces the greater contribution to economic growth [13].

Colleges or universities can make significant contribution to national economic development initiatives. A higher educational entity has to have a desire to do so. A college or university must know their strengths and assets that can be leveraged to benefit their organization and geographic area in which they can have an impact. The higher educational entity must have a vision of what they would like to achieve. Finally, the college or university must have an implementable strategic plan. To maximize results for a region, state and country, the higher educational entity must be engaged with government, the private sector, other academic institutions and the not-for-profit community. If everyone is working together to support economic development initiatives, everyone will benefit.

REFERENCES

1. Bloom, D., Canning, D., & Chan, K. (2006). Higher Education and Economic Development in Africa, *Harvard University*, p. 1.
2. Tilak, J. (2003). *Higher Education and Development, International Seminar: University XXI, Brasilia, Brazil*, p. 3.
3. Bassanini, A., & Scarpetta, S. (2001). Does Human Capital Matter For Growth in OECD Countries? Evidences From Pooled Mean-Group Estimates, *OECD Economics Department Working Papers*, No: 282.
4. Becker, W. E., & Lewis, D. R. (1992). Preview of Higher Education and Economic Growth, in "Higher Education and Economic Growth" Edited by: William E. Becker and Darell R. Lewis, *Kluwer Academic Publishers*, p. 2-3.
5. Tilak, J. (2003). Higher Education and Development, *International Seminar: University XXI, Brasilia, Brazil*, p. 3.
6. World Bank. (2000). Higher Education in Developing Countries: Peril and Promises, The Task Force on Higher Education and Society. Washington, D.C.: The World Bank, p. 40.
7. Psacharopoulos, G., & Patrinos, H. A. (2004). Returns to Investment in Education: A Further Update, *Education Economics*, Vol. 12, No. 2, p. 112.
8. Tilak, J. (2003). Higher Education and Development, *International Seminar: University XXI, Brasilia, Brazil*, p. 4.
9. Psacharopoulos, G. and Patrinos H. A. (2004). *Returns to Investment in Education: A Further Update*, *Education Economics*, Vol. 12, No. 2, 113.
10. World Bank. (2000). *Higher Education in Developing Countries: Peril and Promises*, The Task Force on Higher Education and Society. Washington, D.C.: The World Bank, 92.
11. Rizzo, M J. (2004). *The Public Interest in Higher Education*, A Federal Reserve Bank of Cleveland Research Conference Proceedings of a Conference Held in Cleveland, Ohio November 18–19, p. 20.
12. Topel, R. (2004). *The Private and Social Values of Education*, A Federal Reserve Bank of Cleveland Research Conference Proceedings of a Conference Held in Cleveland, Ohio November 18–19, 47-48.
13. Özsoy, C. (2008). *The Contribution of Higher Education to Economic Development: 8th Global Conference on Business & Economics*, Anadolu University, Eskisehir, Turkey.

Websites

1. http://siteresources.worldbank.org/INTAFRREGTOPEIA/Resources/Higher_Education_Econ_Dev.pdf
2. <http://blogs.worldbank.org/endpovertyinsouthasia/education/how-higher-education-bangladesh-creates-opportunities>
3. http://siteresources.worldbank.org/INTAFRREGTOPEIA/Resources/Higher_Education_Econ_Dev.pdf
4. <https://www.coursehero.com/file/p2dtaft/The-model-of-endogenous-innovation-and-learning-by-doing-has-major-implications/>