

Does Human Capital Cause Economic Growth?

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Abstract

It is the 21st century; every state desires to develop itself more rapidly. After the Second World War in 1945, industrial, individual, and communication revolutions transformed the world into a global village. The internet, cyber space, and e-mail have compressed the world into a smaller region. Every sane individual can easily have an access to all types of changes occurring in the world. Thanks to the communication revolution, nothing is hidden from the eyes of human beings. In this regard, every state in the world is looking for its specific role in the world. In this regard, every state is the looking for its specific role in the world. The economy is not only the sole source of development in a state but these are the men behind all types of amelioration. The knowledge, skills and hardworking of the individuals sustain the economy of a state. Traditionally only the land labour and physical resources were considered important means of production. Undoubtedly, man and material resources are unavoidably necessary for the economic growth of a country. In this century, without manpower all other resources are futile. This paper is based on the thesis that human capital consists of manpower, skill, and knowledge, is sine qua non for economic growth. The economics of education is the perfect investment is the major theme of this paper.

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1 Introduction

Plato (427-347 BC) was the first political thinker who considered the human beings a valuable asset. In his treatise, "The Republic" Plato gave the idea of his ideal state. In his ideal state, he emphasized upon the state's responsibility to train the people according to their skills and talent. His ideas were purely of political nature but not devoid of economic objectives. He introduced an education system that was unique. His education system led

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the political system towards specialization of functions and division of labour² The classical economists like Adam Smith and Alfred Marshall constructed the theories of human capital in the backdrop of Plato's idea of specialization of functions and division of labour. Adam Smith wrote, "Wealth of Nations" in 1776 and considered man expensive machine in the pretext of his education and skills³. The concept of human capital has become a matter of grave concern in the studies of economics. The economic of education is a branch of economic theory and investigation, developed in 1960. The economists like Adam Smith, Alfred Marshall, and John Stuart Mill considered the education national investment in the 18th and 19th century⁴. It shows that the history of economics of education is an age back issue. Later on, this issue was discussed in countries of Europe and America regarding the importance of education. Considering the importance of education, different countries in the world started investing more in education. In developed countries this investment was more as compare to the developing part of the world.

Schultz and Becker emphasized upon the education investment. They made research upon the concept of human capital and analyzed that education is the best national investment that in future would be beneficial both for the society and for the individual itself.⁵ Bowman makes a theoretical and empirical study upon human capital and declared the human investment as a revolution in economic thought.⁶ The Russian economist Strumilin and other European economists "drew analogies between investment in education and investment in physical capital."⁷

In the context of above discussion, it can be derived that in the world of economics human beings are also taken into considerations as valuable capital like physical capital such as buildings, factories and machines which generate income as yielding goods and services. In the same way economist opine that investment in education and training enhances the skill of manpower that ultimately gives more production as new machines have more productive capacity.⁸ The considerable point is that, "The concept of human capital can be applied not only to education and training, but to any activity which increases the quality and productivity of the labour force and thus raises the future income levels."⁹

Now the question arises here how human capital can be made more favorable and profitable in the prevailing conditions of any country.

There are generally developed countries and developing countries in the world. In the developed countries human capital is taken more seriously as compare to developing world. In every country, human capital can be observed in two aspects:

²G. H. Sabine, *A History of Political Theory* (London: George g. Harrap And Company Ltd., 1961), 35-67.

³George Psacharopoulos (ed.), *Economics of Education: Research and Studies* (Oxford: Pergamon Press, 1987), 01

⁴Ibid.

⁵Ibid

⁶M. J. Bowman, *The Human Investment Revolution in Economic Thought*, Socio. Educ. Spring: 111-137.

⁷Psacharopoulos, *Economics of Education*.

⁸Ibid.

⁹Ibid.

- Quantitative Aspect
- Qualitative Aspect

Quantitative human capital relates with the number of population in the country include all skilled and unskilled people. Contrary to this, the qualitative human capital relates with the skilled and trained man power. In the developed countries, more emphasis is given upon qualitative human capital for more production of goods and services. For attaining the objective, proper training and knowledge are delivered to manpower. In America, UK, Canada, and other developed countries, skilled and trained manpower is welcomed. Such countries have designed their educational system in a way that every individual could guess his propensity in any discipline. Consequently, individual works in the same discipline that attracts him. In the backdrop of such education system, the upcoming breed definitely underpins the economic growth of the country. What makes human capital instrumental for economic growth?

Human capital is an integral part of modern economy. It is highly instrumental for economic growth of a country. It is education and proper training that make the human capital instrumental for economic growth. It is usually considered that more educated people earn on average higher incomes as compare to less educated people.¹⁰ Most economists argue that it is the human resources of a nation not physical or natural resources that make the difference in the social and economic development of a nation.¹¹ Late Professor Frederick Harbison of Princeton University says,

“Human resources... constitute the ultimate basis for the wealth of nations. Capital and natural resources are passive factors of production; human beings are active agents who accumulate capital, exploit natural resources build social, economic, and political organizations and carry forward national development. Clearly, a country which is unable to develop the skill and knowledge of its people and to utilize them effectively in the national economy will be unable to develop anything else.”¹²

Theodore W. Schultz also emphasized upon the investment in education and considered it fruitful for future economic growth.¹³ So, education and training are two basic ingredients in human capital that link it to economic growth. Human resources may be adorned through formal or informal education. Most economists argue for formal education to make the human capital more effective.¹⁴ Another economist Wade D. Habbad has also insisted upon the expansion of formal education to attain the economic growth on larger scale.¹⁵ Different

¹⁰Mark Blaug, *An Introduction to Education* (Middlesex: Penguin Book Ltd., 1970).

¹¹Michael P. Todaro, *Economic Development* (New York: Addison Wesley Longman Ltd., 1997), 378.

¹²Frederick H. Harbison, *Human Resources As the Wealth Of Nations* (New York: Oxford University Press, 1973), 3.

¹³Theodore W. Schultz, “Investment in Human Capital,” *American Economic Review* 51 (March 1961).

¹⁴George Psacharopoulos, “Education and Development: A Review,” *World Bank Research Observer* 3. (January 1988), 99-116.

¹⁵Wadi D. Haddad, et al., *Education and Development: Evidence For new Priorities*, World Bank Discussion Paper No 95 (Washington, D.C.: World Bank, 1990).

techniques have been used to see the link between education and economic growth as education is the basic ingredient of human capital.

The technique of cost benefit analysis has been applied to education. In this technique it is estimated that how much is invested by individual and the society.¹⁶ The rate of return on investment is also calculated to measure the economic growth.¹⁷ During this analysis, opportunity cost is also taken in consideration.¹⁸

The opportunity cost includes all values of goods and services used in the process of education. Not only the time of teachers, books, equipment, furniture, light, heat, materials and institutional building is considered but times of students and pupils also taken into consideration. "Which does not form part of the money, cost of education, but is part of the real resource cost."¹⁹

The time of students in the backdrop of income forgone represents the opportunity cost of their time.²⁰ The loss of income in times of achieving education is the true cost, to the individual or student on one hand, the loss of the national income on the other hand that may be produced by the individual in the time that he spent in his education. It is also the part of resource cost of education.²¹ As far as the benefits of education are concerned, those are measured for lifetime incomes of the educated manpower as compared to the less educated manpower.²²

The cost benefit analysis of education is a profitable form of investment that gives profit for a long time in the life of an individual and society as a whole. According to Psacharopoulos education has both private and social returns.

"The private rate of return is consistently higher than the social rate of return, and the rate of return to the primary education is generally higher than the rate of return to secondary or higher education."²³

Human capital means that human beings invest in themselves by various means like education, training and other like activities. Such investment may have an increase in their future income.²⁴

According to economists, investment is "expenditure on assets that will produce income in the future and contrast investment expenditure with consumption, which produces immediate satisfaction or benefits, but does not create future income."²⁵

¹⁶Psacharopoulos, Education and Development: A Review, 02

¹⁷Ibid.

¹⁸Ibid.

¹⁹Ibid.

²⁰Ibid.

²¹Ibid.

²²Ibid.

²³Ibid.

²⁴Ibid., 02

²⁵Ibid.

2 Rate of Return to Investment in Human Capital

The economists have developed an analogy between investment in human capital and investment in physical capital. According to them the rate of return to investment in human capital can be calculated by employing same cost benefit analysis technique which is also used in measuring the rate of return to investment in physical capital.²⁶

Psacharopoulos has prescribed the following formula:*

$$\text{Private rate of return} = \frac{[\text{Mean annual post tax Earnings of university Graduates}] - [\text{Mean annual post tax earnings of secondary school graduates}]}{[\text{Four Years * of study}] + \frac{[\text{Mean annual post tax earnings of second school of graduates}] + [\text{Mean annual private direct cost of study}]}{4}}$$

*George Psacharopoulos, "Education as investment," Finance and Development: (September 1982), 40:

The investment, made upon better education, health care and training of the people will increase the productive capacity of the workers. This factor will also increase the lifetime earnings of the workers and society as a whole.²⁷

It is possible to make a comparison between the rate of return to investment in human capital and physical capital.²⁸ Investment in human capital benefits both to the individual and to the society as a whole.

Psacharopoulos has made a research to calculate the social and private rate of return to invest in education. He made this research in selecting 32 countries and updated this survey of research on the returns to education by analyzing the results of cost benefit analysis of education in 44 countries. This survey was conducted during 1958-1978,²⁹ According to this survey four underlying aspects can be derived:

1. The returns to primary education (whether social or private) are the highest among all educational levels.
2. Private returns are in excess of social returns especially at the university level.
3. All rate of return to investment in education are well above the 10 percent common yardstick of the opportunity cost of capital.
4. Returns to education, in less developed countries are higher relative to the corresponding returns in more advanced countries."³⁰

²⁶ Ibid.

²⁷ Ibid.

²⁸ Mark Blaug, Op. cit., 54-59

²⁹ Psacharopoulos, Education and Development: A Review. (22).

³⁰ Ibid.

Table 1: The returns to education by region and country types. (%)

Region or country type	c	d	e	f			
	N	Prim.	Sec.	High.	Prim.	Sec.	High
Africa	(9)	29	22	32	29	17	12
Asia	(8)	32	17	19	16	12	11
Latin America	(5)	24	20	23	44	17	18
LDC Average	(22)	29	19	24	27	16	13
Intermediate	(8)	20	17	17	16	14	10
Advanced	(14)	(b)	14	12	(a)	10	9

(a) Source: Psacharopoulos (1973 p. 86) (b) Notcomputable because of lack of a control group of illiterates (c) N = number of countries in each group (d) Prim. = Primary educational level (e) Sec. = Secondary educational level (f) High. = Higher educational level.³¹

Table 2: The returns to alternative forms of capital by level of economic development

Level of Development	Physical Capital	Human Capital
Per capita income under \$ 1, 000 (7 Countries)	15.1 <	19.9
Per capita income over \$ 1,000 (6 Countries)	10.5 >	8.3

a) Source: Psacharopoulos (1981 p. 329.)³²

In the retrospect of all above story, investment in human capital remains a controversial issue. The above mentioned way to calculate the rate of return is criticized by various economists. They argue that education does not increase the productive capacity of the workers “but simply acts as a screening device.”³³

3 Human Capital versus Physical Capital

The table 1 shows the average private and social rate of return for all levels of studies in less developed, moderate, and economically advanced countries. The results show that in investment in human capital is profitable both for an individual and for the society as a whole. Preference in investment can not be ensured in any one form of the capitals (human or physical). Since Psacharopoulos has analytically examined the rates of returns to physical capital in both developed and developing countries.³⁴

The following results can be mentioned here:

³¹Psacharopoulos G 1973 Returns to Education: An international comparison. Elsevier, Amsterdam.

³²Psacharopoulos G 1981 Returns to Education: An updated international comparison. Comp. Educ. 17, Pp. 321-41.

³³Ibid. p.21.

³⁴Ibid.

1. The returns to both forms of capital are higher in developing countries that reflects the dearth of either capitals in developed and developing countries.
2. Human capital is a superior investment in developing countries but no in developed countries as shown in the table 2.³⁵

4 Does Human Capital Increases Workers' Productivity?

It is said that education and skill increase workers' productivity, A number of economists criticize the statement. They argue that education and skills only act as a "Screening device" but do not increase workers' productive capacity. Some economists have refuted this notion. Mark Blaug clearly mentioned in his "Slightly Jaundiced Survey" that employers used to pay more to educated workers as compare to less educated workers. He predicts that,

"In time the screening hypothesis will be seen to have marked a turning point in the human investment revolution in economic thought, a turning point to a richer, still more comprehensive view of the sequential life cycle choices of individuals."³⁶

Beside education and training there are also some other form of investment in human capital like on the job training and work experience and the process of job search, migration for better prospects, health, etc.

5 Significance of Human Capital in Developed World

The developed countries are making rapid economic growth through investing in human capital. They have formal education system to train the unemployed and unskilled youth. The Youth Opportunity Program and Youth Training Scheme in the U.K and many others like programs in Europe have been designed to train the young people. All such programs and schemes concentrate upon providing substitute periods of vocational education training and work experience. It depicts that developed world is very much conscious about the fact that investment in human capital certainly leads to economic growth.³⁷

6 Significance of Human Capital in Developing World

The developing countries especially situated in Asia and Africa is less conscious about the investment in human capital. The vocational and youth developing countries formal education has become a largest country and greatest consumer of public revenues. In the context of increase in human resources needs the people of third world countries have

³⁵ Ibid.

³⁶ Mark Blaug 1976, The Empirical status of Human Capital Theory : A Slightly Jaundice Survey.J. Econ. Lit. 14, Pp. 827-55.

³⁷ Europeon Centre For the Development of Vocational Training (CEDEFOP) 1982 Alternance Training for young people: Guidelines For Action. CEDEFOP, Berlin.

exerted a tremendous political pressure upon the political and non political elites to establish increasingly vocational and training institutions? Owing to such pressures, educational expenditures in Asia and Africa were tripled during 1960-70.³⁸ In 1990s the educational expenditures of third world were absorbing 15-27 % of the national budget.³⁹ Unfortunately, in Asia, Pakistan is the country which is lagging behind in investing more in human capital. Only 2.9% of the national budget is being used on human capital. The output will be insignificant against such meager education expenditures. The economic growth will be ultimately very low. The condition of investment in human capital in Pakistan is deplorable. The governments are least concerned about the concept of human capital. The prevailing political institutions and economic disparity are the real outcomes without qualitative human capital.

7 Significance of Human Capital for Economic Growth

All above mentioned facts and figures endorse that human capital has a great significance for economic development. The considerable thing is how to organize and utilize the human capital that it could give maximum rate of return. Considering McClelland's Hypothesis, education links with economic growth seem futile since "the overall chi-square results have appeared insignificant. The evidence does not support McClelland's Hypothesis that, overall, secondary level education inputs tends to have significant on subsequent growth rate."⁴⁰

8 Conclusion and Recommendation

Human capital consists of education, training, migration, experience, process of political research and health care, etc. Education is above all, compare to other ingredients. In fact, education develops attitudes, characteristics and aptitudes and abilities that in turn affect human productivity. The significance of human capital for economic growth is highly related with the form of culture of any country. The authoritative government will tend to implement certain decisions according to its heart. Selective morality, favoritism, nepotism, bribery and corruption are such social evils that are deep roots in the political systems of South Asia. Such evils are undermining the economy of South Asian countries relentlessly. Pakistan is one of those countries where above mentioned all ills are part of human capital and scarcely found in Pakistan.

This paper depicts only significance of formal education for economic growth but in my view informal education is also significant for the economic growth. The important thing is the absence of self-respect which is not given to working and labour class. The working and labour class are portion of our society without them one can not perform one's multifarious duties more appropriately. For example, if a cobbler does not make shoes for us, a farmer does not sow seed for us, an auto-mechanic does not repair our automobiles, a

³⁸Michael P. Todaro, Op, cit., P. 381

³⁹Ibid.

⁴⁰Dr. Khalid Aftab, Education And Economic Growth: Pakistan Economic, Social review (1977)

hair dresser does not cut our hair, etc. think what will happen? Therefore, human capital should be trained through formal and informal education. The self-respect should be given to human beings rather to their professions.

As far as the significance of human capital for economic growth is concerned, that is somehow valid and unavoidable. The economic growth links with all stocks of capital available in the country and education is only a part of it. So, we can say along with education, other natural and material resources are also inevitable for economic growth. This is a reality that all natural and material resources are utilized through proper management and planning, which is needed proper education of human beings. Therefore, to have a planned and sustainable economic growth, investment in human capital is an unavoidable fact.

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