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The Assessment of the Impact of Human Capital on Economic Growth in Uzbekistan

Beknazarov Bekzod Bakhtiyor ugli

Abstract

This article aims to highlight the concept of human capital and its impact on economic growth of Uzbek economy. To represent human capital two indicators: human development index and pupil per teacher ratio in primary school, as well as for economic growth GDP per capita were chosen.

Keywords: human capital, GDP, education, knowledge, economics.

Master student at Samarkand State University

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INTRODUCTION

Socio-economic development in the second half of the 20th century and the beginning of the 21st century is characterized by the increasing role of the human factor. In the economy of the modern world, human capital plays a decisive role in achieving competitive advantages and ensuring quality parameters of economic growth. Prospects for this development in the 21st century are associated with human resources as carriers of knowledge. Thus, by the middle of the twentieth century, there were enough prerequisites for the development of the theory of "human capital".

The methodological foundations and main directions of the theory of "human capital" were formulated by such economists as G. Becker, W. Bowen, E. Jenison, T. Schultz and others. By the end of the twentieth century the theory of "human capital" became recognized by the award of the Nobel Prize in Economics to Theodore W. Schultz and Gary Becker. The concept of human capital is presented in the most consistent form in the works of G. Becker. For the first time after A.Smith and K.Marx, economics recognized that people, not machines, represent the driving force of economic growth and development. In the era of scientific and technical revolution and transformations in the structure of productive forces, the worker himself becomes a factor of economic growth. The efficiency of the use of basic resources increasingly depends on the extent to which employees are morally and financially interested in achieving high end results.

The modern theory of human capital is based on an economic approach to human behavior, which has found expression in the following logical scheme of G. Becker:

- abilities, knowledge, professional skills, motivation become capital at the time of the sale and purchase of labor, hiring or receiving remuneration by the worker;
- the growth of human capital should contribute to the growth of labor productivity and production;
- the rational use of capital should lead to an increase in employee income;
- the growth of income stimulates the employee to invest in health, education to increase the stock of knowledge and skills, in order to then effectively apply them[1].

Many researchers, when defining the concept of "human capital", take into account the following features:

1. Human capital is the main value of modern society, as well as a fundamental factor in economic growth.
2. The formation of human capital requires significant costs, both from the individual himself and from society as a whole.
3. Human capital can be accumulated, namely: an individual can acquire certain skills, abilities, can increase his health. The knowledge of an individual becomes obsolete, i.e. the cost of human capital changes economically in the process of being, human capital is depreciated.
4. Investments in human capital give its owner, as a rule, higher income in the future.
5. Investments in human capital are quite long-term. This applies to both investment in human capital in education and in health capital.

[1]Becker G: *Human Capital*. 2nd edition. Columbia University Press, New York; 1964. Pp.61-64

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6. Human capital differs from physical capital in terms of the degree of liquidity. Human capital cannot be separated from its carrier - a living human personality.
7. Direct income received by a person is controlled by him, regardless of the source of investment.
8. The functioning of human capital depends on the decision of a person, on his expression of will. The degree of return from the use of human capital depends on the individual interests of a person, on his preferences, his material and moral interests, worldviews, and on the general level of his culture. So, summarizing the above, it can be noted that under human capital in the economy is understood a person's stock of knowledge, health, skills, experience, which are used by an individual to generate income. Moreover, this is not just a body of knowledge, abilities that a person possesses. The concept of "human capital" includes: acquired stock of knowledge, abilities, skills; the possibility of the expedient use of this stock in a particular sphere of social activity, which contributes to the growth of labor productivity and production; an increase in income, contributing to the interest of the employee, which leads to further investment in human capital; human abilities, talents, etc., which are an integral part of every person; motivation as a necessary element for the process of reproduction (formation, accumulation, use) of human capital to be fully completed.

The level and pace of development of the economies of all countries of the world are increasingly dependent on the degree of development of science and education. In the developed countries of the world, the last fifty years, the formation of an innovative economy and a "knowledge economy" took place. Therefore, the priority direction of the economic policy of many countries has become an increase in the level and quality of education of the population. In this regard, one of the most important problems of economic science should become the development of theoretical and methodological approaches to the analysis of mechanisms the influence of education on the volume of production, income and consumption of the population, on the rate of economic growth and the rate of scientific and technological progress, and also methods for assessing the degree of their influence, allowing to reproduce and test the results of this kind of research. There is an urgent need to develop and substantiate theoretical and methodological approaches to measuring and quantifying human capital, as well as macroeconomic empirical analysis of its impact on the economic development.

An equally important issue is the development of criteria for the selection of statistical indicators and economic and mathematical models that allow regularly monitor the impact of education and human capital in a broad sense on economic development, timely identify new phenomena and trends in the development of business processes. Conducting regular and systematic theoretical and methodological and empirical research would contribute to the formation of a rational educational strategy and employment policy, and the adoption of evidence-based public policy measures in the field of education and science in Uzbekistan.

Despite the variety of approaches available in the economic literature to the study of the processes of formation and use of human capital, the assessment of the return on education and methods for analyzing its impact on economic processes, theoretical and methodological approaches are imperfect. Assessment of the effectiveness of education in modern Uzbek scientific literature is extremely rare. In particular, the methods of macroeconomic empirical analysis are practically not used in determining values and dynamics of private and social returns to education, as well as external effects. The influence of education on various aspects of

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macroeconomic development is huge, especially on scientific and technicalprogress and "knowledge diffusion".

Literature review. Thus, taking into account the intangible nature and multidimensionality of human capital, various authors freely formulate the concept of human capital and place an ambiguous emphasis on its individual constituent elements: some tend to focus on the functional side of human capital, i.e. on its ability to generate income, others give its essential characteristics as a form of a personal factor of production. In almost all definitions after the 60s of the twentieth century, the principle of an expansive interpretation of human capital is observed as not only realizable knowledge, skills and abilities, but also potential ones (including the possibility of acquiring them); not only external stimulation, but also the internal motivation of the employee, which, in essence, does not change the economic content of human capital.

Yu.G. Bychenko characterizes human capital as a special form of human life, assimilating two specific forms (consumer and production)[2]. The other scientist G. Becker, after T. Schultz, translated the concept of "human capital" at the micro level, in which they defined that human capital in an enterprise as a set of human skills[3].

The concept of human capital can be viewed in both a narrow and a broad sense. In a narrow sense, one of the forms of human capital is education. It was called human, because this form becomes part of a person, and it is a capital because it is a source for future earnings and satisfaction, or all taken together. In a broad sense, human capital is formed through investments (long-term investments) in one specific person in the form of expenses for education and training of an employee for an enterprise, for health care, migration, and also for searching for information on prices and incomes. F.Neumann attributed the combination of the following elements to the main components of human capital: cultural and ethnic characteristics, qualifications, general and vocational education[4]. E.V.Vankevich singled out such components as education and vocational training, health status, driving needs, motivation, values[5].

Analysis and results. For assessment of the impact of human capital on economic growth, we picked up the human development indicator, which is defined asa summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living[6]. Also, to accurately represent human capital we included the pupil-teacher ratio into the model. GDP per capita was used to reflect economic growth. All in all, we formulated the following regression model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \boldsymbol{\varepsilon}$$

Here$Y -$ gross domestic product per capita in current US dollars, $\alpha -$intercept, $\beta_1, \beta_2 -$ corresponding coefficients, $X_1 -$ human development index, $X_2 -$ pupil-teacher ratio and$\varepsilon -$ error. It was decided to use logarithmic form of regession so as to minimize the risk of heteroscedasticity. We used the ordinary least squares method to calculate corresponding

[2]BychenkoYu.G. An innovative mechanism for the sustainable development of human capital. - M .: LAP Lambert Academic Publishing, 2014 .-- 532 p.
[3]Becker G: *Human Capital*. 2nd edition. Columbia University Press, New York; 1964. Pp.61-64
[4]Neumann F. Methods of economic assessment of human capital // Public administration: transformation processes in the modern world. Abstracts of the international scientific and practical conference. Part 2. - Minsk: Academy of Management under the President of the Republic of Belarus, 2015. - 98 p.
[5]Bakhshiyan D.V., ZevekeO.Yu. Human capital is the main resource of an efficient enterprise as a response to the challenges of the modern world // Economics and management of innovative technologies. - 2017. - No. 3
[6] http://hdr.undp.org/en/content/human-development-index-hdi

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coefficients. In table 1, one can see the results of the analysis.

Table 1. The results of econometric model.

	R squared	Coefficients	Standard error	t-statistics	P-value
Intercept	0,9	2,58	1,81	1,42	0,17
HDI Uzbekistan		14,35	1,34	10,69	0,000
Ln(pupil-teacherratio)		-1,73	0,45	-3,82	0,0013

According to table 1, human development index and pupil per teacher ratio explain 90% of the fluctuations in GDP per capita that is very significant. Also, from p values we can see that both coefficients are statistically significant even at 99% level of confidence. From this we can infer following equation:

$$\ln Y = 2{,}58 + 14{,}35X_1 - 1{,}73 \ln X_2$$

That is if pupil to teacher ratio decreases by 1% the GDP per capita increments by 1,73%, while 1% increment in human development index boost up GDP per capita by 1435%. The tremendous boost up by increment in human development index can be explained by strong influence of quality of education on human capital. The decrement in pupil per teacher ratio means that quality of education can become higher because teachers will have to teach less students and more focus on each of the pupil in primary schools. So, thereby the above given equation can be justified.

Conclusion and discussion. The discussions around human capital began in the beginning of the 20th century and up to now they continue. Many researchers argue about what should be included into human capital. But most of them agree that quality of education is a most significant factor. So, based on this we propose taking following measures to improve the quality of human resources, and thereby boost up the economy of the country:

1. Ensure the decrease in pupil per teacher ratio in primary schools, as it is one of the important indicators of quality education. The less pupils teachers teach the more time they may dedicate to work with each pupil individually, which is very important in forming qualified labor force.
2. Support reforms in primary schools, encourage qualified teachers to go for work at schools by offering salary increases, and other bonuses.
3. Reform educational system, so that universities and institutes became financially independent and create competitive market of local higher educational institutions.
4. Promote the achievements of scientists, arrange more marketing campaigns to support intellectual youth.
5. Create favorable environment for cooperation of businesses and higher educational institutions, so that laboratories were more involved in real commercial projects.

References

1. CheremnykhYu.N. Microeconomics. Advanced Level: Tutorial. - M.: NITs INFRA-M, 2015.-- 844 p.
2. BychenkoYu.G. An innovative mechanism for the sustainable development of human capital. - M.: LAP Lambert Academic Publishing, 2014.-- 532 p.

ISSN 2697-2212 Online: https://academicjournal.io

3. Becker G: *Human Capital*. 2nd edition. Columbia University Press, New York; 1964. Pp.61-64
4. Neumann F. Methods of economic assessment of human capital // Public administration: transformation processes in the modern world. Abstracts of the international scientific and practical conference. Part 2. - Minsk: Academy of Management under the President of the Republic of Belarus, 2015. - 98 p.
5. Bakhshiyan D.V., ZevekeO.Yu. Human capital is the main resource of an efficient enterprise as a response to the challenges of the modern world // Economics and management of innovative technologies. - 2017. - No. 3
6. Safarov B.Sh. The models of prognosis of regional tourism's development. Perspectives of Innovations, Economics & Business.2010, 6, 80-83. Available at https://www.ceeol.com/search/article-detail?id=246600
7. Safarov B.Sh. The role of innovations and its impact on investment flow into tourism market of Uzbekistan. *Journal of Economy and Business*. 2016, 3, 18-22. Available at https://cyberleninka.ru/article/n/rol-innovatsiy-i-ih-znachenie-v-investitsiyah-na-rynke-turistskih-uslug-v-uzbekistane
8. Janzakov B. The innovational development of tourism and other theoretical frameworks of competitiveness. International Journal of Advanced Science and Technology. Vol. 29, 5, 2020, pp 1774-1780.