

## HUMAN CAPITAL IN ECONOMIC INNOVATIVE DEVELOPMENT

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*The article considers the issue of human capital as a strategic resource of innovative development. Human capital is analyzed as a factor and determinant of economic development of society on the whole and public production development in particular. The aim of this article is to define the role and significance of human capital in innovative economy.*

Dynamics of modern processes in the new global economy can be characterized by being innovative, having innovative instruments, presence of endogenous relations of science factor in expended reproduction and growing research intensity of economic progress.

Contribution of scientific and technological progress in increase of gross domestic product of the most developed countries according to various sources amount to 75-100 %. Consequently, one of the main aspects of innovation importance on the national level is its determinative influence on macroeconomic data. Innovations are strategic factors of economic growth, have positive effect on the structure of public production, can change economic organization of society and the level of innovation development determines competitiveness of national economy and national security. In its turn, dynamic development and fast renovation of scientific and technological bases of modern society can lead to changes of role and place of a person in particular and human capital in general in social reproduction process.

People, their creativity, energies and abilities which help them to develop themselves and the world around, are traditionally investigated in economic and social sciences. At the same time accelerating development of material and technical base of production because of industrial revolution, diverted the interest from the problems of personal development and production abilities and created illusion about the dominance of physical capital in economic growth revision. As the consequence of this, for long years personal production capabilities have been considered and measured as one of quantitative factor of production.

Human capital refers to the stock of skills and knowledge embodied in the ability to perform labor so as to produce economic value. It includes skills and knowledge gained by employees through their education and experience.

Concept of *human capital* allows learning many market phenomena, helps to recognize their real value, their influence on innovative economy and also prove necessity and high effectiveness of investments in people.

Solow economic-growth model suggests that turnout is come up faster than two main economic factors – capital and labor because of one additional factor - technological advance.

Alternative approach to measure of influence of different factors on GDP consists in using of inter-country regression, which includes physical capital, education, income level as variables and it also comprises variables which reflect different social and institutional factors. However, obtainable results are substantially different depending on the studied countries. They can include variables, choice of temporary intervals and specification of models.

Early economic growth models didn't take into account role of different levels and quality of education. With advance in models of «new growth» the role of education and training in creating new technologies and innovations was essentially enforce. New developments and ideas entail increase in performance of physical capital in other branches and sphere of economy.

Technologic changes, growth returns to scale, inventions which happen during the process of technologically intensive production, motivate growth of production turnover.

Higher education is important for carrying out and developing innovative researches and also using their results. Therefore, in some *new growth* theories human capital does not refer only to education, but also to investigations and innovations.

For valuation of human capital the following data can be used:

- share of population with a secondary education;
- number of adult population with higher education;
- share of adult population with primary, secondary or non finished higher education;
- quality assessment of education on basis of student test results.

Influence of these data on economic growth can raise the following analytic problems:

1. Cause-effect dependence isn't always obvious;
2. Human capital role can be undisclosed because of cooperation with other factors: adaptation to new technologies, perfection of job management, more effective allocation of physical capital.
3. Completed level of education is extremely insufficient data from the point of view role of knowledge and skills.
4. Measuring discrepancies because of differences in classification of completed education in different countries.

The second problem from the list above appears when model can't reflect how some countries with a low initial asset of human capital can get big opportunities for growth, import and introduce technologies, which were created abroad. On the other hand, countries with low initial income level and big asset of human capital can gain by adapt use import technologies. The fourth problem illustrates the dissonance in international statistic data and suitable faults in evaluation when handling accounts on unreliable information.

Recent works of specialists were devoted to searching of measurement defects and attempts to overcome them. So, using of a perfect data base under OECD countries allow exactly confirming that human capital have essential and positive impact on GDP growth or per capital income. Further investigation in OECD countries show that improvement of human capital is one of the main key factors which underlying economic growth in the past decade in all OECD countries.

Because in majority of OECD countries all population have primary or secondary education for researchers influence on economy growth of high education are of interest. Researchers break down countries according to their income level and have come to a decision that high education is important factor of economic growth for OECD countries, primary and secondary education are more important for economic growth in developing.

Human capital influences on model inequality of incomes. There is connection between education and income distribution and cause-effect dependence can consider like double-side. Generally, more equal extension of human capital is associated with large equivalence in incomings.

At last, it is necessary to mention the following about the influence of human capital on all prosperity aspects. Human capital as prosperity is a complex of concepts which aren't explored outright theoretically and aren't able to complete statistical service because of lack of information. Limitation of data base doesn't mean that investigations of these factors are impossible.

Whole number of methodological approaches to valuation of *social benefits* of education and training is set in recent years. Considers influence of base education on such spheres like medical care, social insurance, child-rearing, criminality, individual or subjective prosperity. Influence of education on health and social behavior can expressed in strengthening of habits, characteristics and features which is ministerial to work creation, labour productiveness, individual prosperity, positive time distribution and self-discipline. Some of these characteristics together with natural endowments and features initially form outside of formal

education system, but at the same time in the process of development connects with school education.

In last years investigations are presented various technical methods of money value social benefits from education, for example, influence of education on health. Research cooperation such social processes as medical care, democratization, decrease inequality of incomes and poorness, environment protection, criminality, indicate that more than half total influence of education on population happen through indirect consequences – improvement of health and therefore growth of per capital income. With constant additional variables (income, race, social status, etc.) investigations exactly prove tendency of connection education with better health, low level of criminality, political and public activity and social involvement. Obviously social consequences are large and probably they exceed direct influence on position of worker on labour market and direct macroeconomical effect.

Education and professional training can play important role in assignment of basis for economy growth, social involvement and personal development. Investment is important process in the system of reproduction of human capital. Investments are base for achievement of effectiveness in reproduction of human capital, system of education, medical care, economic motivation, etc. Labour costs and efforts of self-development and self-improvement play the important role in process of creation and accumulation human capital. Incurred charges come into account in social costs on all stages of reproduction process. Investments of human capital take time so that realize and provide benefit. Their effectiveness depends on quality of management of this process.

For reproduction of human capital it is necessary to realize the strategies which are focused on:

- quality of investments in human capital and correspondence of skills to economic and social demand;
- distribution of education capabilities inland taking into account connection between inequality and collective production;
- consideration possibility of market incomplete investment in human capital as a consequence his characteristic as *public benefit* or *externalities*.

Some existing definitions of human capital and its factors can be characterized as too narrow, so it is necessary to use not only traditional statistic index of population coverage by education for analysis, but inspection results which present the concept of the quality of population knowledge.

Today the subject of keen interest for economists is the level of prosperity in society; economy growth is no longer the main goal of economic and social activity. Therefore, investigations which allow specifying the sources of prosperity, identifying the accessibility of benefits of modern society to consumers are becoming especially important and urgent.

Created conditions of reproduction involve new opportunities which can lead to essential growth of prosperity in case of effective use. Because the use of human capital depends on an individual, then, motivation of economic subjects become one of the main control levels of human capital in economy management. Because of this, creation of special economic conditions which determine innovation economy where accumulation of human capital will be profitable and prestige is becoming a priority.

The presented views allow generalizing and classifying actual ideas about human capital, help to define the role human capital plays in new economy.