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The leading role of human capital in the process of countries' progressive economic development

Abstract. The significance of studies in the area of human capital impact on social and economic processes in countries increases in the XXI century. The priority of strategic direction for progressive growth in social and economic spheres of nations is contributing to the process of additional investments in the growth of human capital, and promoting such an environment of social institutions for which these investments will be the main way of obtaining stable growth indicators of countries' human capital.

The problem of accumulation, maintaining and development of human capital must be a top state strategic priority for contemporary Russia as well as for all countries with progressive economic development. Enhancing the role of human factor as one of the leading economic indicators in providing effective innovation activities of states requires significant investments in training of creative-minded, innovative citizens with a strategic vision of a country's economic development.

Keywords: Human Capital; Human Development Index (HDI); Creative Class; Economic Development

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Провідна роль людського капіталу в процесі прогресивного економічного розвитку країн

Анотація. Пріоритетом стратегічного вектору прогресивного зростання в соціальній та економічній сферах держав є сприяння процесу вкладення додаткових інвестицій у зростання людського капіталу, сприяння формуванню такого середовища суспільних інститутів, для якого ці інвестиції будуть основним способом одержання стабільних показників зростання людського капіталу країн.

Ключові слова: людський капітал; індекс розвитку людського потенціалу; креативний клас.

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Ведущая роль человеческого капитала в процессе прогрессивного экономического развития стран

Аннотация. Приоритетом стратегического вектора прогрессивного роста в социальной и экономической сферах государств является содействие процессу вложения дополнительных инвестиций в рост человеческого капитала, способствование формированию такой среды общественных институтов, для которой подобные инвестиции будут основным способом получения стабильных показателей роста человеческого капитала стран.

Ключевые слова: человеческий капитал; индекс развития человеческого потенциала; креативный класс.

1. Introduction. In a contemporary context, it is difficult to overestimate the importance of human capital in social and economic spheres of modern developed countries. Today, many Russia's indicators characterize it as a country with strong bases and all the necessary resources to increase human capital. Reasonable reforms in the education sector, along with other factors, lead to the increase of human capital of countries. For a long time the priority has been the study of human capital from the point of view of a value of society determining as the main aspect for the formation of a country's economic potential. Today, in our view, this definition remains relevant.

2. Problem statement. Recent events in Central and Eastern Europe (Fall of the Iron Curtain, EU integration, market economy development) have made this region very attractive for «human capital», and here one can see a clear link between GDP growth and concentration of human capital in some countries. As for Russia, if we look at labour productivity in the country, one can see twofold or threefold lagging behind the leaders that should be addressed by focusing on increasing the quality of professional education of citizens, creating a favourable investment climate and using up-to-date technologies [1].

We see the solution of this problem by enhancing the level of «human capital» in the developed countries overall as well as in Russia in particular by improving the level of higher education of population, creating such conditions of work that will

help to raise the level of their professional competence. In its turn, human capital will increase productivity, which will lead economies towards sustainable progressive development.

3. Review of studies and publications. While reviewing approaches to the definition of human capital, we can see that there is no single definition of this concept. We have analyzed the basic definitions of it in the works of G. Becker (2003), T. Schultz (2003), C. Melander (2013), R. Floridab (2014), A. Sogren (2013), Charlie Karlsson (2013), Borja Johansson (2013) and Roger R. Stouch (2013) and the representatives of the Russian school in the person of E. E. Limachko (2010), S. S. Nasibyan (2007). As a result, we have singled out several approaches to the study of human capital. The major ones we consider below.

The developed concept of human capital, in its modern meaning, is based significantly on the work of Gary Becker (2003) and Theodore Schultz (2003) [2]. According to Charlotte Melander (2013) and Richard Floridab (2014) [3], the importance of human capital in the economic development of contemporary superpowers is obvious. The notion of human capital here must include, first of all, highly educated people with bachelor's degree or higher. More recent works of these authors say about the importance of citizens' achievements after graduation from higher educational institutions, i.e. universities' objective is to build an important knowledge base that should be further

extended by individual. That is, it is necessary to have the pursuit of professional development in one's activities for self-education, willingness to use new methods and approaches in the sphere of production, ability to adopt new and progressive from the world practice. All this must promote development of creative personality being able to create a new and progressive approach in the process of working career [4].

Charlie Karlsson (2013), Borja Johansson (2013) and Roger R. Stouch (2013) believe that conditions contributing to the sustainable growth of modern powers are being accumulated continuously, and one of these conditions is the presence of human capital. The regional stage of human capital formation, i.e. by means of cities is generated by knowledge, owing to which the efficiency of productions increases and so does the efficiency of continuous growth of cities, industries and firms with knowledge-intensive activity. All this requires an increase in the availability of labour power with varied and deep knowledge and specializations, as well as human resources equipped with special talents in specialized sectors [5].

Of course, all of the above-mentioned theories are complementary, since the human capital of countries is being constantly replenished with active citizens striving for self-development and improvement in their work. Therefore, in the process of human capital formation the combination of several factors is important: the level of higher education; and how a citizen made use of it during his/her career; his/her experience level; and whether a company properly managed to motivate an employee's creativity and the desire to improve one's skills through self-education during the production process [6].

Anna Sogren (2013) [7] defines the political sphere as an important aspect of stimulating the growth of human capital in countries. Political reforms may contribute both to a country's educational system progress and to its stagnation, and this, undoubtedly, affects the economic development. Reforms occurring amidst political decisions, including reforms in educational sphere, contribute to the increase of human capital or, conversely, to a sharp reduction of it, if such policy actions affect the functioning and performance of the education system. There may be such a situation when the increase of human capital is accompanied at the same time by stagnation of the economy. This proves the ineffectiveness of the entire system, and, accordingly, its reforms. On the contrary, positive reforms in this sector lead to rapid economic growth of countries, as well as progressive and sustainable growth of nations.

After analyzing this approach, we can observe the change in the economies of developed and developing countries: if the state is really interested in the growth of human capital of a country, as its integral part, and does everything possible for this, it will effectively facilitate this process through a variety of reforms in education or the social sphere. It will promote the interests of its citizens in seeking to invest in new knowledge and methods of work [8].

It is worth mentioning that educational process should be continuous throughout the life process, making possible the replenishment of human capital, both within a country and a given region [9]. We believe that continuous investment of citizens in their education invariably leads to the growth of their salary, to increasing motivation for work, and this, in its turn, is an important aspect in the course of social reproduction.

We think that conducting studies devoted to human capital should be included in the key objectives of contemporary highly developed nations and the support of these studies and their further implementation should be at the state level.

Based on the position of S. S. Nasibyan (2007) [10], with the increase in the degree of countries' development, it will be impossible to raise the economy only at the expense of the larger number of workers at enterprises. It is the qualification of employees, their skills, experience and desire to raise their

qualification that will play the key role. As a result, we can say that the increasing importance of human capital as a determining factor of countries' economic development requires large investments to prepare creative minded, innovative citizens with a strategic vision of a country's economic development [11].

4. The purpose of the article is to reveal the role of human capital in the economic development of world powers, conduct a comparative analysis of countries with very high human development index and Russia as a country with a high level of human development index.

5. The key results of the study. Let us consider the concept of «human potential» in order to analyze the level of economic development of the world powers and compare the contribution of the countries-world leaders to human capital. In our opinion, the relationship of human potential with human capital is evident. In modern science, human potential is measured by means of human development index (HDI). This index was developed in the 90-s of the last century by a team of economists under the leadership of Mahbub-ul-Haq. A key contribution to the structure of this index was made by Amartya Sen (1991). One can acquaint oneself with this index in the annual reports on human development published by the UNO. While calculating HDI, it is necessary to take into account its 3 components:

- population life expectancy (expected one);
- population literacy which is calculated on the basis of the average number of years spent on education or the duration of education (expected);
- living standards of the population based on their purchasing power which we estimate in US dollars.

The index calculations made in 2014 included 187 countries. All the countries were divided into 4 groups according to the level of their development: very high human development index (HDI>0,796); high human development index (HDI 0,712-0,796); medium level of human development index (HDI 0,536-0,712) and low human development index (HDI<0,536).

Table 1 presents the first eight of the leading countries according to the level of HDI that are included in the group of «countries with very high human development index» in comparison with the Russian Federation which, in its turn, is included into the group of «countries with high human development index» [12].

Tab. 1: Human Development Index and its constituents

| HDI | Country | Human Development Index (HDI) (value) | Life expectancy at birth (the number of years) | Education period expectancy (the number of years) | Average duration of education period (the number of years) | Gross national income per capita, USD | Gross national income per capita, ranking points |
|-----|------------------------|---------------------------------------|--|---|--|---------------------------------------|--|
| 1 | Norway | 0.944 | 81.6 | 17.5 | 12.6 | 64 992 | 5 |
| 2 | Australia | 0.935 | 82.4 | 20.2 | 13.0 | 42 261 | 17 |
| 3 | Switzerland | 0.930 | 83.0 | 15.8 | 12.8 | 56 431 | 6 |
| 4 | Denmark | 0.923 | 80.2 | 18.7 | 12.7 | 44 025 | 11 |
| 5 | the Netherlands | 0.922 | 81.6 | 17.9 | 11.9 | 45 435 | 9 |
| 6 | Germany | 0.916 | 80.9 | 16.5 | 13.1 | 43 919 | 11 |
| 7 | Ireland | 0.916 | 80.9 | 18.6 | 12.2 | 39 568 | 16 |
| 8 | the USA | 0.915 | 79.1 | 16.5 | 12.9 | 52 947 | 3 |
| 51 | the Russian Federation | 0.798 | 70.1 | 14.7 | 12.0 | 22 352 | -1 |

Source: Formed by the authors based at HDI data [13]

As it can be seen from Table 1, the Russian Federation does not lag much behind the world leaders in such indicators as *Average duration of education period*, as it has only 1.1 years less than Germany (the leader for this indicator), and *Education period expectancy*, 5.5 years less than Australia (the leader for this indicator).

Life expectancy at birth is maximum in Switzerland (83 years), while in Russia it is only 70.1 years, which is significantly lower. A considerable lag of Russia is observed in *Gross national income per capita* (it is the aggregate income from production and ownership of factors of production after deduc-

tion of incomes paid for the use of factors of production owned by the rest of the countries, calculated in US dollars). Australia is the leader here. It is followed by Ireland, Germany and Denmark.

Let us consider the trends in Human Development Index from 1990 to 2010 and 2014 (Table 2) [13].

The Table 2 shows that all the countries have increase in HDI, however, the average annual growth in countries with a very high level of human development index was observed in the period from 1990 to 2000, and in Russia from 2000 to 2010. Thus, it should be noted that during this period the average annual growth of HDI in Russia exceeded even countries with very high human development index.

In our opinion, in addition to the above-discussed indicators that help calculate the index of human development, the structure of human capital, must include:

- ability to generate income, innate intelligence and talent, acquired skills;
- a set of personal skills, knowledge and abilities;
- motivation, energy, creativity;
- the creative class.

We purposefully single out «the creative class» as a separate indicator because its role in modern society, in our opinion, is increasing year by year. This term was introduced by American Richard Florida (2002) in 2002. Under the creative class, he meant modern, «post-industrial» citizens. While analyzing the definitions of the «creative class», it was revealed that Richard Florida (2002) refers to it, first of all, people with creative thinking being used to solve complex and multifaceted production tasks [14].

From the point of view of V. A. Zhuravlev (2008) [15] and M. V. Savina (2008) [16], the main goal of the creative community is to create new and unconventional solutions for problem situations, to use people's creativity maximally, including for the purposes of economic development of countries.

In our opinion, the government of Russia must take a number of steps to enhance the component of human capital. We have suggested doing certain activities that can be fulfilled in the period up to 2020. These activities may contribute to increasing the number of human capital and its quality.

1. Human capital formation with high professional skills and strong motivation requires that businesses and organizations should monitor the continuity of education process to maintain competency and continuously increase it due to the rapid development of modern society's information environment. At the same time, it is necessary to ensure that lateral reassignment and promotion should be only possible upon condition that an employee continuously improve his/her qualification.

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Tab. 2: Trends in Human Development Index, 2010-2014

| Country | HDI | | | | | Annual average growth of HDI | | | |
|------------------------|-------|-------|-------|-------|-------|------------------------------|-----------|-----------|-----------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 1990-2000 | 2000-2010 | 2010-2014 | 1990-2014 |
| Norway | 0.940 | 0.941 | 0.942 | 0.942 | 0.944 | 0.77 | 0.25 | 0.11 | 0.44 |
| Australia | 0.927 | 0.930 | 0.932 | 0.933 | 0.935 | 0.36 | 0.33 | 0.20 | 0.32 |
| Switzerland | 0.924 | 0.925 | 0.927 | 0.928 | 0.930 | 0.67 | 0.40 | 0.14 | 0.47 |
| Denmark | 0.908 | 0.920 | 0.921 | 0.923 | 0.923 | 0.76 | 0.53 | 0.41 | 0.61 |
| the Netherlands | 0.909 | 0.919 | 0.920 | 0.920 | 0.922 | 0.56 | 0.36 | 0.34 | 0.44 |
| Germany | 0.906 | 0.911 | 0.915 | 0.915 | 0.916 | 0.66 | 0.58 | 0.26 | 0.56 |
| Ireland | 0.908 | 0.909 | 0.910 | 0.912 | 0.916 | 1.12 | 0.54 | 0.21 | 0.72 |
| the USA | 0.909 | 0.911 | 0.912 | 0.913 | 0.915 | 0.28 | 0.28 | 0.18 | 0.26 |
| the Russian Federation | 0.783 | 0.790 | 0.795 | 0.797 | 0.798 | -0.17 | 0.88 | 0.47 | 0.38 |

Source: Formed by the authors based at HDI data [13]

2. Higher education institutions must prepare and update their educational documents and programmes in close contact with employers in order to take into account all applied difficulties of production and direct requests of organizations for improving the quality of human potential, which makes it possible to avoid the need for retraining and additional adaptation of graduate students.

3. It is also necessary to expand the options for in-company training of organizations' members, to introduce phasing and continuation of education levels depending on the abilities, knowledge, creative potential, creative solutions, making sure that each step is a logical continuation of the preceding one and the whole learning process is based on an upward trend. That is, education must become a tool for human capabilities' development; it must give an employee some opportunities to learn challenging and new activities.

4. Higher education institutions must not only provide basic professional knowledge for the individual, but they also must monitor socio-economic development of the region so that human capital, its cultural and professional level should correspond to the needs of a country's socio-economic development acceleration through scientific and technological progress.

6. Conclusion. In the process of our study, we have found out that only highly educated and creative people are capable of innovation, we can say that they are intelligent, or rather intellectual and creative capital of their country, and therefore, they are the main component of human capital, as an instrument of progressive economic development of nations. Their competence is largely determined by the quality of strategic governance, since it is impossible for the state to possess the abilities of a person for creative activity. In the end, we can say that the creative class is replenishing the human capital of a country.