DOI 10.33111/vz_kneu.27.22.02.01.005.011
УДК: 330.3;338.2

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SUSTAINABLE DIRECTIONS OF INCREASING SCIENTIFIC AND INNOVATIVE AUTHORITIES IN REFORMING THE NATIONAL ECONOMY

Abstract. The development of environmental problems, the emergence of environmental crises and catastrophes, and the rise in global problems observed today need immediate resolution. The issues related to the human factor and its activation in innovative development play an important role in the development of programs for socio-economic development of the country, the deepening of reforms. This article provides views on the development of competitive training for innovation in the context of globalization, increasing the prestige of scientific work, as well as scientifically based recommendations for capacity building. The reason for applying the cluster approach in the context of this work is the absence of effective organizational and economic mechanisms of interaction between special protection enterprises, enterprises for the production of environmentally-oriented products, processing enterprises, trading companies, authorities and scientific organizations. World experience shows the effectiveness of the creation and functioning of clusters in different segments of the economy. Their common feature is productivity gains in the cluster itself and in related sectors due to the synergistic effect. The analysis shows that clustering is one of the promising models of development and can provide the necessary dynamics of economic growth.

Keywords: national economy, national education system, innovative development, human capital, intellectual competence.

Introduction

In order to be competitive in the world market, it is necessary to actively use the knowledge, potential and energy of the population to produce cheap and high-quality products. At the same time, it is important that the innovative development of the national economy shifts from an economy based on the use of natural resources to development based on the most powerful reproductive resources, such as human knowledge.

The structural changes taking place in the national economy are among the busy ones who are able to master the advanced achievements of science and technology, have the ability to put innovations into practice, and are busy and skilled. This indicates the need for a steady increase in the educational and professional requirements for the workforce in society. Because today the role of the state in the international community is measured by its intellectual potential, the ability to create and effectively use new knowledge.

Scientific activity is the most active area of public policy. At a time when new approaches to increasing scientific and innovative capacity in world markets are emerging, Uzbekistan is also implementing radical reforms in this area. All of these reforms raise the human factor to a higher level than ever before, making its power a matter of urgency, directly linking its perception and competence to development and civilization. Therefore, the scientific and practical solution of problems related to the organization, formation and strategic management of innovative activities is of particular importance, and one of the most important indicators of scientific and innovative competence in the reform of the national economy.

Review of scientific research

Resolutions of the President of the Republic of Uzbekistan Sh.M. Mirziyoev dated September 21, 2018 «On approval of the Strategy of innovative development of the Republic of Uzbekistan for 2019–2021» state that the level of competitiveness of the country in the international arena and the quality of innovation the main goal of the strategy. **[1]** Special emphasis is placed on the training of national personnel in the words of the President, «We consider it our priority to improve the functioning of all links of the education system in accordance with modern requirements». **[2]**

In the formation of an innovative economy based on human capital, science and education should be considered as a priority, deepening the integration of science, higher education and production, creating an innovative environment, increasing the effectiveness of research and encouraging creativity. Special attention is paid to the training of personnel capable of innovative management and innovative development through the internal and external integration of disciplines, the effective use of existing competencies in academic science and higher education. In particular, according to S. Gulyamov, in order to raise the living standards of the people of Uzbekistan, it is necessary to solve the problem of transition to the path of innovative development. The problem of unlimited use of human intelligence «satisfying unlimited needs with limited resources» has found its own solution. **[3]**

Research methodology.

During the research, scientific methods of studying the processes of economic reality were used, such as historical, structural, structural, accurate sociological, complex study of scientific sources, induction and deduction, analysis of statistical data.

Analysis and discussion of results.

Competitiveness of the country’s economy in the field of competitiveness in the field of competitiveness in the field of deepening democratic reforms, modernization and diversification of leading industries in the Strategy of Actions for the five priority areas of development of the Republic of Uzbekistan for 2017–2021, adopted at the initiative of the President. The reformes are being carried out. In particular, over the past two or three years, attention has been paid to the development of human capital, which is an integral part of national wealth in our country, and the quality and territorial aspects of training are being strengthened. In particular, the goal is to further develop science in our country, to educate our youth as masters of deep knowledge, high spirituality and culture, to continue the work we have begun to build a competitive economy and to raise the economy to a new, modern level, year.»

Thanks to the ongoing reforms in the national education system, positive changes are taking place in the structure of higher education institutions in our country. It

should be noted that currently there are 117 higher education institutions in Uzbekistan. The coverage of graduates with higher education in the 2018/2019 academic year was 15 %. As a result of the reforms launched to develop pre-school education, 5,722 public, private and family kindergartens were established last year. In particular, in 2019, 4 schools of the President and 3 schools of creativity will be launched with completely new content and form. Increase the coverage of graduates with higher education by at least 25 % by 2020 and 50–60 % in the future, double the number of state grants for admission to higher education institutions, transfer of the educational process to the credit-module system of higher education, higher education; and financial independence, by selecting at least 5 higher education institutions on a competitive basis, and in cooperation with prestigious foreign higher education institutions, it is planned to transform them. Last year, 19 higher education institutions, including 9 branches of prestigious foreign universities, were opened to promote higher education. In cooperation with leading foreign universities, training on 141 joint curricula has been launched. 146,500 people were admitted to higher education institutions, or twice as many as in 2016 **[4].**

At the beginning of the 2018/2019 academic year, the total number of teachers was 444.2 thousand (excluding students), of which 54 % work in rural schools and 46 % in urban schools. In Uzbekistan, there is an average of 13 students per teacher. The number of students who achieved a bachelor's degree in 2018 was 66,594, of whom 19,105 were educated on the basis of state grants. In 2018, 25,566 undergraduate graduates will be girls (38.4 %). 43.8 % of undergraduate graduates are in the humanities, 10.7 % in the social sphere, economics and law, 28.0 % in the field of production and engineering, 7.4 % in the field of agriculture and water management, 4.4 % in the field of health and social care. 5.6 % graduated in the field of services.

If we analyze the distribution of students in higher education by master's degree, the total number of masters is 11,647, of which 34.9 % are in the humanities, 19.8 % in the social sphere, 21.7 % in the social sciences, economics and law. 4.9 % are trained in agriculture and water management, 16.0 % in healthcare and social security, and 2.7 % in services.

One of the world's most influential publications, The Economist, has recognized Uzbekistan as the country that will implement the most rapid reforms in 2019. «Uzbekistan still has a long way to go, but it's not the fastest country in the world this year,» the Economist said. Recognition by such international publications will undoubtedly serve to strengthen the creative image of Uzbekistan in the international arena, to make Uzbekistan one of the leading business, cultural and tourism centers in Asia.

Singapore's first leader Lee Kuan Yew «Talented people are the most valuable assets of the country,» he said The more talented people work as ministers, administrators and specialists, the more effective the government's policy will be and the better the results. We need to be educated and become part of a knowledge-based world. The presence of capable ministers in the government and civil servants with high moral qualities who have assisted them has become a key, decisive factor in ensuring Singapore's successful development» **[5].**

The overall quota for admission to master's degree programs in higher education has increased significantly. Due to the reforms implemented in the national education

system, the expected duration of education was 13.7 years in 1990, **[6]** and in 2017 it was 12.0 years **[7].** As a result of reforms in recent years, this figure has risen. The expected duration of education for the most economically developed countries in the world is 15.9 years. Also, in developed countries, great emphasis is placed on investing in the full cycle of education, that is, investing in the upbringing of a child between the ages of 3 and 22. Because this investment will benefit the society in the amount of 15–17 times. In the United States, for example, young people between the ages of 3 and 22 spend an average of $ 260,000, while in South Korea, an average of $ 130,000 is spent on a full cycle of education **[8].** In Japan, if a child under the age of 16 does a project of his or her own, the project will be purchased by the government, whether or not it is beneficial to the state. This encourages the authors of this project to be more active in their future research.

The able-bodied part of the population of the Republic of Uzbekistan with a population of more than 33 million is 18,151.8 (55 %) per thousand people (16–54 years old), pre-school age (3–6 years old) is 2,712.1 (8 %), schools, academic lyceums and The age of education in vocational colleges is (7–18 years) 6783.9 (20 %) and higher education — (19–30 years) 7331.5 (22 %) **[9].** Qualified labor resources are formed in the existing system of continuous education in the Republic. As of January 1, 2019, 35 % of preschool children in the country are enrolled in preschool education. The distribution of these values by regions is as follows: Tashkent 74 %, the Republic of Karakalpakstan 41 %, Fergana 40 %, Bukhara 39 %, Navoi and Syrdarya 38 %, Tashkent 37 %, Jizzakh 32 %, Khorezm 30 %, Samarkand and Kashkadarya 24 %. %, Surkhandarya is equal to 18 % **[9].**

Along with the improvement of the system of higher education in our country, great attention is paid to postgraduate education. The system has a unique history of development, with two levels (Doctor of Science and Candidate of Science) in 1992–2012, one level (Doctor of Science) in 2013–2017, and two levels (Doctor of Science) (DSc) from July 1, 2017, and a Doctor of Philosophy (PhD).

In the past, the coverage of graduates of higher and specialized secondary education in Uzbekistan with higher education was maintained at 9–10 %. As a result of measures taken in the last two years, this figure was 20 % in the 2019/2020 academic year. Compared to the developed countries of the world, this figure is 60–70 %. Uzbekistan conducts 0.02 % of world research and has a low level of evidence. Scientists and researchers make up a small part of the working population (0.12 %) and their absolute number is only 16.7 thousand people. Although our country has risen to 8 places in 2019 according to the «International Information and Communication Technologies Development Index», we are still far behind. Also, despite the fact that Uzbekistan is a net importer of high-tech and research products, it accounts for only 6.2 % of total imports **[9].**

The full implementation of such tasks as the discovery of human potential and the mobilization of man to achieve certain goals is the basis for the development of our country. Research shows that there are the following problems in our country: Lack of education hinders innovative development in Uzbekistan: investment in education is 10 times lower than in developed countries, despite the availability of state-supported programs and annual wage fluctuations ‘low salaries of teachers (30 times lower than in developed countries) **[9].**

– all this is complicated by the weak material and technical base and the lack of computer classes;

– old educational infrastructure with a high level of depreciation of fixed assets: 3644 schools (38 %) are in need of major repairs, only 37 % of schools have modern computer equipment, and 7 % have access to the Internet; **[10]**

– Lack of investment in education has a negative impact on the material and technical base of educational institutions. According to experts, water and electricity supply remain a major problem in all regions of the Republic of Uzbekistan;

-From 2008 to 2015, the average cost per student doubled, **[10]** but still much lower than similar rates in other developed and developing countries;

– In some schools of the Republic of Uzbekistan, the number of students in the classroom reaches 45–50 people, which prevents them from receiving quality education.

Conclusions and suggestions

In our opinion, the following measures should be taken to gradually eliminate these problems and to activate the human factor in ensuring innovative development in Uzbekistan:

– Adaptation of teaching methodologies and programs at all levels of education to the needs of the economy;

– Encourage the formation of a developed private education market;

– creation of a network of schools implementing experimental and innovative programs;

– Development of educational projects that allow students to work without interruption;

– Encourage the acquisition of academic degrees to improve the share of highly qualified personnel, improve their conditions;

– Increasing the number (branches) of universities;

– active introduction of online education;

– take measures to prevent the outflow of highly qualified personnel;

– Improving the quality and coverage of education at all levels, developing a system of continuing education, ensuring the flexibility of the training system to the needs of the economy;

– creation of effective mechanisms for the integration of education, science and entrepreneurship to strengthen the scientific potential and increase the efficiency of research and development, the widespread introduction of the results of research, development and technological work;

– strengthening the introduction of public and private funds for innovation, research, development and technology, the introduction of modern and effective forms of financing activities in these areas;

– increase the efficiency and responsibility of public authorities in matters of education through the introduction of modern methods and tools of management;

– Ensuring the protection of property rights, the creation of competitive markets and equal conditions for doing business, the development of public-private partnerships;

– creation of sustainable socio-economic infrastructure.

In short, in order for a person to become a key factor in innovative development, it is expedient to carry out its development in a comprehensive manner, taking into account the processes in all elements of the system and complementing each other.

In order for Uzbekistan to be globally competitive in the field of science, intellectual potential, modern personnel and high technologies, the head of state said, «Many more Beruni, Ibn Sino and Ulugbeks will grow up in our country. I believe in this. «If we all unite around the idea of human capital, not only in the state, but also in the family, we can be the first to train highly educated personnel in the field of innovation, raise the innovative environment and innovative thinking to a new level.

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