

Role Of The Regional University In The Process Of Harmonization Of The Triple Helix Model

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Annotation

The article reveals a pattern that manifests itself in accordance with the level of implementation of scientific and educational activities, the real level of development of society and the economy of Russia. Identified problems in various socio-economic spheres of the country, in particular, the predominance of a resource-based economy, rather than the production of innovative products, which reduces the demand for training high-quality personnel. The perspective directions of development of market relations, based on the formation of innovative thinking among representatives of power structures, business community and citizens, are presented. It has been demonstrated that the effective implementation of the potential of the digital economy and the "triple helix" model creates new, breakthrough approaches to personnel training that can overcome the shortcomings in the development of the regional market space. Examples of development and practical implementation are given, with the scientific and methodological support of the Kaluga State University. K.E. Tsiolkovsky, the real implementation of the potential of the digital economy and the "triple helix" model in the Kaluga region. The authors defend the position that the answer to the most difficult challenges is the harmonization of the "triple helix" model, based on improving the quality of human capital, the production of high technologies and quality services.

Keywords: digital economy, triple helix, knowledge economy; Kaluga State University, regional development.

Introduction

The difficult state of the domestic economy, which has developed during the spread of the pandemic, required the immediate adoption of a national program to restore the national economy. The implementation of the plan, prepared by the government of the country, and

containing hundreds of different measures, is designed to solve employment problems and ensure an increase in the level of income of citizens. In the global socio-economic reality, authoritative world organizations and developed countries, it is considered a generally recognized priority in the construction of modern economic models to stimulate the development of the knowledge economy.

The conditions for continuous renewal, increasing the global information capacity, and implementing change management require a universal institutional matrix for an innovative type of development in the modernization of the Russian economy. The term "triple helix" refers to mutually beneficial networking between government, business and science. In conditions when there is a deformation of the hierarchical way of coordinating relationships ("the vertical of power") and a modern network structure is being built, the issues of connections in the "triple helix" come to the fore [4.]

Scientific and educational activities, as a unified system of knowledge, skills, and abilities, is designed to ensure the transformation of a hierarchical management system into a horizontal network system. Such a system provides ample opportunities for equal interaction of all socio-economic groups, satisfying the needs of Russian society in self-organization, the development of horizontal ties and informal institutions, as well as contributing not only to the formation of a partner environment in business, but also to the development of innovative thinking inherent in the knowledge economy. The growing role of scientific developments in the successful implementation of economic activities stimulates entrepreneurship to increasingly cooperate with scientific and educational organizations. [5.]

Experimental Methods

Thanks to the use of qualitative methods of systemic, historical, economic and comparative analysis of monographic and textual material, the method of expert assessments, as well as content analysis of publications in the media, the authors came to the conclusion that initially declarative reforms in the socio-economic life of Russia were supposed to be carried out in an evolutionary way, relying on the potentials of democratic transformation and market relations. But practical results testify to the emergence of a social system characterized, according to some scholars, by the term "clan capitalism", in which a power-property system is formed, characterized by the presence of informal ties between large business entities and representatives of power structures [1.] Such relations ensure the strengthening of the property status of persons in power, hinder the development of the system of individualized private property, while the market model should be based on various forms of ownership and entrepreneurship. The most important function of the state is the creation of a single market space, in which there are uniform rules for all, competition is stimulated and public interests are protected by special state institutions. Successful implementation of the function is ensured through continuous interaction of government agencies with representatives of the scientific and educational community, business structures and citizens.

The scientific and educational community is obliged to set and solve not so much short-term tasks, but to formulate goals covering promising horizons associated with the transition to a new technological order, characterized by the rejection of the globalization trend and the construction of the autonomy trend. It is necessary to comprehend the basic provisions of the emerging new world order, which is often associated with the achievement of economic growth with the help of far from market methods, and the increasing role of the state, which prioritizes the promotion of the development of medicine and education. The analysis of world practice reveals the trajectories determined by the change in the hegemony of one country, the emergence of conflicts in relations between countries that were not previously

questioned, the growth of economic sovereignty, contrary to the interests of integration.

In the current situation, the negative assessments that were given by the domestic business community, the results of the activities of Russian universities in training personnel with innovative thinking look extremely archaic and short-sighted.

Following the laws of acquisitiveness, profit, in an effort to get rich quick, contrary to the interests of the economy of their own country, businessmen wished to receive personnel with the competencies and skills to withdraw funds and assets to offshore zones, to evade payment of taxes and fees to the state, services purchased abroad, personal property. The clash of representatives of the business community with cadres formed by universities within the framework of the policy of using human capital in the interests of promising, innovative, comprehensive socio-economic development of Russia, and not the personal interests of businessmen, caused unequivocal irritation. But this is not a problem of universities, but characterizes the ideological position of some representatives of Russian business.

The coronavirus pandemic, which has swept the whole world, has exacerbated the previously existing economic problems in almost all countries, including Russia. At the same time, the conclusions drawn earlier by the social sciences and humanities regarding the role of a person in society, the influence of the state and business on the built system of relations, etc., have become irrelevant, subject to reevaluation.

Russia's new socioeconomic policy, which is gaining momentum, aimed at overcoming the consequences of the pandemic, provided the state with an opportunity to act as a constructive start to a new stage in realizing the possibilities of the "triple helix" [2.]

Results

The current situation is characterized by a whole range of problems:

There is an increase in the social structure of signs of a significant increase in the distance between the authorities and citizens, the predominance of the sacred, rather than partnership nature of the relationship between them. The consequence of this is a decrease in the level of trust in the authorities, representatives of business and science, rejection of other people's opinions, the manifestation of fear of changes among the population.

The scientific environment is one of the indicators of the success of transformations. Domestic science is going through one of the most difficult periods since the beginning of the century. In Russia, only 17% of citizens are employed in labor belonging to the category of "knowledge", which is significantly less than in developed countries. The number of scientists in 1991 - 1 million 600 thousand, in 2019 - 600 thousand people.

Orientation to an archaic economy, the past historical period and "every minute" rather than promising demand in the development of educational standards negatively affects the training of personnel in domestic universities. The education system does not fully cope with the solution of modern tasks to provide the necessary quantity and quality of personnel endowed with the necessary competencies and skills, capable of transferring the activities of government bodies and business structures to a new civilizational level [3.]

At the same time, the results of the study provided an opportunity to outline promising directions for neutralizing problems:

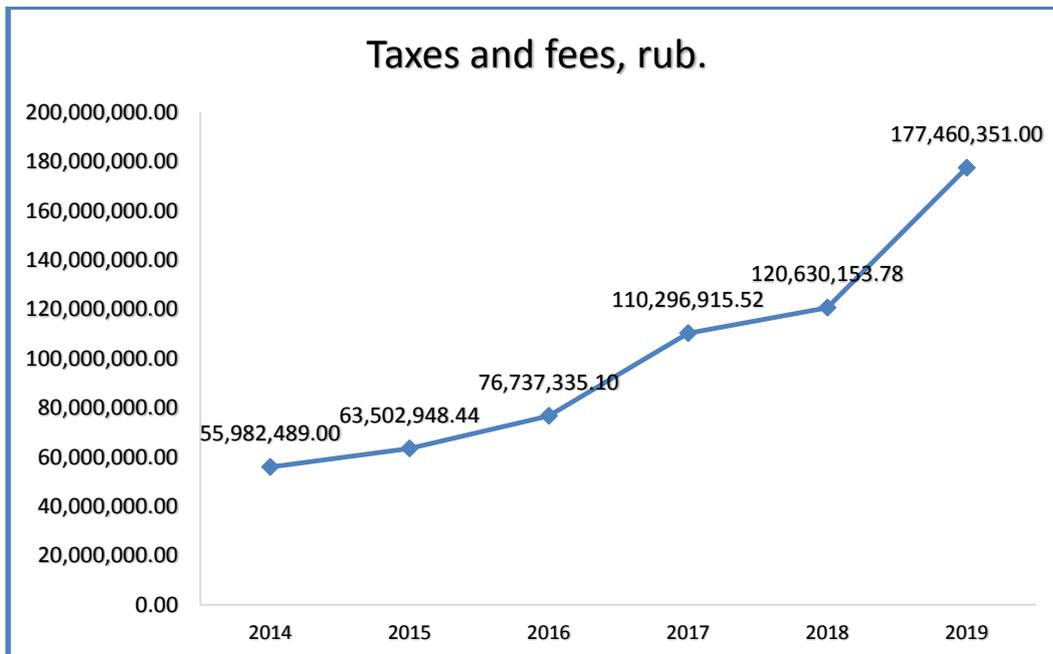
- Technologies of the digital economy provide limitless opportunities for realizing the possibilities of the triple helix. Digitalization creates an environment that bears trust in government authorities, business structures and individuals, since it is based on automatic strict adherence to the rules.
- State structures, mass media, science and education system should work to ensure active popularization of positive achievements, support of a free, just society. Modern universities, based on the achievements of science and technological developments,

perform, in contact with the state and business, new functions of an incubator of ideas and a conductor of generated knowledge into the sphere of direct practical application.

Let's look at an example from real practice in the Kaluga region. The leadership of the Kaluga Region proposed a new model of long-term regional policy aimed at solving innovative post-industrial socio-economic problems. By constructively using the opportunities provided by priority national projects, government bodies exercise a soft, targeted impact on the formation of a favorable institutional environment for the implementation of the knowledge economy, expanding network partnerships, and supporting cluster initiatives of the business community. [8.]

In the unified system of regional development institutions, the priority place is occupied by the Kaluga State University named after K.E. Tsiolkovsky, performing a number of modern basic functions, from creating new knowledge, designing a system of continuous transfer of scientific achievements to representatives of government, business and society, as well as ensuring the commercialization of scientific achievements.

The university itself acts as a subject of economic relations, making tax payments and providing a contribution to the budgetary system of the Russian Federation. Dynamics of taxes and fees listed by KSU named after Tsiolkovsky, shown in the pic. 1.



Pic. 1. Dynamics of the amount of taxes and fees transferred to the budget system of the Russian Federation KSU named after Tsiolkovsky

The data presented in the figure demonstrates, for the analyzed period, the growth of the considered values. In 2019, 140 962 574 rubles were transferred to the federal budget, and 3 697 777 rubles to the consolidated regional budget. We can confidently talk about the leading positions of the University in the region in terms of the volume of educational services provided.

At the same time, an analysis of the structure of services provided in the Kaluga Region in previous years revealed a downward trend in the volume of services in the field of education from 7,1% in 2015 to 6,5% in 2018 (Table 1). At the end of 2019, the trend has not changed.

Table 1. The structure of services provided in the Kaluga region

	2015	2016	2017	2018
All services provided including:	100	100	100	100
- household	12,1	11,6	11,9	11,7
- transport	9,3	8,4	8,1	8,1
- postal services, courier services	-	-	0,5	0,5
- telecommunication services	17,5	16,3	16,3	16,4
- housing and utilities	34,5	35,9	35,4	35,2
- services of hotels and similar accommodation facilities	2,7	2,6	3,2	3,0
- culture	1,2	1,2	1,2	1,1
- tourist	1,4	1,8	1,7	1,8
- physical culture and sports	1,0	1,1	1,1	1,1
- medical	7,1	8,4	8,8	9,3
- legal	1,3	1,0	1,2	1,0
- education systems	7,1	6,8	6,4	6,5
- services provided to senior citizens and disabled people	0,4	0,5	0,5	0,6
- others	3,4	3,1	2,5	2,4

At the same time, in the conditions of the university performing new functions that provide a multiplier effect, the lag in the development of regional education is unacceptable. The effectiveness of the implementation of priority projects and regional programs is directly related to the growth in the quality and volume of educational services. The achievement of the goals set by the government is intended to cause a chain reaction in the form of an increase in income and employment, and in general, in all its manifestations of social progress.

The leadership of the Kaluga State University named after K.E. Tsiolkovsky, measures are being taken to overcome the emerging trend of a decrease in growth rates. In particular, own funds were additionally directed to finance R&D, technical and technological renovation of premises, payment for information and communication services, as well as transport, utilities and other services within the framework of the digital transformation process (table 2).

Table 2. The structure of expenses of KSU im. K.E. Tsiolkovsky, thousand rubles.

Indicator name	2015	2016	2017	2018	2019
Procurement of goods, works and services of them:	59 047,5	101 342,3	114 908,5	129 383,5	163 160,6
R&D	0,00	0,00	4 312,3	4 413,2	1 292,6
for the repair of state property	0,00	10 815,9	21 369,2	5 961,9	6 491,5
communication services	1 617,6	1 787,6	2 015,5	1 958,5	1 982,1
transport services	1 031,1	39,4	166, 4	311, 67	478,9
utilities	24 330,9	26 256,5	33 846,3	34 824,5	37 516,5
property rent	0,00	0,00	60,0	72,7	42,4
works, services for the maintenance of property	11 644,8	7 618,1	16 914,7	23 830,1	40 871,8
other works services	20 423,1	20 690,8	21 965,6	29 982,6	44 849,7

One of the examples of the use of the "triple helix" model is the creation of a full-fledged medical faculty at Kaluga State University. K.E. Tsiolkovsky. Since 2013, in the Kaluga Region, the situation has worsened related to the provision of healthcare institutions with medical workers. An adequate response to the challenge was the coordinated activity of the authorities, business and science in the development and implementation of the regional program "Human resources for health care in the Kaluga region for 2013–2020". As part of this program at KSU named after K.E. Tsiolkovsky, a scientific and educational base for the training of future physicians in the specialty "general medicine" was formed.

The leading medical institutions of the region, such as the Kaluga City Hospital № 4, which opened the Department of Internal Medicine, the Regional Clinical Hospital, the Clinical Emergency Hospital, the Children's Hospital, the Sosnovaya Roshcha City Hospital, a specialized center for infectious diseases and AIDS and Regional Oncological Dispensary.

The successful implementation of the regional program became possible due to the widespread use of digital economy technologies while improving the competencies and skills of students, and at the same time full immersion of students in mastering the methods of medical care with the support of experienced doctors and the management, under their guidance, of patients. In the shortest possible time, the path has been covered from admitting the first 18 people to study, to expanding the possibilities for increasing the contingent of students to 120 people (2019). The university is creating conditions for the admission of 1000 people by 2024 [9.]

Discussion

Academician of RAS (Russian Academy of Sciences) Glazyev S.Yu., identified the main priority areas in the national knowledge economy that need support - science and education. The academician's opinion is indisputable, at the same time, in order to overcome the negative phenomena, present in the socio-economic life of Russia, it is required to make constructive changes to the social contract between the state, business and society, clearly establishing mutual responsibility for the state of affairs in society. [3.]

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Smorodinskaya N.V. connects emerging negative phenomena in the economy with the process of updating the organizational code of economic systems, the transition from vertical structures to network structures. But it is necessary to take into account the depth of economic entropy, that is, the presence of fundamental asymmetry in the domestic economy, which negatively affects innovation processes [4.]

Professor N. Srnichek notes that information support and the formation of platforms acts as a modern source of economic growth and resilience. You can agree with this statement, provided that you have a developed infrastructure that allows you to register, standardize and analyze data in the interests of users [10.]

Professor A.A. Auzan, is sure that in order to ensure the formation of the knowledge economy, a new elite with innovative thinking should be formed in the country. Supporting the professor's confidence, it is necessary to emphasize that in order to solve the fundamental problem posed, it is necessary to carry out radical changes in the country's scientific and educational system, designed to satisfy the demand of society for training personnel with such a thinking [6.]

Professor V.V. Kossov, discusses the need of society for responsible people who, without the help of the state, are able to build their well-being. Of course, "direct democracy" has a number of important positive features, but the very process of training the required quantity

and quality of "responsible people" requires highly professional scientific and educational structures. [1.]

Professor Volkonsky V.A., discussing with Kossov, expresses his opinion about the constructive role of the Russian state, which needs to restore the lost trust. But one should not forget, carried away by the dispute, that competencies and skills within the framework of the knowledge economy shape the activities of the scientific and educational community [2.]

Conclusions

Any manifestations of the crisis, except for the negative, carry a positive component, which allows for a new rethinking of the features of the conducted socio-economic policy, and determines the promising directions of the restoration activities of the state, business and society. A promising recovery policy of the regions and the country should be aimed at introducing the capabilities of the knowledge economy.

The scientific and educational system is designed to engage in continuous research, the results of which ensure the harmonization of the "triple helix" model, taking into account national and regional characteristics.

The strength of the socio-economic foundation of the country and regions depends on the level of scientific and educational services provided to representatives of government, business and citizens, the breadth of access to modern knowledge, which acts as a state guarantee for the implementation of "social tone".

The potential of the higher education system of the country and regions must be realized in the development of practical measures to ensure the effective use of human capital in the interests of innovative socio-economic development.

The formation of a new innovative thinking and an active position among the millennial generation is designed to solve the numerous problems accumulated in society.

Universities, as demonstrated by the example of Kaluga State University, are able to act as a powerful driving force that ensures both the neutralization of negative challenges, in this case related to the pandemic, and the achievement of mutual understanding among the elements of the "triple helix" model.

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