
Formation of a Single Innovation Space in the Agrarian Sector of the EAEU Member States

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Abstract:

The relevance of the study is determined by the need to form a single innovative space in the agricultural sector of the EAEU Member States in order to make rational use of the aggregate scientific potential of the countries of the Union.

Models of interstate cooperation in the scientific and technical sphere were developed and a “panel of indicators” for the development of the market for scientific and technical products was proposed.

Practical recommendations on the transfer of innovations in the agricultural sector of the economy of the EAEU member states are given.

Keywords: EAEU, innovation space, models of interstate cooperation, “panel of indicators”.

JEL Classification: O33, Q18, P41.

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1. Introduction

The widespread use of the results of scientific and technical activities and intellectual property in the agrarian sector of the EAEU member states is of exceptional importance for the economic development of the agro-industrial complex of the countries of the Union, as they serve as the scientific basis to produce competitive products, thereby ensuring food security of an individual country. In this regard, there is a need for the formation of a single innovation space, and therefore the agrarian market of scientific and technical products of the EAEU member states, which determines the relevance of the study. The object of the research is individual intergovernmental cooperative formations in the agricultural sector of the EAEU member states, including the Eurasian Agricultural Technological Platform. The subject of the research is the organizational and economic relations of the subjects of innovation activity in the agricultural sector of the economy of the EAEU member states.

2. Methods

Research methods are abstract-logical, monographic, economic-statistical, balance, expert assessments. The information base of the study consisted of: regulatory legal acts in the sphere of the agro-industrial complex of the Eurasian Economic Union states and decisions of the Eurasian Economic Commission (EEC), information and analytical reviews of the agricultural markets of the Union countries and other official information sources. The novelty of the study is to develop proposals for the formation of a single innovative space in the agricultural sector of the EAEU Member States, based on the development of interstate cooperation, which will provide an economic effect based on the rational use of the aggregate scientific potential of the Union countries and will manifest itself in increasing the volume and competitiveness of agricultural products, the growth of profitability of agricultural producers, increasing the volume of innovation production and increase its share in the global agri-food market (Yemelyanov *et al.*, 2018a, 2018b, 2018c).

The elements of the increment of scientific knowledge include the developed models of interstate cooperation in the scientific and technical sphere: the conceptual model of the innovation market, the model of the scientific and industrial interstate formation, the mechanism of interaction between the participants of interstate innovative entrepreneurship (including the Eurasian Agricultural Technological Platform), and practical recommendations on transfer of innovations to the agro-industrial production of the countries of the Union.

3. Results

The “single innovative space” of the EAEU member states should be understood as the territory where a single complex of economic, innovation and legal events is held. This category should not be identified with “innovation sphere” - the area of

activity of producers and consumers of innovative products (works, services), including the creation and distribution of innovations (Ladatko and Nechaev 2005). Currently, a single innovation space in the agrarian sector of the EAEU member states has not been formed, although for the development of this direction, the Recommendation of the EEC Board (February 19, 2013) No. 3 “On the need to prepare the procedure for developing and recommending intergovernmental programs was adopted” and the decision of the Collegium of the EEC of July 8, 2015 No. 14, in which the main areas are highlighted as promising R&D until 2020 (Recommendation of the Board of the Eurasian Economic Commission of February 19, 2013, No. 3; Recommendation of the Board of the Eurasian Economic Commission of July 8, 2015, No. 14).

The formation of a single innovation space is directly related to the implementation of the goals and objectives presented in the programs and development strategies of the agro-industrial complex of each EAEU member country (Concept of the strategy of innovative development of Armenia; The concept of innovative development of the Republic of Kazakhstan until 2020; Science and innovation activities in the Republic of Belarus; The main directions of the strategy for sustainable socio-economic development of the agro-industrial complex of the Russian Federation for the period up to 2030; Development of agro-industrial complex and cooperation).

In our opinion, the formation of a single innovation space in the agrarian sector of the EAEU member states directly depends on its digitalization — replacing analog (physical) data collection and processing systems with technological systems that generate, transmit and process a digital signal about their condition (Order of the Government of the Russian Federation dated July 2, 2017 No. 1632-p; Strategy for the Scientific and Technical Development of the Russian Federation until 2035). Digitalization will affect all existing markets, including innovative products, since they will all have a networked nature, which will have a positive effect on the growth of labor productivity in the industry (Hanfan and Setiawan, 2018; Nedelkin *et al.*, 2016; Nedelkin *et al.*, 2017; Plotnikov *et al.*, 2018; Kamolov *et al.*, 2017).

At the same time, one of the main distinguishing features of the current stage of development of the innovation space in the agro-industrial sector is the intensification of cross-border cooperation, by analogy with the European Union (Zavyalova *et al.*, 2018; Polyakova *et al.*, 2018). As an example of such interaction, the creation of a cross-border cluster (Russia-Kazakhstan) for the deep processing of grain outlined by us should be given (Nechaev *et al.*, 2017b; Nechaev and Mikhayushkin, 2017a; Nechaev, 2018; Akhmetshin *et al.*, 2017a; 2017b).

It is the effectiveness of their development, and not only in the border areas, but also abroad, will, in the future, determine the positions of the EAEU member states in the agrarian sector of the economy, not only in the domestic, but also in the global agrifood markets. The achieved results of such cooperation are: the expansion of the sales market for agricultural products based on innovative technologies, the

development of a competitive environment, the creation of new jobs, the growth of export revenues from the sale of competitive products in the domestic and foreign markets, the inflow of investments in the agricultural sector (Takhumova *et al.*, 2018; Akhmetshin *et al.*, 2018; Abramov *et al.*, 2018a; 2018b; Yamova *et al.*, 2018; Sadriev *et al.*, 2016; Gamede and Uleanya, 2018; Suratno *et al.*, 2018). However, in the process of forming a single innovation space in the agrarian sphere of the EAEU member states, the following main problems must be overcome:

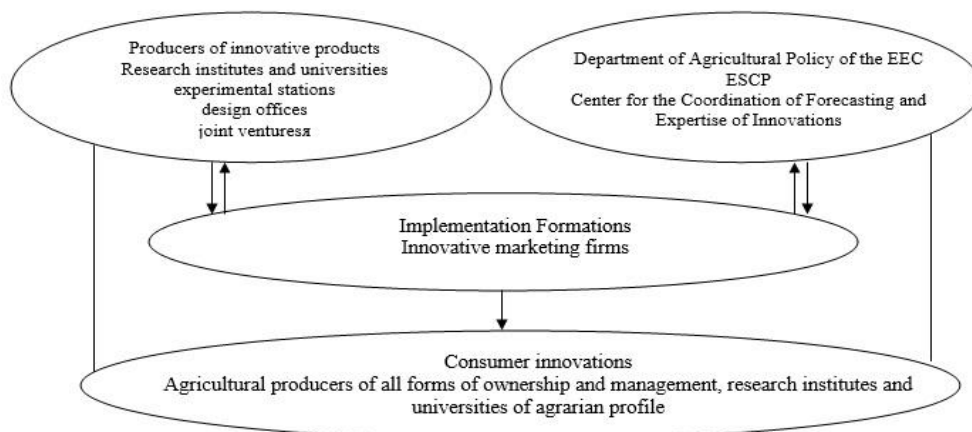
- lack of supranational coordination of scientific, technical and innovation potentials, identifying the interests of the countries-partners for cooperation, identifying strategically possible technological spheres in them for the development of joint innovation projects;
- the high cost of this process in the formation of the interstate space coordinating the potential of innovation systems of cooperation partners in the global scientific, technical and educational space;
- imperfection (absence) of the model of integration relations in science, technology and financial policy, which makes it necessary to delegate part of national authority to a supranational level (by analogy with the EU);
- the continuing contradictions of the national interests of the EAEU Member States in the market for innovative products;
- adverse global conjuncture in the agricultural market of scientific and technical products (price fluctuations, changes in demand, credit restrictions, financial instability of all members of the Union);
- lack of a system for training scientific personnel for interstate innovation cooperation, innovation infrastructure, entrepreneurship in the scientific and technical sphere, investment mechanisms and other development institutions.

At the same time, there is an objective expediency of forming a single innovative space in the agricultural sector of the EAEU member states in order to optimize the use of scientific and financial resources to ensure the sustainability of the market of scientific and technical products in order to stimulate mutually beneficial innovative development of national agro-industrial complexes of the Union countries.

The Eurasian Agricultural Technological Platform created in accordance with the decision of the Eurasian Intergovernmental Council of April 13, 2016 No. 2 "Regulations on the Formation and Functioning of Eurasian Technological Platforms" and facilitating cooperation in the scientific and technological and innovation spheres based on the unification of the scientific and financial potentials of the states of the union, effective interaction of all interested parties (business, science, government, intergovernmental organizations) in order to stimulate mutually beneficial innovative development of national agrarian complexes, constant technological renewal of production and increase the competitiveness of their products (Decision of the Eurasian Intergovernmental Council of April 13, 2016 No. 2). The further formation of interstate innovation space can be carried out because of models of interstate cooperation.

The conceptual model of the innovation market in the agrarian sector of the EAEU member states is presented in Figure 1.

Figure 1. Conceptual model of the innovation market in the agricultural sector of the EAEU member states

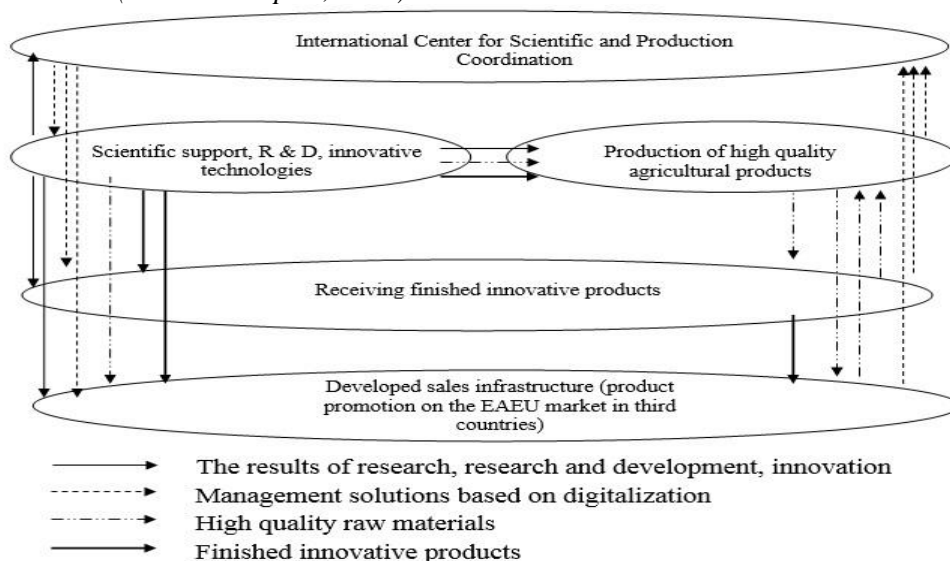


In the presented model on the polar sides are the producers of innovative products and its consumers - agricultural producers of all forms of ownership, as well as the organizations of the science itself: research institutes and educational institutions of the agricultural sector. It should be noted that based on the experience of various integration associations, the creation of interstate research structures for creating and mastering the achievements of scientific and technological progress, in accordance with the Recommendation of the EEC Board of February 19, 2013, can come forward.

The same approach was supported by the Decision of the EEC Board of July 8, 2015, No. 14 (Recommendation of the Board of the Eurasian Economic Commission of February 19, 2013, No. 3; Recommendation of the Board of the Eurasian Economic Commission of July 8, 2015, No. 14). The functional model of the research and production interstate formation within the EAEU is presented in Figure 2. At the stage of development and use of the model it is planned to create several functional blocks:

- research and production coordination;
- development of production and sales of finished innovative products based on network technologies;
- production of high-quality agricultural products;
- production of finished products based on innovative technologies (resource-saving and environmentally friendly);
- development of market infrastructure for the sale of finished products in the markets of the EAEU and third countries.

Figure 2. Functional model of a research and production interstate formation within the EAEU (Research Report, 2017).

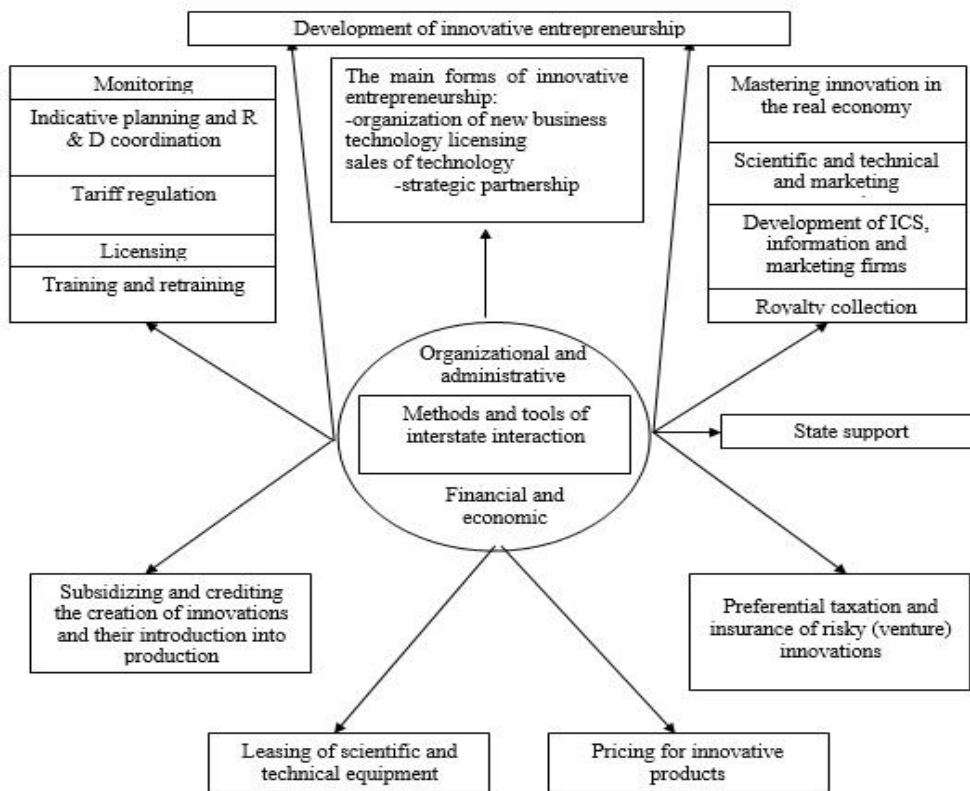


It should be noted that as of January 1, 2016, 65 joint ventures and more than 40 organizations with foreign capital operate in the agrarian sector of the EAEU member states. Their field of activity is focused on the production of potatoes, vegetables, livestock products, their processing, as well as the provision of various types of services (Research Report, 2017).

The mechanism of interaction of participants of interstate innovative entrepreneurship in the agricultural sector is presented in Figure 3. This mechanism is characterized by a complex interstate structure and consists of a set of models of innovative entrepreneurship, as well as two main blocks - organizational and economic. The main priorities of the organizational block of interaction of participants of interstate innovative entrepreneurship should include the creation of a supranational center under the auspices of the Eurasian Economic Commission (hereinafter ECE) to coordinate innovative developments and introduce them into production, indicative planning and coordination of R&D, training innovative managers, creating information and consulting and marketing firms.

The economic block of interaction of participants of interstate innovative entrepreneurship in the agrarian sphere includes: interstate support based on the creation of a single financial fund to subsidize a part of interest rates on loans received for creating, acquiring and introducing innovations into the real economy of the EAEU member states; preferential taxation and insurance of risky (venture) innovations on the territory of a single innovative space; common approaches in pricing innovative products; leasing of scientific and technical equipment and other financial and economic methods and tools at the interstate level.

Figure 3. Mechanism of interaction between participants of interstate innovative entrepreneurship in the agricultural sector of the EAEU member states.



The development of interstate cooperation to form a single innovative space in the agrarian sector of the economy of the EAEU member states should be carried out in stages, starting with the creation and development of institutions and mechanisms for expanding the market for scientific and technical products and unhindered movement of capital and technology. To this end, a market infrastructure should be formed as a priority - a set of institutions and organizations, consulting and information and marketing firms that ensure the free movement of scientific, technical and innovative products in the agricultural market.

It is the effectiveness of their development, as well as the degree of participation of the EEC in creating a favorable business environment in the future will determine the position of the EAEU member states on the global market for scientific and technical products. In this regard, it will be useful to use the EAEU Member States to use the experience of the development of integration processes in the European Union based on the use of interstate agreements for the implementation of joint innovation projects. At the present stage of development of a single innovative space of the EAEU member states it is proposed to limit the creation of a number of intergovernmental non-governmental organizations, among which the International

Agrarian Scientific Society of the Union countries and the International Association “Agro-education” should be noted. The first type of organization is created to prepare for the EEC recommendations for the development of the market of scientific, technical and innovative products, the second is designed to assist educational institutions in fulfilling the tasks of staffing and scientific support for the development of the agro-industrial complex of the EAEU member states; maintain close ties with interstate and public organizations; study and distribute advanced foreign experience of the best educational, research and educational institutions; prepare innovative managers to work in the conditions of creating a single innovative space of the EAEU member states.

Particular attention should be paid to the development of practical methods of transferring innovations to the agro-industrial production of the Union countries on the basis of an agreed set of price (discounts, bonuses), financial (deferred payment, installments for a long period, leasing), credit (subsidizing interest rates), technical (maintenance and repair in the regions of supply of equipment), as well as the use and improvement of the mechanism of public-private partnership in the promotion of advanced innovative developments in the agricultural sector of Union economies (Zhupley *et al.* 2018).

The basis of the innovation space in the agrarian sector of the economy of the EAEU member states, along with the national innovation systems, is the market of scientific and technical products (NTP), which should be understood as the totality of intellectual property objects, market agents, legal mechanisms and information means by which the price level of the NTP and its acts of sale are carried out. Currently, in the countries of the EAEU, the NTP market is not developed and requires direct and indirect influence of the state and intergovernmental authorities for their improvement proposed by us (Ladatko and Nechaev, 2005; Nechaev V., 2018). In order to manage the NTP market and its quantitative assessment, we used the “panel of indicators” of the market development of scientific and technical products in the agricultural sector of the EAEU member states, presented in Figure 4, which allows us to assess the current state of this market in the context of international trends (National Report on Innovations in Russia, 2017). In the presented “Panel of Indicators” all indicators are grouped as follows:

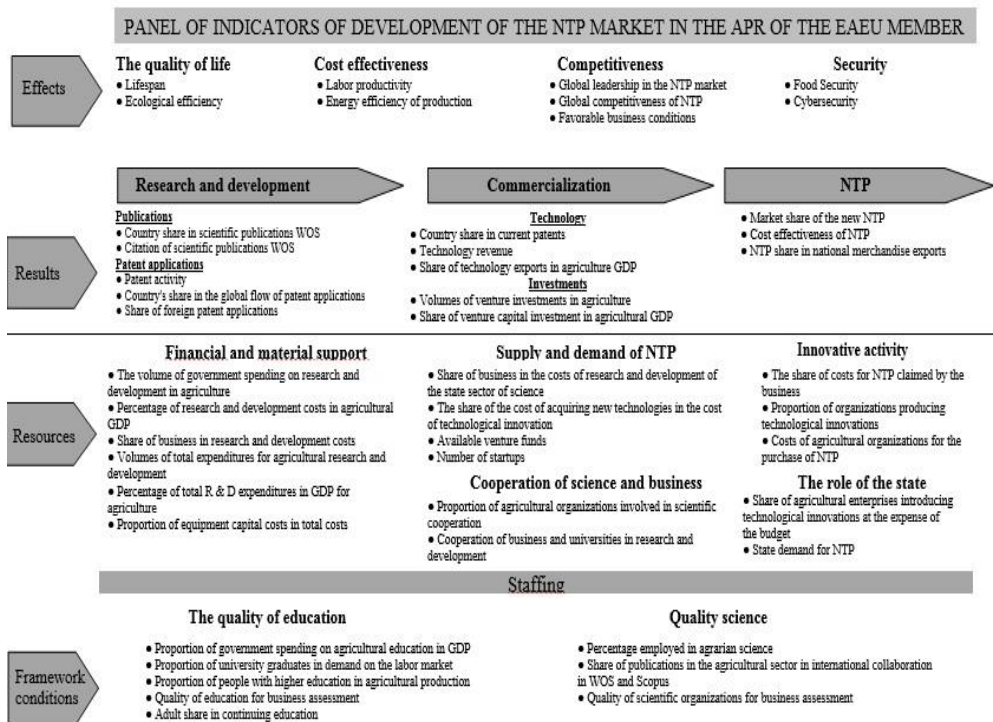
- horizontally - according to the stages of development of the NTP market;
- vertically - by the levels of the innovation space (top to bottom).

4. Conclusion

The formation of a single innovation space in the agrarian sector of the EAEU member states on the basis of models of interstate cooperation will allow solving an important interstate problem of ensuring the accessibility of the Union's agricultural producers to advanced agricultural technologies. Such an approach will help the countries to gain real economic effect from combining scientific and financial

potentials, mutual economic interest and building on this basis a mutually beneficial Strategy for sustainable socio-economic development of the agrarian sector of the EAEU member countries based on innovation. The achieved results of such cooperation will allow to keep decent positions both in the domestic and global agrifood markets.

Figure 4. Panel of indicators of the development of the market of scientific and technical products in the agricultural sector of the EAEU member states (National report on innovation in Russia, 2017).



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