FACTORS OF INVESTMENT ATTRACTIVENESS OF RUSSIAN AGRICULTURE IN THE CONTEXT OF INNOVATIVE STRUCTURAL ADJUSTMENT

Marianna VASILCHENKO, Elena DERUNOVA

Institute of Agrarian Problems of the Russian Academy of Sciences, 94, Moskovskaya St., 410012, Saratov, Russia, Phone: +78452263179, Fax: +78452264768, Mobile:+79172036930, +79873093797, Emails: mari.vasil4enko@yandex.ru, ea.derunova@yandex.ru

Corresponding author: ea.derunova@yandex.ru

Abstract

In modern conditions, investment activity is a non-alternative option for increasing the competitiveness of agricultural production and a driver for increasing the country's export potential. The aim of the work is the development of methodological approaches to assessing the investment attractiveness of agriculture and the study of factors influencing it, as well as the rationale for practical recommendations to increase it. An author's methodological approach to assessing the investment attractiveness of agriculture has been developed, the essence of which is to build an integrated indicator based on the synergy of assessment indicators of innovative, scientific, intellectual, production and technological potential, natural resources, as well as taking into account the risks of financial and economic activity. The study identified constraining and accelerating factors of investment attractiveness of agriculture at the macro, meso and micro levels. Based on the correlation and regression analysis, a model of the dynamics of innovative development in accordance with investment investments is built. The empirical analysis revealed significant imbalances in the investment policy of agriculture. To eliminate them, innovative sources of financing investment in agriculture are proposed. The study developed a mechanism for managing investment attractiveness in agriculture, a feature of which is the stimulation of innovative susceptibility to the introduction of innovations at all stages of the innovation process. The practical significance of the results of the study is to increase the efficiency of agricultural production by improving the forms and mechanisms of attracting investment resources to the innovative development of the industry.

Key words: agriculture, investment policy, evaluation, investment attractiveness factors, management mechanism

INTRODUCTION

In modern conditions, innovation is a nonoption alternative for increasing competitiveness of agricultural production and a driver for increasing export potential. As a result of the implementation of innovation transfer processes, interaction is carried out between the subjects of regional agricultural systems regarding the creation. implementation, distribution, commercialization of innovations with the necessary socio-economic effect. Innovation and investment activity is associated with the tasks of structural restructuring of the economy and is aimed at development of agricultural sectors based on the intensification of the introduction of high technology products in the production process [33].

The role and place of agriculture in the country's economy is characterized by the

share of its share in GDP, in the commodity structure of exports, the share of the cost of food in total incomes of the population, as well as its contribution to increasing the sustainability of rural development. Starting in 2016, Russian agriculture is characterized by higher growth rates, including due to the restriction of food imports [1].

Over the past few years, the growth rate of agricultural production has significantly outpaced the growth rate of the economy as a whole. From 2014 to the present, there has been an increase in production volumes, the number of unprofitable farms has decreased, import substitution has been provided for many sub-sectors of agriculture, and a pronounced export orientation has been formed for some sub-sectors. At the same time, problems of technical support, the financial situation of agricultural producers, the introduction and use of innovations remain for agriculture [8].

One of the most important factors restraining the development of agriculture is the low level of investment attractiveness of the industry [2]. In the context of the transition to a new technological structure and the formation of an export-oriented economy, ensuring the sustainable development of agriculture is inextricably linked with the search for new forms, methods, mechanisms to stimulate investment activity in agriculture [29].

In recent years, various regulatory documents have been adopted to achieve this goal: the "Food Security Doctrine", the Federal Scientific and Technical Program for the Development of Agriculture for 2017-2025, and the State Program of the Russian Federation. "Scientific and technical development of the Russian Federation", Passport of the national project "International Cooperation and Export» [23].

Following the federal project "Export of agricultural products", it is expected to double agricultural exports by 2024 compared to 2018. These documents reflect the priority directions of the state agrarian policy, according to which the targeted financial resources will be allocated to farmers.

Such priority areas for the development of the agro-industrial complex in the Program include the development of beef cattle breeding; support for small business forms; technical and technological modernization, innovative development; of development land reclamation; rural social development and sustainable rural development. By the Decree of the President of the Russian Federation dated May 7, 2018 No. 204 "On National Goals and Strategic Tasks of the Development of the Russian Federation for the Period until 2024", an Action Plan was approved to accelerate the growth rate of investment in fixed assets and increase by 2524 to 25% of their share in gross domestic product [7]. The implementation of the agro-industrial complex sets a significant need for investment resources from agricultural producers.

In recent years, also in Russia, there have also been changes in the methods and forms of state financial support for the agricultural sector. A certain adjustment of government support measures was caused by the changed macroeconomic conditions for the functioning of the economic environment, the economic sanctions of Western countries against Russia, the increase in the cost of investment loans, and the inaccessibility of foreign capital markets [9].

These changes are associated with such issues of increasing the role of the state in investment processes as the conditions and procedure for providing subsidies for investment loans; priority areas of investment for which loan subsidies are allocated; government participation indirect financing of part of the investment costs for the construction of livestock farms, vegetable stores, greenhouses, and other capital facilities. However, despite attempts by the Government of the Russian Federation to increase the inflow investments in the agricultural sub-sectors, several important problems remain unresolved. Theoretical and methodological issues of investment analysis and assessment investment attractiveness were studied by such foreign and domestic researchers as I. A. Blank, N. D. Guskova, V. V. Bocharov, N. A. Borkunov, V. V. Kovalev, I. Ya. Lukasevich, W. Sharp, G. Markovits, A. Damodaran and others, cited by [4]. The generalization of foreign and domestic experience in the study of "investment attractiveness" made it possible to single out the most important conditions for attracting investments at the level of a country, region, or in a particular sector of the economy. Foreign sources consider the term "investment attractiveness" in an entrepreneurial context from the perspective of institutional economic theory. A. Shin's research reflected that investment attractiveness at the level of an agricultural organization is determined by the quality of management, while the capital of this organization is formed by private According investment [31]. to Kontorovich, investment attractiveness is a system of economic relations between business entities regarding the effective development of a business and maintaining its competitiveness [19]. According to I. V. Sergeyev, investment attractiveness is characterized as a generalized characteristic of prospects, profitability, efficiency and minimization of the risk of investing in its development at the expense of own funds and other investor funds [30]. In our opinion, the investment attractiveness of an agricultural organization is its ability to realize its innovative potential by attracting additional sources of investment and introducing new innovative forms and methods of investment policy. At the level of the agricultural industry, investment attractiveness is an analytical derivative of the formed business environment. S. Bowes proposed the concept of investment attractiveness of organizations using the branding category. At the same time, brand value is presented as a key criterion for investment attractiveness, and consumer attitudes to the brand are presented as investment attractiveness factors that show either evolution or stagnation depending on the quality of the institutional environment [6]. M. Falk analyzed the degree of influence of the quality of institutions on the investment attractiveness of business models of enterprises [10]. Empirically, he proved that the influx of foreign direct investment is due to the influence of institutional and fiscal factors. Similar conclusions on investment attractiveness in agriculture and the agroindustrial complex are contained in the works of R. Garrett, J. Le Polen de Varou, R. Heilmaira, E. Lambina [21]. The authors substantiated that such sectors of the economy that are characterized by flexible government policies and high availability of natural, scientific, intellectual, material and other resources will have the greatest investment attractiveness. Today, progress in agricultural sector is inextricably linked with the development of promising high-tech industries. According to World Bank experts, one of the main tasks of the state in the field of managing innovative activity in agriculture is to provide financial resources [28]. The work aims to develop methodological approaches to assessing the investment attractiveness of agriculture and the factors influencing it, as well as practical recommendations for its improvement.

MATERIALS AND METHODS

The methodological basis of the study was the state legislative acts, decrees and decisions of

the government, scientific works of domestic and foreign scientists - economists and agricultural specialists on the issue under study. In the process of the study, monographic, abstract-logical, analytical, economic-statistical, and expert research methods were used. The information from the Federal State Statistics Service, the Higher School of Economics, the Ministry of Agriculture of the Russian Federation, and special references was used as the research information base.

When assessing the investment attractiveness of the agricultural sector and the agroindustrial sector, based on the theoretical considerations presented above, it is possible to assume that investment attractiveness is a system indicator that reflects the quality of the institutional environment, the resource potential of the industry from the perspective of future profit from investment in industry assets, period their payback, as well as the possibility of their transfer to management. In methodological assessing terms, investment attractiveness of the agricultural sector is a more difficult task than evaluating The level of individual enterprise. investment attractiveness of an enterprise can be assessed by its competitive position, by a set of financial indicators, and by the efficiency of economic activity. These indicators within the organization can be compared with those of other enterprises in the agricultural sector. For the industry, such an assessment is not legitimate and objective.

The scientific and managerial literature contains various methodological approaches to assessing the investment attractiveness of the sectors of the national economy of national economies.

I. A. Blank [4] identified such criteria for assessing the investment attractiveness of sectors of the economy as: significance in the country's economy; industry resistance to fluctuations; level of government support for the industry; volume and share of capital investments in the industry; financial relative ratios; social significance of the industry; industry life cycle stage; level of competition in the industry.

In foreign sources, it is proposed to evaluate the level of investment attractiveness of the agricultural industry not from the perspective of the analytical criteria presented above due to the subjectivity of these procedures, but from the perspective of the dynamics and structure of the processes of innovative activity of the industry from the perspective of inter-regional and inter-country differences [3,13,17].

With this assessment, the rationale for the applied analytical indicators comes to the fore, with the help of which it is possible to assess the dynamics of ongoing innovative processes. The main requirements for the estimated indicators are the reliability of the initial statistical data for analysis and their general availability.

According to V. Maslova, N. F. Zaruk, the assessment of investment attractiveness is carried out based on a rating, the construction of which consists of two stages. In the first stage, to calculate the investment attractiveness of agriculture based on expert assessments, indicators are allocated from the standpoint of both investment potential and investment risks. In the second stage, the integral indicator is calculated, which constitutes investment attractiveness [22].

We share this approach and in its development, we propose the construction of an integrated indicator of investment attractiveness based on the synergy of the indicator of innovative, scientific, intellectual, production and technological potential, land resources, as well as financial and economic risks.

By applying these methodological approaches, constraining and accelerating factors will also be identified in the work, problems of increasing investment attractiveness will be identified, and optimal ways to eliminate them will be proposed. To study the investment activity management system in agriculture and to develop mechanisms to stimulate investment attractiveness, the investment attractiveness of Russian agriculture will be assessed using a dynamic model that reflects the dependence of innovative development on investment in the agricultural sector.

RESULTS AND DISCUSSIONS

The results of statistical studies and empirical calculations for a more in-depth study of investment activity in agriculture have revealed trends in monitoring innovative activity in comparison with Russia and foreign countries.

According to the Institute of Statistical Studies and Economics of Knowledge, HSE, other studies in 2016 and Goskomstat data for 2017, the share of agricultural organizations implementing technological innovations in crop production and animal husbandry in Russia amounted to no more than three, in total 9% [11].

One of the most important factors of low innovation activity in agriculture is the insufficient level of private-state support for the formation of the material and technical base for creating high-tech products by the needs of the agricultural economy.

The share of innovative products in the total volume of goods shipped in crop production is 1.9%, livestock - 1.7% (in the economy as a whole - 7.2%). The average level of innovative agricultural products in total in European countries is about 10%. In terms of technological innovation costs in agriculture, Russia is also inferior to European countries.

A study of the positive experience of increasing the investment attractiveness of agriculture revealed various trends in the implementation of the investment policy of leading agricultural countries. So. interesting trend is the rejection of direct measures of state support for agriculture of the countries of the Kern Group - Australia, Argentina, New Zealand. The agricultural investment policy of these countries is characterized by a minimum level of direct subsidies to agriculture, the development of production is carried out by increasing competition and the efficiency of production processes. The experience of the Kern group countries demonstrates an increase in the aggregate productivity of factors after the abolition of direct state subsidiary support [15]. In the livestock industry, subsidizing tools are aimed at reducing the cost of breeding animals, the costs of conducting breeding and artificial insemination of animals, and reducing the cost of livestock production. In the short term, the pork market in European countries will be characterized by such trends as an increase in pork production, intensification of exports, a decrease in imports and a slight decrease in consumption [25]. Analysis and evaluation of financing of agricultural production in Western countries proves that the driver of the development of competitiveness of agricultural products and an efficient production process is government support as the most important source of financing. The highest level of state support is typical for Sweden, Norway, and Japan and amounts to more than 70%.

In developed agrarian countries, an effective system of lending to farmers has been created, through which state regulation and investment of agricultural production is carried out. Specialized funds have been created in the EC for agricultural producers who are faced with financial difficulties: European Social Development Fund (EFRE); European Social European Alignment and (ESF); Guarantee Fund (EAGFL) [5]. Also, various systems of agricultural credit cooperation have developed in European countries [24].

Features of the functioning of these systems are determined by differences in historical traditions, the territorial scale of the country, the level of development of the credit and banking sector. In the Scandinavian countries, there are two-stage systems of agricultural credit cooperation, which are represented by central system-forming banks. In Finland, the central bank of cooperative banks operating within the framework of administrative regions and extending their activities to agriculture operates. In Norway, a bank has been established for small and medium-sized agricultural producers engaged in operations with credit cooperatives. In France, Germany, and the Netherlands there are three-tier systems of agricultural credit cooperation: the central bank of cooperative credit, regional cash registers of cooperative credit, and local credit cooperative associations.

A specialized credit system in market conditions is a characteristic feature of the mechanism of lending to agricultural producers in market conditions. A study of the positive

foreign experience of countries with developed agricultural economies shows that a large proportion of loans are secured by property, such as land. If we take the experience of the United States, it becomes clear that American farmers are laying their land to pay for current production costs, to purchase equipment, and additional land. Preferential sometimes taxation in developed countries as one of the types of state support aimed at stimulating the investment activity of agricultural producers. Cooperatives engaged in the production of environmentally friendly products exempted for several years from taxation in several countries. For example, in Germany, such benefits are characteristic of companies using alternative energy sources. The income tax for individuals reaches 50%, and for cooperatives - only 20%.

experience of developed Western countries, as well as countries of Central and Eastern Europe, is useful for improving Russian investment policy. One of the most advanced methods of financial support and logistics of agricultural production is leasing. In the USA, from 20 to 30% of investments in the USA are financed through leasing, in the UK - 11-20%, in France - 16-17%, Germany -15-16%, Italy - 14-15%, Canada - 8-10% [16]. In Germany, a policy of mixed financing of being investments is implemented combining such economic instruments as tax incentives, accelerated depreciation, subsidies, loans from federal and land budgets. The maximum possible amount of federal assistance for the investment project is 35%, the rest is covered by the investor [20].

The solution of the priority tasks of agricultural production is possible only if the investment subsidy program is improved, which will be aimed at reducing investment costs and reducing investment payback periods projects. Thus, it is possible to achieve accessibility of state support measures for all agricultural facilities on equal terms.

The structure of costs for technological innovations in agriculture in Russia is dominated by investments in the acquisition of machinery, machinery, and equipment (50.3%). The cost of research and development is a little more than 10%, which explains the

low demand from agricultural producers for the results of innovation.

State budget support accounts for 1.1% of technological innovation costs (including 0.5% from the federal budget, 0.6% from the budgets of the constituent entities of the Russian Federation and local budgets). Foreign investment is 0.5%. Smart technologies in crop production, according to data, are applied to 7 million hectares. According to surveys, no

more than 1% of farmers used differential fertilizer and plant protection systems. Only about 10% of dairy farms use robotic equipment in Russia [18].

In Denmark and Sweden, the proportion of milking robots is about 60%, in Finland - 80% [27].

In Table 1, we may notice some trends in the development of agricultural and industrial production in Russia from 2012 to 2017.

Table 1. GDP growth rates of agricultural and industrial production (% of the previous year), RF, 2012-2017

Indicators	2012	2013	2014	2015	2016	2017
Physical volume of gross domestic product	103.5	101.3	100.7	97.2	99.8	101.5
Industrial output	103.4	100.4	101.7	96.6	101.1	101.0
Volume of agricultural production	95.2	105.8	103.5	102.6	104.8	102.5

Source: Rosstat data.

Currently, in Russia, there is an insufficiently stable tendency for the influx of investments in agriculture. The dynamics of the index of investments in the development of agriculture in fixed assets are presented in Table. 2. The

analysis shows that despite the increase in investment in 2016-2017. their share in the total economy in 2017 amounted to only 3.1%, which is lower than the contribution of the agricultural sector to gross value added.

Table 2. The index of investment (% of the previous year), RF, 2012-2017

Indicators	2012	2013	2014	2015	2016	2017
Investments in fixed assets for agricultural development	101.0	106.6	94.8	87.3	117.1	103.1
Investments in fixed assets for all types of economic activity	106.8	100.8	98.5	89.9	99.8	104.2
Investments in the development of agriculture as a% of the total volume of investments in fixed assets	2.9	3.1	3.0	2.9	3.4	3.1

Source: Rosstat data.

As a result of the analysis, we can identify some trends in innovation and investment in agriculture. So for the investment sector is characterized by a slight increase in innovation activity, the development of the structure and sources of investment. However, investment processes in agriculture are faced with the problems of regulating the regulatory support of innovation. The innovation sphere is characterized by a low rate of increasing the introduction of high-tech products, insufficient level of personnel competence in the context of the structural transformation of the economy. The author's methodological approach to assessing the investment attractiveness of the industry is to build an integral indicator of investment attractiveness

based on the synergy of the indicator of innovative, scientific, intellectual, production and technological potential, natural resources, as well as the risks of financial and economic activity (Table 3).

The results of a sociological survey conducted by Deloitte Company highlight several key problems that Russian agricultural producers face in the course of their activities. In particular, they include the imperfection of state regulation of the industry, insufficient state support and financing, low production and technical potential, currency risks, the unattractiveness of this business for external investors, geopolitical risks, the inflexibility of the tax system and others.

PRINT ISSN 2284-7995, E-ISSN 2285-3952

	t attractiveness o	

Indicators	Private indicators			
Innovation potential	Costs of technological innovation in agriculture, million rubles			
	The share of innovative products in agriculture in the total volume of goods shipped,			
	work performed, services,%			
Scientific and intellectual	The proportion of organizations engaged in innovation in the total number of			
potential	organizations surveyed,%			
	The share of scientific and technical work performed in agriculture, the total volume			
	of products produced, work performed, services,%			
	The share of employees of innovatively active enterprises in agriculture in the number			
	of workers in the enterprises of the sample,% of the number of people employed in			
	agriculture, thousand people			
	The number of students in agricultural universities per 10 thousand people.			
	economically active population, people			
	The number of graduate students and doctoral students in agricultural universities per			
	10 thousand people. Population			
	Labor supply, people per 100 hectares of sown area			
	Average salary per 1 worker in agriculture, USD / month			
Production and	Indices of agricultural production,%			
technological potential	Investment rate,%			
	The coefficient of renewal of fixed assets in agriculture,%			
	The profitability of agricultural products,%			
	The number of cultivated varieties and hybrids of crops			
	The number of breeding forms of animals, birds, fish, and insects			
	The number of developed new and improved technologies for vaccines, diagnostic kits,			
	biological products			
	Number of new food items developed			
	Indicators of the novelty of innovative goods, works, services Indicators of export of			
	innovative goods, works, services Indicators of the volume of goods, works, services			
	produced using marketing innovations			
Land resources	The total area of cultivated land, thousand ha			
	The share of agricultural land in the total land area,%			
Risks of financial and	Interest rates on long-term loans,%			
economic activity	The tax burden on agriculture			
	Return on assets			

Source: Own concept of the authors.

Factors affecting the investment attractiveness of agriculture in the work are considered at the national, regional and enterprise levels (Fig. 1). At the national level, investment attractiveness is determined by such factors as the efficiency

of market mechanisms, the level of state regulation, the natural and climatic risks of the agricultural business, the degree of integration of agriculture in the world economy [14].

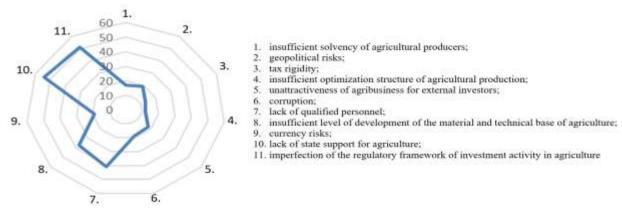


Fig. 1. A study of factors holding back investment activity in Russian agriculture in the 2018. Source: Own determination.

The study systematizes and classifies the constraining and accelerating factors of the investment attractiveness of agriculture, combined into groups: climatic, institutional, financial, industrial, economic, innovative, social.

At the level of an agricultural enterprise, factors affecting investment attractiveness are the degree of technical equipment of production, the presence of a development strategy, the level of competitiveness of its products, the availability of qualified personnel, the financial condition of the enterprise, market share, etc.

Figure 2 presents a factor analysis of the dynamics of the volume of shipped products per one ruble of investments in fixed assets for 2006-2016.

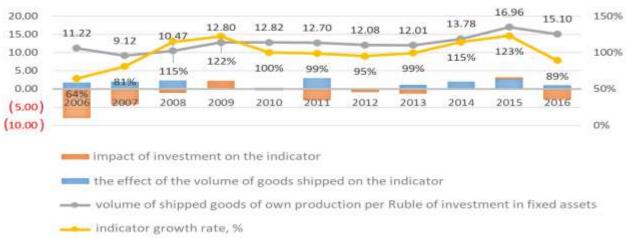


Fig. 2. Dynamics of the volume of shipped products per one ruble of investments in fixed assets for 2006-2016. Source: Own determination.

Based on the conducted correlation and regression analysis, it is shown that the growth of investments is 2006-2007. Led to a positive increase in the indicator in 2008-2009, and a significant decrease in investment in 2009 has a negative impact in subsequent years, up to 2013. Moreover, the decline in these years (2010-2013) is also explained by the growth of investments, the return on which leads to a positive increase of 15% and 23% in 2014 and 2015, respectively. In general, for the entire study period, this indicator showed a slight increase of 0.29%. Moreover, the factor "Investments in fixed assets" hurt this indicator - 12.26% and the factor "Volume of goods shipped" had a positive effect of 12.55%.

The results obtained indirectly may indicate a high degree of depreciation of fixed assets and insufficient investments in fixed assets, as well as inefficient management.

The empirical analysis revealed significant imbalances in the investment policy of agriculture. To eliminate them, it is necessary to improve the investment climate, as well as develop measures to increase the attractiveness of agriculture for potential investors. This set

of measures is aimed at creating an exportoriented model for the development of the agricultural sector of the Russian economy.

The financial support of innovation is provided by state and non-state support funds; there are two main forms of sources of financial support for innovation - direct and indirect financing. Direct sources of financing innovative activities in agriculture include budgetary and extra-budgetary funds. own funds agricultural enterprises, Russian and foreign loans, grants. Indirect sources of financing include tax incentives and discounts, loans, leasing, customs and depreciation benefits.

According to a study by the All-Russian Center for the Study of Public Opinion, in 2018, farmers more often began to apply for credit resources, due to a lack of own funds for agricultural production. Currently, ordinary bank credit is becoming less popular due to the emergence of interested organizations and private investors who are ready to provide a loan on more favorable terms. The disadvantage of bank loans is that payments on them must be paid from the first month of using the loan. In the agricultural sector, this is not

always possible, since the product must first be grown and then sold. With such a form of support as leasing, which is a rental of the property with the possibility of subsequent redemption, taking into account the payments made, the property is not taxed.

Thus, in agricultural production, there are such types of financial support as subsidies, leasing, insurance, lending, investment, and taxation.

Among the innovative opportunities for attracting finance to the agricultural sector of the economy, crowdfunding and business angel financing can be singled out [32].

Crowdfunding is an activity aimed at seeking funding from the general public. This investment attraction mechanism is aimed at seeking to interest the maximum number of people, for example, to open a new business or start a project. The advantage of this tool is the absence of the need to repay loan funds for the implementation of the idea. In turn, the disadvantage of this investment tool is the need to interest the largest number of people who are willing to invest in the proposed ideas.

Another way to raise funds for the development of agricultural production is business angel financing, with this method, investors invest in promising innovative projects with a high degree of risk to make a profit.

In recent years, the investment attractiveness of agriculture has increased thanks to certain government policies. In particular, in 2019, the Ministry of Agriculture began to conclude agreements with companies on improving competitiveness. They are aimed at increasing the production of products that are in demand abroad and in this regard enable agricultural producers to receive soft loans for short-term and investment purposes [26].

The development of the mechanism for managing innovation and investment activities of enterprises of the agricultural sector of the economy is based on improving methods and scientific approaches to organizing interrelated tools for its functioning, the main purpose of which is to increase the efficiency of agricultural production on an innovative basis. As a result of the research, innovation-investment management tools in agriculture were proposed that provide managerial

decision-making in the field of innovation promotion and dissemination. Regarding the object of study, standard management functions are considered: planning, organization, motivation, coordination, control.

The results were used to create a model for managing innovation and investment in agriculture, the principal feature of which is to stimulate innovative susceptibility to the introduction of innovations at all stages of the innovation process, as well as its investment. At the planning stage, conceptualization and research processes are carried out, a business plan is developed based on the existing concept of innovation policy [12]. At the stage of innovative investment, the innovation process solves the tasks of finding investors and monitoring the sources of investment, creating a schedule and developing a budget for the investment project. The stage of consumption is devoted to the investment in agricultural production and the implementation of an innovative product.

It is planned to raise funds for the introduction of innovations, launch production of high technology products, bringing it to the end consumer. At the final stage of the innovation process, an efficiency assessment is carried out, the contribution of various investment policy instruments to improving the efficiency of agricultural production during the transition to an export-oriented economy is analyzed. Presented in Figure 3, agricultural investment attractiveness management model based on a symbiosis of management functions, stimulating approaches to innovative susceptibility at all stages of the innovation process and sources, forms and methods of investment policy.

The presented author's model makes it possible to simultaneously regulate investment processes at all stages of the innovation process and create conditions for the implementation of high-tech products in agriculture by stimulating innovative susceptibility on the one hand and parallel investment of all stages of the innovation process on the other. The implementation of this model is aimed at improving the quality of managerial decisions

to introduce innovations in the production processes of agricultural enterprises.

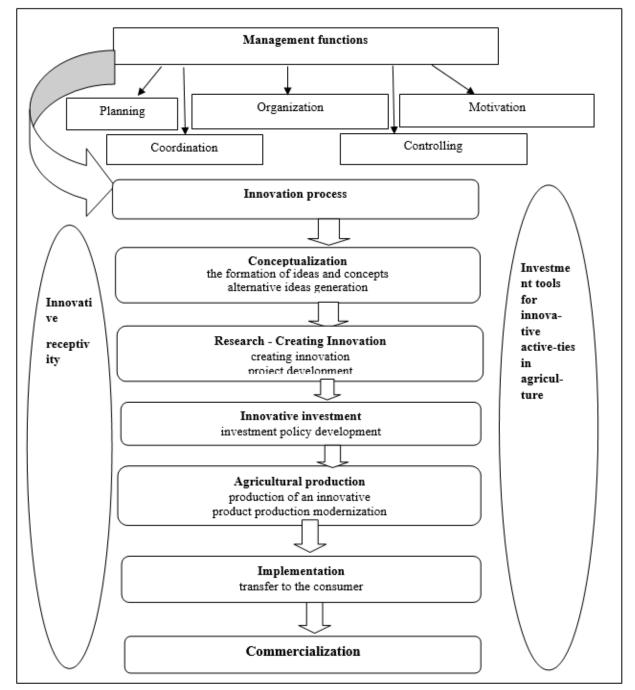


Fig. 3. Multifunctional model of the managing innovation-investment in the agricultural sector Source: Own determination.

CONCLUSIONS

The paper substantiates the role of the state in the development of investment policy in agriculture. Based on the analysis of the "investment attractiveness" interpretations, the author's definitions are formulated. Various methodological approaches to assessing the investment attractiveness of the agricultural industry are investigated.

The authors developed a methodological approach to assessing the investment attractiveness of agriculture, the essence of which is to build an integrated indicator of investment attractiveness based on the synergy of the estimated indicators of innovative,

scientific, intellectual, production and technological potential, natural resources, as well as taking into account the risks of financial and economic activity.

A study of the positive foreign experience of the leading countries in increasing the investment attractiveness of agriculture revealed various trends in investment and innovation that are characteristic of the agricultural industry: a slow increase in implementation activity based on advanced scientific and technological achievements, a concentration of new developments in the production sector, and a poor supply of personnel innovative in conditions innovative structural adjustment.

The study systematizes the constraining and accelerating factors of investment attractiveness of agriculture at the macro, and micro levels, such as climatic, institutional, financial, social, innovative, economic, industrial. It is proved that when pursuing innovation policy in agriculture, factors accelerating innovation development must be taken into account.

An analytical assessment of the investment attractiveness of Russian agriculture was carried out using a dynamic model reflecting the dependence of innovative development on investment in the agricultural sector. The empirical analysis revealed significant imbalances in the investment policy of agriculture. To eliminate them, the use of innovative sources of financing innovation in agriculture is proposed.

Based on the analysis and assessment of factors affecting investment attractiveness, research on positive foreign experience in investing innovative activities in agriculture, mechanism for managing investment attractiveness in agriculture based on a symbiosis of management functions, approaches stimulating innovative to susceptibility at all stages of the innovation process and sources were developed forms and methods of investment policy.

The practical significance of the results of the study is to increase the efficiency of agricultural production based on improving the forms and mechanisms of attracting investment resources, as well as the quality of managerial

decisions to introduce innovations in the production processes of agricultural enterprises.

ACKNOWLEDGEMENTS

The reported study was funded by the Russian Foundation for Basic Research according to the research project №20-010-00979 A «Influence of investment resources of regional agricultural systems on increasing export potential in the conditions of innovative structural transformation».

REFERENCES

[1]Altukhov, A. I., 2014, The main problems of agricultural development and ways to solve them. Bulletin of the Kursk state agricultural Academy. №2. pp. 2-6.

[2]Andryushchenko, S.A., Vasilchenko, M.Ya., Derunova, E.A., Rubtsova, V.N, Sharikova I.N., 2018, Modeling of Structural and Institutional Factors of Development in Regions Unfavorable for Agriculture. The Journal of Social Sciences Research. №3. pp.40-43. [3]Bathla, S.,2017, Futuristic private and public capital requirements in agriculture for doubling farmers' income across the states. Agricultural Economics Research Review. (Conference Number):101–116.

[4]Blank, I. A., 1999, Fundamentals of financial management. Kiev: Nika-Center, 592 p.

[5]Bolotova, Yu., 2004, Support for agricultural producers in the USA. AIC: Economics, Management. №1. pp. 37-40.

[6]Bose, S., Roy, S.K., Tiwari, A.K., 2016, Measuring customer-based place brand equity (CBPBE): An investment attractiveness perspective. Journal of Strategic Marketing. 24 (7): 617–634.

[7]Decree of the President of the Russian Federation No. 204 of may 7, 2018 «National goals and strategic objectives for the development of the Russian Federation for the period up to 2024» (May 8, 2018) // https://www.garant.ru/products/ipo/prime/doc/7183720 0/, Accessed on February 26, 2020.

[8]Derunova, E., Andryushenko, S., Gerchikova, E., Firsova, A., Derunov, V., 2018, Monitoring of innovative activities effectiveness in agriculture. Scientific Papers. Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 18(3): 89-100.

[9]Derunova, E.A. Kireeva, N. A., Prushchak, O. V., 2019, Inclusive development of the agri-food system as a driver for sustainable growth in the region's economy. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol.19 (3):165-174.

- [10]Falk, M., 2016, A gravity model of foreign direct investment in the hospitality industry. Tourism Management. 55: 225–237.
- [11] Gokhberg, L., Ditkovsky, K. A., Kuznetsova, I. A. et al., 2019, Indicators of innovation: 2019: stat. sat, National Research University Higher School of Economics, 376 p.
- [12]Goncharov, P.V., Lytneva, N.A., 2015, A multifunctional model of the mechanism for managing innovation and investment in the agricultural sector, International Journal of Applied and Basic Research, 9:106-109.
- [13]Hallam, D., 2009, Foreign investment in developing country agriculture: Issues, policy implications and international response. In: Beyond the crisis: International investment for a stronger, cleaner, fairer global economy. OECD 8th Global forum on international investment (7–8 Dec. 2009). Paris: OECD Conference Centre; 2009. http://www.oecd.org/investment/globalforum/4423182 8.pdf /, Accessed on February 26, 2020.
- [14]Ievleva, N.V., Gushchina, Yu.I., Zhemerikina, E.B., 2016, Problems and tasks of increasing the investment attractiveness of the agro-industrial complex. Economics: yesterday, today, tomorrow, №6: 290-300. [15]Iskakov, B.M., 2018, Features of the investment climate in agriculture. Problems of the agricultural market, pp. 21-27.
- [16] Ivanova, V.N., Goncharov, V.D.,2011, Investment activity in agribusiness of Russia. Agribusiness: economics, management, № 4: 10-14.
- [17]Jorgenson, A. K., Kuykendall, K. A., 2008, Globalization, foreign investment dependence and agriculture production: Pesticide and fertilizer use in less-developed countries, 1990–2000. Social Forces. 87(1):529–560.
- [18]Karabut, T., 2018, Milk without a man. What changes the robotization of dairy farms. Agroinvestor. https://www.agroinvestor.ru/technologies/article/30204 -moloko-bez-cheloveka/, Accessed on February 27, 2020.
- [19]Kontorovich, S. P., 2000, Management of the investment attractiveness of an enterprise (system-evaluation aspect), 168 p.
- [20]Korbut, A., 2015, Investment climate in the agroindustrial complex: an attempt to informal analysis, http://www.agroxxi.ru/stati/investicionnyi-klimat-v-apk.html, Accessed on March 1, 2020.
- [21]Le Polain de Waroux, Y., Garrett, R. D., Heilmayr, R., Lambin, E. F., 2016, Land-use policies and corporate investments in agriculture in the Gran Chaco and Chiquitano. PNAS, 113 (15): 4021–4026.
- [22]Maslova, V.V., Zaruk, N.F., Savkina, E.M., Avdeev, M.V., 2020, Assessment of investment attractiveness of the agricultural industry in the context of integration into the EAEU. Economics of Agricultural and Processing Enterprises, № 2, p.21-27.
- [23]Passport of the Federal project «Export of agricultural products " (UTV. minutes of the meeting of the project Committee of the national project

- "international cooperation and export" dated December 14, 2018 # 5) // http://mcx.ru/upload/iblock/013/013f266cee8d39bce5c a867381ff0da1.pdf, Accessed on February 27, 2020.
- [24]Popescu, A., 2014, Research on profit variation depending on marketed milk and production cost in dairy farming, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 14(2):223-230.
- [25]Popescu, A., 2020, Trends in pork market in the European Union and in its main producing countries in the period 2007-2018 Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 20(1):475-488.
- [26]Results of 2019 in Russian agriculture http://agroobzor.ru/article/a-1161.html, Accessed on March 1, 2020.
- [27]Robotic systems in dairy farming, https://agrarnyisector.ru/zhivotnovodstvo/robotizirovan nye-sistemy-v-molochnom-zhivotnovodstve.html, Accessed on March 1, 2020.
- [28]Sandu, I.S., Nechaev, V.I., Fedorenko, V.F., Demishkevich, G.M., Ryzhenkova, N.E., 2013, Formation of the innovation system of the agroindustrial complex: organizational and economic aspects. Rosinformagroteh, 216 p.
- [29]Sandu, I.S., Veselovsky, M.Y., Semyonova, E.I., Fedotov, A.V., Doshchanova, A.I., 2015, Methodological aspects of social and economic efficiency of the regional activities. Journal of Advanced Research in Law and Economics. T. 6. №3. pp. 650-659.
- [30] Sergeev, I.V., 2003, Organization and financing of investments: Finance and Statistics, 400 p.
- [31]Sheen, A., 2016, Do Public and Private Firms Behave Differently? An Examination of Investment in the Chemical Industry, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=27 92410, Accessed on March 1, 2020.
- [32]Tkachev, S.I., Pakhomova, T.V., Rubtsova, S.N., Sleptsova, L.A., 2019, The development of agriculture in the Saratov region due to the improvement of investment policy. Bulletin of the Altai Academy of Economics and Law, 12, p.155-161.
- [33] Vasilchenko, M., Sandu, I., 2020, Innovative-investment development of agriculture in the conditions of formation of the export-oriented economic sector: system approach Scientific Papers. Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 20(1): 599-612.