

## ROLE OF FOREIGN DIRECT INVESTMENT IN INNOVATIVE DEVELOPMENT OF THE AGRARIAN SECTOR

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### Abstract

*Overcoming the shortage of investment resources for the development of the agro-industrial complex of Russia makes it necessary to mobilize both internal and external sources of investment. Attracting foreign direct investment in the agro-industrial complex, creating favorable conditions is one of the most difficult tasks. The purpose of the study is to assess the available mechanisms to stimulate the attraction of foreign investment and determine their contribution to the innovative development of the agricultural sector and increasing the possibilities of food exports; identification of the relationship between the scale of foreign direct investment and the investment attractiveness of Russian regions. Studied foreign and domestic theoretical and methodological approaches to assessing the conditions, opportunities and limitations of foreign direct investment, macroeconomic and globalization effects from their use. The necessity of increasing the inflow of foreign investment in agriculture in order to activate the process of innovative structural transformation of the Russian economy has been substantiated. Investigated the provision of foreign investments in agriculture. An empirical assessment of the scale of foreign investment in agriculture has been carried out, measures are proposed to stimulate the attraction of foreign investment in agriculture. The practical significance of the results of this study lies in the development of measures to improve investment policy in relation to foreign direct investment.*

**Key words:** *foreign direct investment, innovative development, agricultural sector, investment contract, efficiency assessment, government regulation*

### INTRODUCTION

The federal scientific and technical program for the development of agriculture in Russia for 2017–2025 has identified as one of the priority areas the creation of conditions for the early transfer of the agro-industrial complex to a new technological base, the transfer of scientific results into production and their subsequent effective use. At the same time, an increase in innovative activity in agriculture and attracting investment are considered as the main indicators of the Program, innovative activity in agriculture should reach the level of 30% by 2025 [20].

Attracting foreign capital makes it possible to fill the deficit of financial resources and has a

positive effect on the development of the economy, which necessitates the creation of favorable conditions for foreign investors.

Theoretical, methodological, and methodological problems of studying the conditions, opportunities, and limitations of foreign direct investment, macroeconomic and globalization effects from their use, the main models of foreign investment are reflected in detail in the works of domestic and foreign scientists.

The greatest contribution to the study of this topic was made by such foreign authors as D. Danning, J. Keynes, C. Kindleberger, P. Krugman, M. Casson, B. Olin, M. Porter, A. Ragman, E. Heckscher. J.S. Mill, R. Harrod,

E. Domar. Porter substantiated theoretical approaches and models of direct investment export at the macro level; A. Chandler, J. Danning, A. Rugman - at the micro-level. In turn, S. Hymer, C. Kindleberger, and R. Caves, based on the synthesis of micro-and-macroeconomics, emphasized the need for a foreign investment firm to have specific advantages over national enterprises (originality of products, advanced technologies), which allows it to borrow a monopoly position in the market of the host country [2, 27, 31].

A significant contribution to the theory of foreign direct investment was made by A.M. Rugman, who developed the FSA-CSA matrix to reflect the specific strengths of both the firm and the country [41]. For a firm, the main motivational prerequisite for the export of direct investment is the desire to get the maximum benefit from the use of such specific advantages as technology, knowledge, managerial and marketing abilities in the presence of stimulating factors in the recipient country of direct investment (natural resources, the availability of cheap labor, the investment attractiveness of the business) ... According to M. Porter's theory, the competitiveness of a particular country is largely determined by its location at a certain stage of the life cycle (stage of factors of production, stage of investment, stage of innovation; stage of wealth) [39].

The eclectic paradigm of foreign direct investment by economist J.H. Danning (OLI paradigm) is based on the study of the special competitive advantages of foreign investors in comparison with domestic companies (O), the advantages of the location of host countries with the prospects for the development of local markets (L) and the advantages of internalization arising from the coordination of economic activities within the firm (I) [7].

The prevalence of OLI advantages predetermines the existence of conditions for the preferential export of capital from the country.

In the development of these theoretical provisions of J.H. Danning and R.Narula developed the theory of "the way of investment development of the nation",

according to which the export or import of capital is determined by the level of investment development of the country in comparison with the rest of the world. The authors identified five stages of the country's economic development. The first phase is characterized by a low inflow and insignificant outflow of foreign direct investment due to the use of restrictive measures by the state, a weak technological base and a small number of asset-generating firms, and low investment attractiveness. In the second phase, there is a slight increase in foreign direct investment and export inflows; the outflow of foreign direct investment is still low; there has been a slight increase in the competitiveness of national firms. In the third phase, both exports and imports of foreign direct investment increase. A feature of the fourth phase is the equality of exports and imports of investments (and in some cases, outstripping exports). Per capita income and demand for high-quality goods are growing; national firms demonstrate a high level of competitiveness in the domestic and foreign markets. The fifth phase - further growth of exports and imports of foreign direct investment, maintaining a high level of competitiveness of local companies in the domestic and foreign markets, active support for the export of investments [28]. Thus, the theory of "ways of investment development of the nation" can be used to classify countries (external investors or recipients of investments). Placement of foreign direct investment is focused on countries with a lower level of GDP per capita in comparison with the investing country.

In modern foreign studies, the phenomenon of foreign direct investment is of great importance. The problems of increasing the efficiency of using foreign direct investment in agriculture are quite relevant. World experience shows that inefficient investments usually mean low productivity and stagnation of production [25].

Investment opportunities are most limited in developing countries, which impedes overcoming food crises and achieving food security. In the least developed countries, large investment gaps in infrastructure

development have led to a sharp decline in agricultural efficiency and underutilization of agricultural land. Given the disastrous investment security situation, the CFS (United Nations Committee on World Food Security) asked the HLPE (High-Level Panel) to ask experts to prepare a report "Multi-stakeholder partnerships (MSPs) to finance and improve food security and nutrition by 2030 of the year"[26]. As a result, many developing countries have begun to make more active use of foreign investment in agriculture in order to increase the productivity of the sector and meet the needs of agriculture for various resources [30].

Thus, in the past few decades, the higher profitability of agriculture and the relatively low cost of land have been factors in attracting foreign investment in agriculture; multinational companies are actively involved in this process, especially in developing countries [24]. However, there is still a debate about whether foreign investment can improve food security in developing countries [6]. Several authors note the high potential of foreign investment in agriculture to support agriculture in developing countries [29].

This promotes more active technology adoption, increased yields, and improved quality of agricultural products, which, in turn, have increased the share of developing countries in global agricultural production and exports [15].

According to studies by foreign authors, investments have contributed significantly to the creation of jobs and higher incomes for farmers, meeting the growing demand for food and eliminating the problem of hunger [9, 32].

However, some scholars see foreign investment as a threat to local small farmers, leading to a deterioration in food and environmental security, as well as socio-economic destabilization [34]. In selected African countries, foreign investment in agriculture has resulted in the marginalization of smallholder farmers, local labor replacement, food insecurity, and severe environmental problems. In general, foreign investment in agriculture must be viewed in

terms of economic, political, institutional, legal, and ethical issues [10, 33].

Their real effect can be underestimated due to the above circumstances [3].

In Eastern European countries, the foreign investment makes a more significant contribution [35, 36].

Considering the situation in Serbia, Jovanovic, R.J. emphasizes that an increase in the inflow of foreign direct investment has a beneficial effect on the development of agriculture and the food industry, as well as on economic growth and the maintenance of international competitive positions. It is necessary to take into account international rules regarding foreign investment. Too tight restrictions impede the flow of agricultural investment, as a result of which the problems of insufficient production capacity and backward infrastructure persist. In this case, it is difficult to introduce and use agricultural technologies, especially in developing countries [11,13].

Therefore, in the process of deciding on foreign investment in agriculture, especially in developing countries, one should take into account the ratio of positive and negative effects of investment; the state of the investment environment; investment attractiveness of the business. The main determining factor remains the presence of positive externalities of investments, therefore, about developing countries, it is recommended to relax international rules and increase the scale of foreign investment, even if there is a low investment attractiveness.

Thus, research has proven significant advantages of foreign direct investment for the host country: increased investment activity in the national economy and individual industries; economic growth due to the influx of technology and the transfer of innovation; increasing exports by increasing the production of competitive goods; creation of new jobs in joint ventures with foreign capital participation; increasing production efficiency and expanding sales markets; the formation of new competencies of employees through training, knowledge transfer and advanced training. Foreign capital can saturate the host country with resources to modernize its

production base and form a modern consumption model [4].

**The purpose of this study** is to assess the available mechanisms to stimulate the attraction of foreign investment and determine their contribution to the innovative development of the agricultural sector and increasing the possibilities of food exports; identification the relationship between the scale of foreign direct investment and the investment attractiveness of Russian regions.

## MATERIALS AND METHODS

The methodological basis of the study was research in the field of food security and nutrition in the world, the achievement of the sustainable development goals of the FAO, IFAD, UNICEF, WFP, WHO of the World Bank [16, 17, 22, 23, 46].

In the course of the research, monographic, abstract-logical, analytical, economic-statistical, expert research methods were used. Information from the International Monetary Fund, Rosstat, the Central Bank of Russia, and the Ministry of Agriculture of Russia was used as an information base for the study.

The specificity of accounting for foreign direct investment in the context of certain types of economic activity according to the balance of payments methodology is to reflect the balances of direct investments from abroad, which include the participation of foreign direct investors in the capital (equity) and debt instruments. However, it should be borne in mind that in agriculture in Russia, the main recipients of funds are such organizational forms as agricultural holdings, whose activities in statistics can be reflected in other codes for the classification of economic activities (consulting services, financial services, foreign economic activity) and accounted for in other industries [12].

Such incompleteness of information forces us to build cause-and-effect relationships empirically and use expert methods.

## RESULTS AND DISCUSSIONS

Foreign investments are investments of foreign capital in objects of entrepreneurial

activity in the form of objects of civil and property rights, intellectual property rights, as well as services and information. Direct investments can be carried out in the form of acquisition by a foreign investor of at least 10% of a share in the authorized capital of a commercial organization; capital investments in the fixed assets of a branch of a foreign legal entity established on the territory of the Russian Federation; leasing of certain equipment by a foreign investor with a customs value of at least 1 million rubles, which is declared by the relevant decision of the Council of the Eurasian Economic Commission of July 16, 2012, No. 54 [8].

The legal basis for foreign investment is established by the norms of Russian and international legislation. The institutional framework for regulating foreign investment in Russia is determined by the provisions of the Federal Law "On Foreign Investments in the Russian Federation", confirming the existence of state guarantees for investment activities: non-discrimination and respect for their rights and interests, in particular: equal conditions for doing business, exclusion of unfavorable changes in legislation, compensation for nationalization and requisition, justice, participation in privatization. The Federal Law "On the Procedure for Making Foreign Investments in Business Companies of Strategic Importance for Ensuring the Defense of the Country and the Security of the State" defines some restrictions on foreign investments in the interests of protecting the constitutional order, security of the state, the rights and legitimate interests of others. In most states, it is prohibited to attract foreign finance to national defense, postal service, education, production of harmful and environmentally polluting products. Any country has the right to establish its own restrictions on attracting foreign direct investment. For example, in China, in addition to the above-mentioned areas, foreign investments in medicine, fishing, electricity production, as well as in enterprises, the influence on which could shake the monopoly on political power, are prohibited. Also, to attract foreign capital to

the Russian Federation, the legislation provides for some benefits.

The regulation of the activities of foreign investors in Russia is confirmed by intergovernmental agreements; currently, more than 70 such agreements are in force. On April 1, 2020, a new law on the protection and encouragement of investment was adopted, according to which investors can implement investment projects, backed up by state guarantees not to take measures that worsen the situation of investors. For foreign investors, the conclusion of agreements on the protection and promotion of investments (SZPK) is possible only through participation in the capital of a Russian legal entity [18].

In Russia, there is a special mechanism for concluding investment contracts (SPIC) between the state and a private investor in the form of a public-private partnership, aimed at the development and implementation of modern technology that ensures the serial production of industrial products, including in the sectors of the agro-industrial complex. This measure will make it possible to produce products that are competitive in the world market. The term of contracts does not exceed

15 years with an investment volume of up to RUB 50 billion and 20 years with investments over 50 billion rubles [19].

Thus, the mechanism of investment contracts is aimed at the development and transfer of technologies, the inflow of unique technological and production competencies to Russia in exchange for guarantees of stability of business conditions in the long term. contribute to the activation of the process of innovative structural transformation in agriculture and the sectors of the agro-industrial complex

Information on direct placed and attracted investments, as well as gross domestic product (GDP) in Russia as a whole, is presented in Fig. 1. Comparison of these indicators makes it possible to determine the stages of investment dynamics in accordance with the provisions of the theory of the development of the investment path of J.H. Danning and R. Narula. With the exception of 2000-2002, as well as 2012 and 2016, the volumes of direct Russian investments placed abroad exceeded the volumes of foreign direct investments.

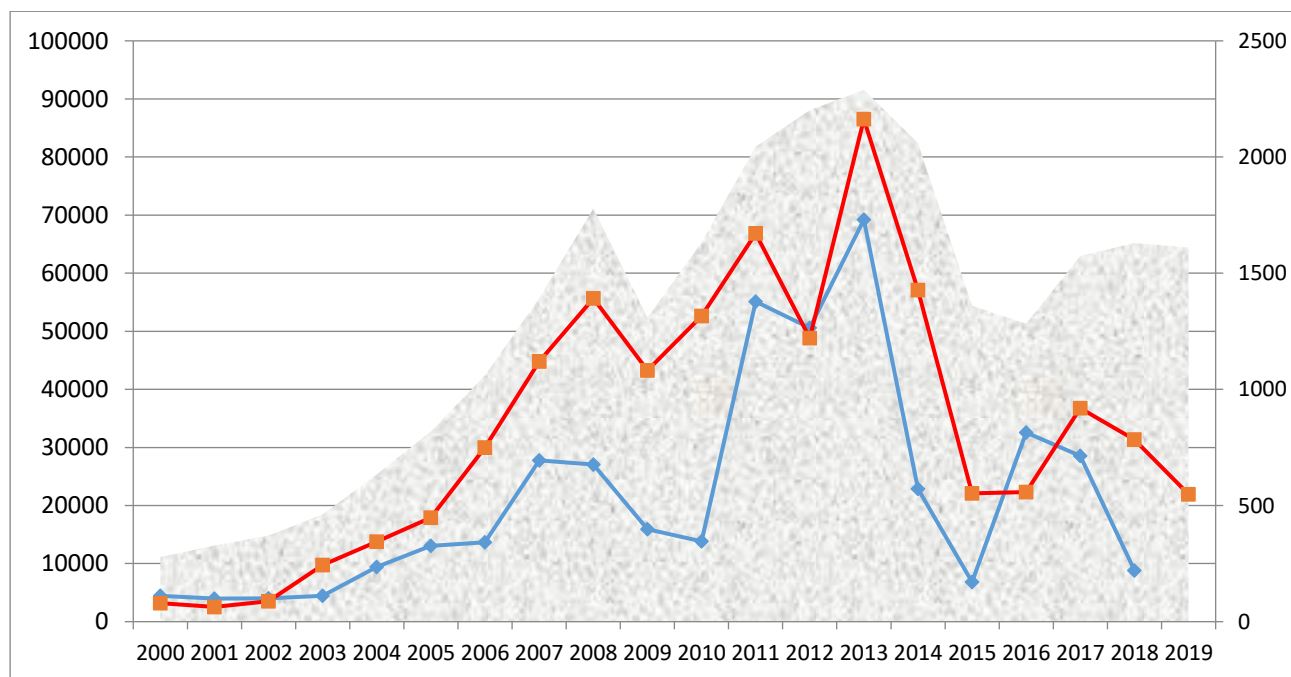


Fig. 1. Dynamics of direct investment and gross domestic product in Russia, USD million  
 Source: Own calculations based on the data of the International Monetary Fund, federal statistics of the Russian Federation, statistics of the Central Bank of Russia

The largest gap between exports and imports of investments was observed in 2010 (USD 52,616 million and USD 13,810 million, respectively). The lack of investment resources was especially noticeable in 2017 when there was a sharp decrease in gross domestic product as an indicator of economic growth. The excess of exports of direct foreign investments over their imports was observed in 2009-2011, and both the outflow and inflow of direct investments increased; economic growth was observed. In 2013-2015 and 2017-2019, the inflow of direct investments into Russia was less than their outflow from the country, although their scale has noticeably decreased. At the same time in 2013-2015, there was a sharp drop (by more than 30% of gross domestic product. In 2017-2019, a further decrease in the volume of inbound and outbound direct investments continued, and the economy, despite an increase in growth rates, did not reach the maximum of 2015 GDP (2,289 billion dollars).

The foregoing allows us to conclude that the dynamics of foreign direct investment is somewhat inconsistent with the theoretical model of J.H. Danning and R. Narula, which is explained by the long-term effect of such factors as an imperfect institutional environment, low investment attractiveness (especially agriculture), high political and financial risks, underdeveloped infrastructure, and a lack of qualified personnel.

It is necessary to take into account the country's low competitiveness in the world market (according to the global competitiveness rating) in 2019, Russia ranked 43rd in the world) [42]. Studies of individual foreign authors also show a fairly conditional correspondence of the dynamics and structure of direct investments to various concepts, including the theory of J.H. Danning and R. Narula, which is especially typical for the Chinese economy [1].

Taking into account the identified trends in the import and export of direct investments against the background of the dynamics of the gross domestic product, the following stages of investment development in Russia can be distinguished. The first stage (2000-2004) is

distinguished by a rather low scale of both the inflow into the country and the outflow of direct investments from Russia. During this period, the economy is characterized by a weak level of innovative transformations. At the second stage (2005-2013), there is a rapid increase in the volume of inbound and outbound direct investments. So, in 2010-2013, foreign investments increased 4.6 times, and the outflow of direct investments doubled. At the same time, the innovative restructuring of the economy does not yet fully affect such low-tech industries as agriculture; products of the agro-industrial complex are notable for their low competitiveness in the world market. Consequently, the second stage according to certain criteria (growth of direct investments) can be attributed to the third phase according to the theory of the investment path; on other parameters (low competitiveness, technological backwardness) - to the second phase. The third stage, which began in 2014, does not meet the criteria of J.H. Danning and R. Narula, since there is a pronounced cyclical movement of direct investment and GDP. With a certain degree of conditionality, it can be noted that Russia is at the stage of transition from the third to the fourth phase of the investment path, which predetermines the need to use foreign capital in the economy, especially in agriculture and other sectors of the agro-industrial complex.

The analysis of the structure of direct investments for certain types of activity showed an insignificant share of agriculture, forestry, hunting, and fishing in comparison with the production of food products, beverages, tobacco products (Fig. 2).

In 2010-2019, the share of direct investments in the type of activity "Agriculture, forestry, hunting and fishing" accounted for from 0.2 to 0.5%. In the production of food products, beverages, tobacco products, investments were made from 2.5% in 2013 to 6.5% in 2017. Some decrease in direct investment was observed in 2019. It is necessary to note the high degree of differentiation of foreign investment flows in agriculture across the territory of the Russian Federation, as evidenced by the calculated indicators of foreign investment concentration.

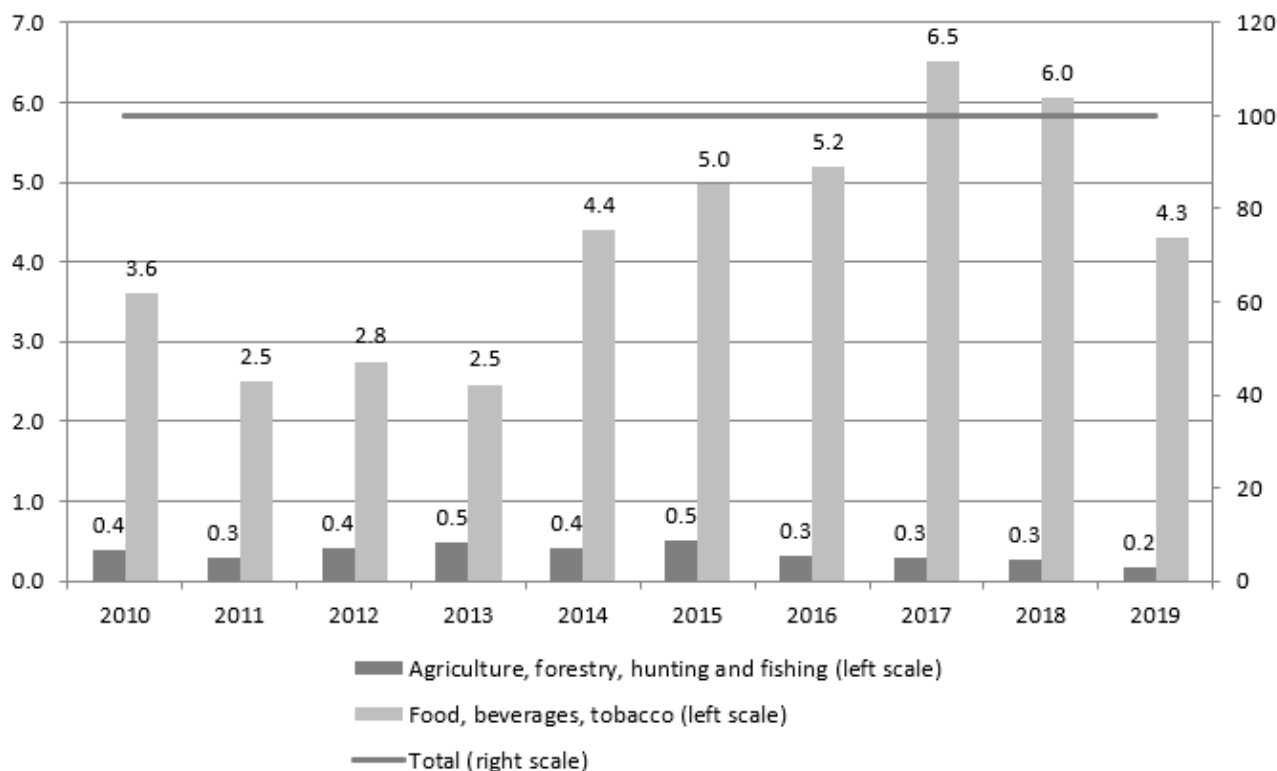


Fig. 2. Direct investment in Russia by type of economic activity, %  
 Source: Own calculations based on data from the Central Bank of Russia

In the economy as a whole, in 2019, the concentration indicator of direct investment CR3, calculated for the three regions with the largest scale of direct investment, was 81.3%, which characterizes a high degree of concentration, and the bulk of foreign direct investment in the period under review was concentrated in St. Moscow (29.8%), Sverdlovsk (10.2%) and Tyumen regions (41.3%). For the type of activity "Agriculture, forestry, hunting and fishing" in 2019, direct investments prevailed in the Kaliningrad region (52.0%), Krasnodar region (21.6%), and Leningrad region (14.1%); the concentration indicator was 87.7%. An empirical method using the available information from the Central Bank of Russia determined their absence in 2019. In most regions of the North Caucasian Federal District, as well as Kursk, Lipetsk, Oryol regions, the Republic of Adygea, the Altai Republic, the Republic of Buryatia, the Republic of Mordovia, and the Trans-Baikal Territory.

In this regard, one of the tasks is to attract foreign direct investment to the peripheral regions of Russia to increase their export

potential and raise the technological level [47].

In modern conditions, the most priority areas for foreign investment in Russia are identified: the introduction of high-performance technologies for the cultivation of crops and raising animals; creation of production facilities and a raw material base for the production of containers and packaging materials; development of agricultural engineering; provision of production services to various parts of agro-industrial production; application of progressive, resource-saving and environmentally friendly technologies [5].

Many investors are showing interest in using the country's natural and climatic potential for the further export of manufactured goods to world markets [21, 37, 38].

Russian agriculture remains an extremely attractive sector for European companies that are members of the food industry committee of the Association of European Businesses (AEB), for example, Bonduelle, Cargill, Danone Russia, Ferrero Russia, Nestle Rossiya. However, it should be noted that there is a high degree of competition between

foreign companies in terms of using more beneficial natural, climatic and economic resources). To determine the contribution of direct investment to the innovative development of the agricultural sector and increasing the possibilities of food export, the relationship between the scale of foreign direct investment and the investment attractiveness of Russian regions was investigated, taking into account the innovative parameters and export opportunities of agriculture (Table 1-3).

Using the indicator "Direct investments in the Russian Federation as a percentage of the gross regional product" allows you to characterize investment activity. It is calculated on the basis of the balance of direct investment, and in some cases its negative value indicates an excess of disinvestment over their receipts. The degree of investment activity is determined by the corresponding indicator value: above 1 - high, below 1 - low. The reason for the withdrawal of investments may be the closure or sale by the company of

existing divisions or a branch. In the analyzed period, in twenty Russian regions, the inflows of direct investments were less than their withdrawals, which reflects low investment activity. This conclusion is confirmed in relation to agriculture. According to information on the balances of direct investments in the Russian Federation by type of activity "agriculture, forestry, hunting and fishing", in 2018-2019. such regions as the Stavropol Territory (with a balance of \$ 258 million), the Penza Region (\$ 125 million), and the Krasnodar Territory (\$ 28 million) had the greatest investment activity.

Comparison of average values for different groups of regions made it possible to characterize them as follows. The first group of regions with high investment attractiveness (Table 1) is also distinguished by higher innovation and investment activity, better opportunities for food exports, although agriculture occupies a smaller share in the gross regional product.

Table 1. Innovation and investment activity of Russian regions with different production and export potential in the group of high investment attractiveness in 2018

Regions of Russia	Investment attractiveness category	Direct investments in Russia as% of gross regional product	Share of gross agricultural product in gross regional product,%	Share of the region in the export of food and agricultural raw materials,%	Share of agricultural organizations that have implemented technological innovations,%
Moscow	High, first level	0.2	0	13.8	5.6
St. Petersburg	High, second level	0.2	0	4.16	9.5
Republic of Tatarstan	High, second level	0.6	9.2	0.65	17.1
Moscow Region	High, second level	2.1	2.6	3.3	9.2
Tyumen Region	High, second level	-1.4	5.2	0.07	11.4
Leningrad Region	High, second level	-1.2	8.3	0.85	5.0
Sakhalin Region	High, second level	9.4	0.9	3.25	0.00
Belgorod Region	High, second level	-0.1	29.7	1.41	14.7
Kaliningrad Region	High, second level	0.2	7.5	5.15	0.00
Kaluga Region	High, third level	1.4	9.4	0.15	0.00
Magadan Region	High, third level	0.0	1.6	0.42	0.00
Tula Region	High, third level	-0.9	10.3	0.57	6.0
Sverdlovsk Region	High, third level	7.4	3.7	0.42	3.3
Voronezh Region	High, third level	-0.1	23.2	2.17	10.6
Nizhny Novgorod Region	High, third level	0.0	4.9	0.86	5.7
Samara Region	High, third level	2.3	5.9	0.89	12.1
Republic of Bashkortostan	High, third level	-0.4	9.4	0.31	2.0
Krasnodar Territory	High, third level	1.0	16.3	10.5	3.6
Lipetsk Region	High, third level	3.9	20.6	1.30	15.9
Perm Territory	High, third level	-0.2	3.4	0.07	1.6
Khabarovsk Territory	High, third level	-3.3	2.4	1.22	0.0
Regional average		1.1	8.3	2.5	6.3

Source: Own calculations based on data from the Central Bank of Russia.



The second group of regions with an average investment attractiveness (Table 2) has the lowest indicators of investment activity (0.15), although compared to the first group,

the scale of agriculture is slightly higher, but export opportunities have not been fully utilized.

Table 2. Innovation and investment activity of Russian regions with different production and export potential in the group of average investment attractiveness in 2018

Regions of Russia	Investment attractiveness category	Direct investments in Russia as% of gross regional product	Share of gross agricultural product in gross regional product,%	Share of the region in the export of food and agricultural raw materials,%	Share of agricultural organizations implementing technological innovations,%
Novosibirsk Region	Middle, first level	-2.2	6.4	0.72	2.8
Rostov Region	Middle, first level	0.8	17.6	21.6	29.5
Krasnoyarsk Territory	Middle, first level	5.6	3.4	0.17	1.4
Murmansk Region	Middle, first level	-4.3	0.4	2.52	0.0
Kursk Region	Middle, first level	2.4	34.2	0.77	6.3
Astrakhan Region	Middle, first level	0.1	7.9	0.94	0.0
Chelyabinsk Region	Middle, first level	2.3	8.1	0.43	4.0
Kamchatka Territory	Middle, first level	0.0	3.5	3.19	11.1
Primorye Territory	Middle, first level	0.7	4.8	6.07	2.7
Vologda Region	Middle, first level	-5.6	5.0	0.09	16.7
Tomsk Region	Middle, first level	3.7	5.3	0.05	21.7
Republic of Sakha (Yakutia)	Middle, second level	0.8	2.4	0.00	4.8
Irkutsk Region	Middle, second level	-0.2	4.6	0.14	7.1
Amur Region	Middle, second level	1.2	15.8	0.68	5.6
Vladimir Region	Middle, second level	-0.7	6.7	0.56	0.00
Ulyanovsk Region	Middle, second level	0.1	10.9	0.08	6.9
Novgorod Region	Middle, second level	0.0	9.9	0.11	5.6
Udmurtian Republic	Middle, second level	1.5	10.2	0.01	5.1
Yaroslavl Region	Middle, second level	0.3	6.1	0.02	0.00
Arkhangelsk Region	Middle, second level	-1.5	1.3	0.42	5.9
Orenburg Region	Middle, second level	-0.2	10.8	0.45	2.6
Tambov Region	Middle, second level	0.2	38.4	0.68	18.8
Ryazan Region	Middle, second level	0.6	14.9	0.10	10.5
Stavropol Territory	Middle, third level	-2.4	27.4	1.04	0.6
Smolensk Region	Middle, third level	1.4	7.7	0.63	3.2
Republic of Karelia	Middle, third level	-1.7	1.6	0.29	18.2
Penza Region	Middle, third level	0.2	20.6	0.35	8.6
Tver Region	Middle, third level	0.2	8.8	0.08	3.4
Saratov Region	Middle, third level	0.1	18.1	0.97	2.5
Kemerovo Region	Middle, third level	1.9	3.8	1.09	0.00
Republic of Adygeya	Middle, third level	0.1	20.2	0.07	0.00
Volgograd Region	Middle, third level	0.1	15.1	0.55	3.6
Chuvash Republic	Middle, third level	-0.4	12.6	0.10	14.3
Regional average		0.15	11.1	1.4	6.8

Source: Own calculations.

In the third group of regions with moderate investment attractiveness (Table 3), all indicators, with the exception of the share of gross output in gross regional product (17.4%), are lower than in other groups, which also indicates insufficient volumes of foreign direct investment and the need to improve investment image.

A more detailed analysis of the indicators in tables 1-3 makes it possible to assess the level of investment activity of the regions in

comparison with their investment attractiveness [14, 48].

In the group of regions with high investment attractiveness, the Leningrad, Belgorod, Nizhny Novgorod, Tula, Voronezh regions and the Republic of Bashkortostan have low investment activity, despite their significant export and innovation potential. For example, the Belgorod region is the largest agricultural export-oriented region, however, additional investment is required to implement large

investment projects in the field of pig processing, breeding, dairy cattle breeding, and

Table 3. Innovation and investment activity of Russian regions with different production and export potential in the group of moderate investment attractiveness in 2018

Regions of Russia	Investment attractiveness category	Direct investments in Russia as% of gross regional product	Share of gross agricultural product in gross regional product,%	Share of the region in the export of food and agricultural raw materials,%	Share of agricultural organizations implementing technological innovations,%
Orel Region	Moderate, first level	0.6	31.3	0.36	6.3
Omsk Region	Moderate, first level	0.7	13.8	0.66	5.7
Komi Republic	Moderate, first level	1.9	1.5	0.00	16.7
Pskov Region	Moderate, first level	0.1	22.5	0.11	2.5
Bryansk Region	Moderate, first level	0.1	25.9	0.38	2.4
Kostroma Region	Moderate, first level	7.9	8.8	0.01	5.3
Altai Territory	Moderate, first level	0.0	24.0	0.80	5.1
Ivanovo Region	Moderate, first level	0.2	8.1	0.02	9.5
Republic of Mordovia	Moderate, second level	0.0	28.0	0.06	9.6
Kirov Region	Moderate, second level	0.0	12.4	0.04	7.6
Republic of Khakassia	Moderate, second level	2.3	5.9	0.02	0.00
Chechen Republic	Moderate, second level	0.0	14.4	0.01	0.00
Republic of Altai	Moderate, second level	0.0	23.1	0.03	0.00
Republic of Mari El	Moderate, second level	0.0	24.3	0.05	8.7
Jewish Autonomous Region	Moderate, second level	2.6	10.3	0.16	0.00
Trans-Baikal Territory	Moderate, second level	0.0	7.0	0.08	7.7
Republic of Dagestan	Moderate, third level	0.0	19.9	0.10	0.3
Republic of Buryatia	Moderate, third level	0.0	7.2	0.07	0.00
Kurgan Region	Moderate, third level	-0.2	18.5	0.07	3.6
Republic of Ingushetia	Moderate, third level	0.0	18.7	0.00	0.00
Republic of North Ossetia – Alania	Moderate, third level	0.0	18.6	0.17	0.00
Kabardino-Balkarian Republic	Moderate, third level	0.0	33.9	0.07	0.00
Karachayev-Circassian Republic	Moderate, third level	0.0	38.3	0.03	0.00
Republic of Kalmykia	Moderate, third level	0.4	36.0	0.00	0.00
Republic of Tuva	Moderate, third level	-5.9	8.9	0.00	3.9
Regional average		0.43	18.4	0.13	3.8

Source: Own calculations.

In the Kaluga region, despite the high rank of investment attractiveness and production and export potential, it should be noted that there is insufficient investment activity in terms of technological innovation. But in terms of the level of investment activity among the regions of the district, the absolute leader is the Krasnodar Territory: about a third of the district's investments fall on it. The priority spheres of the Krasnodar Territory for the investing countries are: transport and communications, agriculture, fishing and fish

farming, food and processing industries, mechanical engineering, metalworking.

In the group of regions with medium investment attractiveness, the Rostov Region and the Stavropol Territory stand out, which, according to the pilot rating of the Russian Agricultural Bank, are in the top 10 regions with high investment attractiveness in the agricultural sector [40].

The high export potential of the Rostov region is determined by the location of the region as a logistics hub; the priority area of investment

is the development of terminal infrastructure on the Sea of Azov. At the same time, investment activity needs to be stepped up. The Stavropol Territory has great potential for increasing the yield of the main export crops. A further increase in the production of agricultural products will also require the use of additional sources of investment, including foreign direct investment. A similar conclusion applies to the Novosibirsk region, which is experiencing a lack of investment in the creation of production facilities for the production of products with high value added. Most regions of the third group with moderate investment attractiveness have low investment potential, which does not allow to overcome the technological backwardness of agriculture. This trend is most clearly seen in the regions of the North Caucasian Federal District.

The attraction of direct foreign investment in the agricultural sector of Russia remains relevant soon since internal sources of investment do not yet allow solving the problems of structural restructuring of the economy and the formation of export-oriented agriculture [45]. However, at present, foreign investments account for no more than 10% of the total investment in fixed assets in agriculture. Foreign investors are attracted by the scale of the Russian market and the prospects for expanding sales markets. At the same time, non-transparent regulation, peculiarities of the banking system, poorly developed infrastructure, and a shortage of qualified personnel act as significant limiting factors.

The investment strategy should be aimed at a gradual reduction in the volume of foreign loans and an increase in direct investment. The most important conditions for the formation of a favorable investment image are the presence of a package of investment projects; an appropriate legal framework for attracting and efficient use of foreign investment; governmental support.

Spheres of application of foreign capital should be points of economic and innovative growth in

the agricultural sector; effective models of agro-industrial production in the form of high-tech industries (for example, industrial and

innovative entrepreneurship), developed based on interregional and regional projects and programs [43, 44].

One of the ways to stimulate regional investment activity can be providing the constituent entities of the Russian Federation with independence in identifying opportunities to reduce investment barriers; the formation and provision of benefits; the selection of promising areas of economic activity with the participation of foreign capital. For example, in the Far East, a simplified visa regime has been introduced for citizens of the countries of the Asia-Pacific region.

Improvement of the investment guarantee and insurance system at the federal and regional levels, the development of new forms and mechanisms of investment activities are associated with assessing the needs of the agro-industrial complex in foreign investment, identifying sectoral and regional priorities; using competitive approaches in financing investment projects with the participation of foreign investors; coordination of government bodies at the federal and regional levels to attract foreign investment in the agro-industrial complex.

## CONCLUSIONS

Studied foreign and domestic theoretical and methodological approaches to assessing the conditions, opportunities, and limitations of foreign direct investment, macroeconomic, and globalization effects from their use. The stages of the investment dynamics of Russia are determined by the provisions of the theory of the development of the investment path of J.H. Danning and R. Narula. It is concluded that Russia is at the stage of transition from the third to the fourth phase of the investment path, which predetermines the need to use foreign capital in the economy, especially in agriculture and other sectors of the agro-industrial complex. The structure of foreign direct investment by certain types of activity has been investigated; an insignificant share of agriculture in the volume of foreign direct investment with practically zero dynamics has been revealed.

Methodological approaches to the study of the relationship between the scale of foreign direct investment and the investment attractiveness of Russian regions are proposed, taking into account the innovative parameters and export opportunities of agriculture. The selected groups of regions have significant differences in the level of investment activity, innovation profile, and production and export potential of agriculture, which predetermines the specifics of approaches to stimulating the attraction of foreign investment. The analysis of the distribution of foreign direct investment and the revealed strong differentiation of foreign investment flows across the territory of Russia - with a predominance of a high degree of their concentration, predetermines the need to make adjustments to the national investment program with the fixed possibility of redistributing foreign investment to export-oriented regions with an established agricultural specialization. One of the criteria for choosing regions can be the indicator of the share of foreign direct investment in their total volume or a regional product, both in the economy as a whole and in the context of individual types of activity, reflecting the level of investment activity. In the calculations of the authors, it is proposed to differentiate regions by the level of investment activity, depending on the value of the indicator "Direct investment in the Russian Federation as a percentage of the gross regional product." The necessity of increasing the inflow of foreign investment in agriculture to activate the process of innovative structural transformation of the Russian economy has been substantiated.

An empirical assessment of the scale of foreign investment in agriculture has been carried out, measures are proposed to stimulate the attraction of foreign investment in agriculture.

The practical significance of the results of the study is to develop measures to improve investment policy about foreign direct investment.

## 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».

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