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State support for the investment development of agricultural producers in conditions of sanctions restrictions

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Abstract. The article deals with the issues of state support of investment development on the agricultural sector of the Russian economy. Based on the method of statistical groupings in the study, a disproportion in the distribution of state support for agricultural producers was revealed. The analysis of state support measures in agriculture showed that the mechanism of subsidizing the interest rate on investment loans for the purchase of agricultural machinery and equipment is mainly used. At the same time, subsidizing the interest rate on loans remains insufficient to expand the ability of agricultural producers to acquire innovative technology. The study adopted the methodology of Rosstat for the analysis of investment processes. In the sample of agricultural producers were large, medium, and small farms, which allowed identifying the main problems, the solution of which would contribute to the expansion of state support aimed at ensuring the flow of long-term capital in the industry. And on this basis will give stimulus to the investment development of agriculture. The research recommends to move to the use of measures of uncoupled support for investment development of agriculture. This is especially important in the context of economic sanctions, when limited opportunities to attract long-term capital to the industry from foreign markets of financial resources.

1. Introduction

The implementation of measures of state support for the agrarian economy of Russia in accordance with the provisions of the World Trade Organization (WTO), which came into force in our country in 2012, contributed to a change in the policy of stimulating domestic commodity producers of agricultural raw materials and agro-food. And one of the key provisions that is explicitly stated in the agreement on joining this organization is to limit the amount of state support by 2020 to the amount of up to \$5 billion annually. For example, state support measures imply an emphasis on stimulating investment processes, and also use of tools and measures that do not directly or indirectly affect the creation of competitive advantages in the implementation of agro-food and agricultural raw materials in the domestic market of the country. These and other provisions of the agreement on accession to the WTO currently operate in the context of actual economic sanctions against Russia by the countries



of the United States, the European Union, Australia, and some others, which, as is known, is not reflected in any of the agreements of world organizations and not regulated by any provision providing for the possibility of using measures of influence on the member-participants, if they do not violate the prescribed conditions and rules. Nevertheless, the most important direction of the state's participation in the world division of labor is undoubtedly the active position on protecting the interests of the domestic commodity producer in the foreign market using available institutions and tools. Therefore, it is difficult to agree with the opinion of many researchers on the need to revise the provisions of the agreements, including their freezing. In modern conditions, the efforts of competition in the world market of agricultural raw materials and agri-food, the most important direction is to stimulate the inflow of private direct investment in agriculture, including through measures of state support, which would contribute to the process of investment development of the agricultural economy, a more active transition to the use of advanced innovative technologies in agriculture.

2. Methods

This study was conducted on the basis of an analysis of the activities of agricultural producers. The activity of agro holdings of various organizational and legal forms was analyzed for the period 2011-2016: public joint-stock companies, non-public joint-stock companies, and agricultural cooperatives. The methods of groupings, index analysis, and others were used. The sample of farms was conducted by a continuous method irrespective of their financial and economic state at the time of the study. The study adopted the methodology of Rosstat for the analysis of investment processes. In the sample of agricultural producers were large, medium, and small farms, which allowed identifying the main problems, the solution of which would contribute to the expansion of state support aimed at ensuring the flow of long-term capital in the industry. On the basis of a statistical sample of agricultural producers in the number of 71 farms, the results were obtained, indicating the need, in our opinion, to develop new approaches to the process of providing state support for agriculture. Moreover, the development of new directions of measures of state influence on investment processes in agriculture. Unfortunately, the methodology for assessing the impact of economic sanctions on the processes of state support for agricultural business requires improvement. And, in addition, it is an independent research topic. Note only that the rules of the world Trade Organization sanctions regime is imposed only against countries that violate certain provisions of the organization related to the creation of benefits for residents, but not to solve any political problems.

3. Results

3.1. *The transition to state support of investment*

In our opinion, on the contrary, it is necessary to intensify the application of measures aimed at attracting investments, especially since the WTO rules do not cover these areas under restrictions and prohibitions. Therefore, the issue should be put on a different plane, namely, with regard to the choice of incentives for direct investment and the development of instruments of state support for investment development that are adequate to economic conditions. It is necessary to approach differently to such measures as: the use of investment loans and subsidizing their interest rate on loans, on the one hand; stimulation of direct investments in the form of investments in the authorized capital (or purchase of debt obligations, i.e. bonds) and the mechanism of compensatory payments to the investor [14, 15]. If the first mechanism is actively used at the federal and regional levels, which is found in various legal documents [1], the second one has not yet been applied to regulate the inflow of long-term investments into the economy of the agro-industrial complex. The reasons for both objective and subjective nature of this situation are many. Among them, the underdeveloped infrastructure of investment funds in different regions, the assets heterogeneity of the bulk of producers of agricultural raw materials and agri-food, and many others. To the significant subjective factors can be attributed

the fact that, that the end beneficiary from the application of the mechanism for subsidizing investment loans is not an agricultural organization or a peasant (farmer) economy, but a credit organization to which the agricultural commodity producer pays one part of interest rates and the state another part. And regardless of the results of economic and financial-economic activity, the interest for using borrowed funds must be repaid in full, periodically in strictly stipulated terms (as a rule, monthly). This predetermines, in our opinion, the choice by credit institutions and other stakeholders in lobbying just such a mechanism of subsidizing, this is the form of state support for agrarian commodity producers.

In our opinion, the transition to state support for direct investment allows the agricultural commodity producer to pay the investor as a co-owner of the enterprise, or at the end of the financial year or at some other frequency, part of the profit in the form of dividends. But, the absence of state regulation of such a mechanism of compensation or compensation for lost profits or income hinders or nullifies the efforts for its possible application in relation to corporate bonds.

Moreover, within the framework of the state program for supporting the agrarian sector of the economy, such a mechanism is not envisaged by any departmental regulatory acts, and it is not supposed to be used by other existing legislative acts. From our point of view, under the state support for investment development, we should understand the totality of forms, methods, mechanisms, and instruments aimed at stimulating the process of formation, accumulation, distribution, and use of capitalized savings that provide expanded reproduction based on the use of advanced, innovative technologies. This is especially relevant for the sphere of agro-industrial production, which is due to the well-known features inherent in agriculture as a branch of the national economic complex of the country. The instruments of state support for agriculture used by 2020 under the terms of Russia's accession to the WTO should not include direct measures that create competitive advantages for domestic producers of agricultural raw materials and agro-food. But, the rules do not limit the measures that stimulate the demand for long-term capital on the part of agrarian producers, on the one hand, and activate the formation of the necessary institutions of a specialized system of savings and the development of mechanisms for attracting long-term capital to agriculture. As noted in 2007 by Larry Karp [3], public investments in infrastructure or education can improve productivity in agriculture, provide high wages and a sufficiently high return on capital for farmers. It should be noted that the use of such a tool as uncoupled income support, which provides payments to agricultural producers per unit of agricultural land, reflects only one of the elements of the system most characteristic of state support for investment development. Another element that is relatively close to this mechanism is the use of state support in the form of a tool to compensate for direct costs incurred, creation and (or) modernization of the objects of the AIC, which is of limited nature, since the subsidy amount is only 20% (25% for the Far Eastern Federal District) of all direct costs incurred for these purposes. For the construction of breeding and genetic centers for the breeding and transplantation of bovine embryos of a group of black-and-white, fawn and red breeds, compensation of direct incurred costs of 30% of the estimated cost is envisaged (35% for the Far Eastern Federal District) [5]. However, this tool does not answer the question of the source of coverage of the main amount of investments (up to 80%) for the construction and modernization of facilities, especially in conditions of inadequate funds to carry out current production and technological operations for the cultivation and production of agricultural products. The given problem is solved at expansion of subjects of recipients of this grant and on direct investments in the form of investments into the authorized capital or bonds of agricultural commodity producers and their associations.

3.2. The main programmer to stimulate investment activity

If at the level of macroeconomics the benchmark for the evaluation of investment activity is one of the indicators is the rate of capital accumulation, then economic entities of different organizational and legal forms can rely on such indicators as: the proportion of investment to revenue and the share of the investment component in profits. In addition, investment activity may also reflect such an indicator as

undistributed profit, which, as analysis of farms, from a random sample of the joint-stock company having an organizational-legal form, accumulates, and is not distributed among owners and shares holders. An analysis of the performance of 71 agricultural organizations related to joint-stock companies (public and non-public) for the period 2014-2016 showed that having sufficient volumes of net profit, the farms of the general sample did not provide or pay dividends to the owners (owners) of the shares. Only six agricultural organizations in 2016 allocated financial resources to pay dividends to their shareholders. Of these, only one farm (Shevchenko JSC, Krasnodar territory) of the sample set used for this purpose the funds accumulated in undistributed profits in previous periods and part of the net profit of the reporting period. In total for payment of dividends, this economy sent over 513.8 million rubles in 2016.

The analysis of financial and economic activity also revealed another feature of large agricultural organizations, namely a high share of profits from non-agricultural production. In the economy under consideration, the share of agriculture accounted for only 45.12% of the total profit in 2016, amounting to 205.6 million rubles. The accumulated undistributed profit in previous years allowed to send significantly larger amounts of funds to pay dividends. It is alarming that paying such a significant dividend, the economy does not acquire non-current assets, intangible assets, fixed assets, which may affect production efficiency and lag behind competitors in technological modernization, for example.

In our opinion, state support for the agrarian sector of the economy can be effective when it is oriented not only to the quantitative parameters of the implementation of the Doctrine of Food Security of the country and their maintenance, not only to the development of export-oriented sectors of agriculture, but also to technical and technological modernization on a new, an innovative basis that provides for updating the material and technical base, taking into account the advanced achievements of science in the field of robotics, as well as various directions. Of course, the current subprogram "Technical and Technological Modernization of Agro-Industrial Production" provides for a support mechanism in the form of subsidizing a part of the key interest rate on investment loans allocated for the acquisition of high-productivity means of production by agricultural producers. But, insufficient allocations from the consolidated budget for the implementation of the program of technical and technological modernization discourage from the full-scale re-equipment of producers of agricultural raw materials and agro-food with high-performance machinery.

4. Discussion

The total need for investments in agriculture alone in excess of 1.2 trillion rubles was identified [3]. Annually, and today the need for inflation is much higher. Moreover, the amount of agricultural machinery has significantly decreased and continues to decrease, although at a slower pace in recent years.

Currently, in Russia uses a fairly wide range of instruments of state support for investment in agriculture, such as: renewal and reconstruction of on-farm irrigation and drainage systems; investment in public production structures in the livestock sector; capital grants for construction of milk complexes (from 2016), capital grants for construction of greenhouses (from 2016). Different investment projects for the support exist in the Far North region. The most importance programs are interest rate subsidy, including in crop production (from 2013), livestock production (from 2013), meat production (from 2014), milk production (from 2016), agricultural machinery, etc.

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Table 1. Change in the number of agricultural machinery in Russia.

Types of machinery	2016, thou/p.	%, 2016 to 2000	%, 2016 to 2008	%, 2016 to 2012
Tractors	223,4	28,4	50,6	70,1
Cultivators	90,3	32,7	58,9	79,1
Seeders	87,7	26,7	49,1	71,0
Combines:				
Combine harvester	59,3	28,2	55,1	77,4
Maize cleaning	0,7	14,6	46,7	77,8
Fodder for harvesting	13,3	20,8	50,0	70,4
Flax harvesting	0,3	8,6	23,1	42,9
Potato harvesting	2,2	19,3	59,5	78,6
Beet harvesters	2,2	16,2	41,5	71,0
Spreaders of solid mineral fertilizers	15,7	41,2	87,7	95,2
Sprayers and pollinators tractor	22,8	65,9	93,1	98,3
Milking plants and aggregates – total	24,1	25,0	60,6	80,1

Source: Author’s calculation from data: Russian Statistical Yearbook, 2017.

In our opinion, the replacement of higher-performance machinery falls behind, the pace of such a significant reduction in the number of tractors, combines, and other major types of agricultural machinery and equipment. And without changing the policy of state support of investment development to stimulate, first of all, direct investments in agriculture in order to refract the negative tendency to reduce the quantitative parameters of material and technical bases for qualitative changes, a significantly longer period of time will be required. This is indirectly evidenced by the indicators of the level of power and energy availability, the values of which have changed during the comparable period is not so significant

As noted in the World Bank report, state support for investment in agriculture should include such areas as, first of all, investing in broadening productivity gains in priority sectors; second,

strengthening value chains and value-addition in the food industry; third, providing support small and medium farms by reducing the bias of public support towards larger farms [6]. Some researchers (see, for example, Reardon) [7] note that the government had largely dismantled food subsidies in globalization period. They relaxed investment regulation and had reduced tariffs and export taxes. The liberalization of foreign direct investment regulations led to dramatic increases FDI. In the context of economic sanctions, such a policy will reduce the competitiveness of agricultural enterprises.

The above judgment on the need to expand the coverage of the state support program, not only in the form of subsidies for interest rates on loans, but also for direct investments in the form of investments in charter capital or debt obligations, because of the impossibility of compensating the reduced number of used equipment for a full range of agricultural producers, is also confirmed. The remaining high level of depreciation of fixed assets in agriculture was in the period of 2008-2016 decreased by only 0.6% and amounted to 41.6% in the reporting period. Moreover, the renewal of machinery is mainly carried out on farms that are the objects of state support, and this is usually large and medium loss-free agricultural organizations and peasant farms.

The insufficient level of an investment component of the profits of agricultural producers is indirectly confirmed by both the volume and the quantity of innovative products or services that have undergone serious technological changes. According to the official statistics of Rosstat, only 62 new technologies were purchased in the crop sector in 2016, amounting to 5,783.1 million rubles, and it was 358 units in animal husbandry, respectively, amounting to 12,119 million rubles. According to the Rosstat [8], more than 32,000 agricultural organizations supply food and agricultural raw materials to the market. The acquisition of such a small number of new technologies is the result of a virtually limited coverage of the participation of producers in the program of state regulation of investment and innovation processes, on the one hand, and the lack of programs to expand the volumes of uncoupled support in connection with innovative technologies, on the other. As research has shown, there is a significant, more than two-fold decrease in the share of investments in agriculture, which are directed to modernization and reconstruction in the total volume of capital investments in fixed assets. In 2016, the share of investments for modernization was more than 8.3%, but this figure was almost twice as high in 2006. At the same time, the specific weight of investments was reduced to the active part of fixed assets - machines, equipment, cars and other equipment.

One of the most promising areas of state support for the investment development of agro-industrial production is the introduction into practice of the use of a loan price, i.e. the price at which a commodity producer can surrender his products to a specialized institution. The use of a collateral price for basic agricultural products is actively, for example, by US farmers [9]. It should be noted that this measure was also used in 2012, when Russia was admitted to the World Trade Organization, where it assumed the obligation to reduce the amount of state support by 2020 to less than \$5 billion per year. We would like to note another important, in our opinion, aspect. Despite the growth of prices for agricultural products by main groups of agro-food and agricultural raw materials, the increase in net income of US farmers on average per farm, observed in the period 2007-2013 (when it increased from 77 thousand dollars to 135 thousand dollars), was replaced by a negative trend, amounting to only 83 thousand dollars in 2016. Moreover, a decrease in net cash income was observed during the years 2014-2016 per one farmer.

In our opinion, the use of various price regulation instruments in the market economy model does not contradict the requirements of the WTO, especially if these measures are aimed at creating the necessary economic conditions for the accumulation of capital sufficient to implement technical and technological modernization of the production process on an innovative basis. Because they do not create directly competitive advantages to the national commodity producer of agricultural raw materials and food in the market in comparison with products imported from other countries, WTO members. Moreover, it holds if the target or recommended prices for agricultural products are lower than market prices, which cannot create any additional advantages for the domestic commodity producer in comparison with any supplier of food and agricultural raw materials from other countries. But, it could contribute to the desire of the Russian commodity producer to sell products either at

market prices with associated risks or to sell at a collateral price, but with less profitability and sales confidence. The problem in this case is to reach the level of the investment component in the profits of the collateral price.

The economic policy of the state does not currently regulate the distribution of the net profit received between the owners of the enterprise, which often leads to the withdrawal of all of its mass from the company in the form of dividends or accumulated in the form of its (profit) undistributed part. For example, as shown by the analysis of 71 agricultural organizations [10] of different regions selected by random sampling, 3 farms (according to the results of financial and economic activities in 2016) had a negative net asset value and uncovered loss, but they received funds from their investment activities (Table 2), which was associated with the sale of individual assets.

Table 2. Grouping the agricultural organizations by the value of net assets and their individual economic indicators in 2016, thousand rubles.

Grouping by net asset value	Farms in a group, units	Net assets at the beginning of the period	Undistributed profit (uncovered loss) in prior periods	Profit (loss) from sales in 2016	Received funds from investment activities
(-173300)-(-17000)	3	-74 154,3	-175 371,7	-93 564,3	233,7
0-51000	9	19 593,9	78 913,7	18 865,1	5 447,1
53000-99000	10	76 223,1	41 370,6	7 683,7	2 557,7
100000-290000	26	213 379,3	163 172,0	24 763,3	3 895,0
290001-550000	12	431 232,2	387 305,5	53 201,3	9 587,7
550001-936000	6	852 358,2	767 152,3	125 156,0	10 627,8
св. 936000	5	2 776 551,4	2 447 521,2	732 042,0	116 848,0

Source: Author's calculations from the site: testfirm.ru.

The raise of the questions about the changes between the groups in terms of the level of undistributed profits and the receipt of funds from investment activities. For example, having 41.37 million rubles retained earnings on average in the group of up to 99 million rubles the value of net assets on average farm attracted 2.55 million rubles and, in a group where the value of assets and the amount of retained earnings were three times higher, only 3.89 million rubles were received. In other words, there is no correlation between the value of net assets, retained earnings and the receipt of funds from investment activities. Moreover, only farms in the group up to 290 million rubles net assets paid dividends to owners in the amount of 4.3 million rubles and bought shares from owners within the limits of 4.95 million rubles.

From our point of view, there is evidence of imperfection of the economic mechanism for distributing income and responsibility between the owners and management personnel, which leads to unjustified accumulation of resources at the disposal of the management of the economy, responsible for operational management. Of course, the company can and should accumulate resources for the modernization of production. But if the proportions between the accumulation and use of created income at the enterprise level are violated, this entails non-payment of taxes on income from owning capital, reduces the amount of tax revenues to the regional and federal budget and other structural violations already at the macroeconomic level. Transfer of the agrarian economy to "digital rails" also requires the transformation of the state support system for investment development, in which the focus is not only on the use of advanced technologies, but also on private investment in research and development in a variety of areas related to the robotization of production processes in agriculture. This, in turn, requires strengthening the role of the state in regulating the capital market, in stimulating private business to invest in the development of new technologies in the agro-industrial sector of the country

5. Conclusion and recommendation

5.1. In Conclusion

The measures of state support to the agrarian sector of the economy did not have a significant effect on supplying the majority of producers of agricultural raw materials and agro-food with advanced technology, highly productive pedigree cattle. Only in recent years (2013-2016), it was possible to halt the reduction of tractors, combines, and other agricultural machinery, as well as to reduce the rate of decrease in the number of cattle in agricultural organizations. In conditions of economic sanctions, the growth of agricultural production based on the use of advanced technologies in crop production, livestock, food, and processing industries can be implemented with changes in state policy from stimulating lending to the use of measures that promote the inflow of long-term capital, primarily as direct investment. This is especially important in connection with the threat of restricting access to the capital market of the EU, the US, and other countries, for the largest financial and credit institutions in Russia, which are the main creditors of the agricultural sector of the economy.

5.2. Recommendations

In condition of economic sanctions to ensure the investment development of agricultural production, such economic instruments and measures could be used: transforming the investment market system; establishing investment institutions focused on investments in the country's agro-industrial complex; changing the policy of state support in the form of subsidizing the interest rate on loans to encourage the maintenance of returns on direct investment in the agricultural sector; expanding compensation payments to business entities from 40% or more, depending on the area of production.

The efficiency of the agrarian and agro-industrial production of the country is largely determined by the pace of transition to innovative technologies, the use of automated, robotic systems, the use of computer systems, which is not possible for the vast majority of economic entities of the village without the involvement of long-term direct investment. And, the role of state support for the investment development of agro-industrial production has a key, decisive significance. The activation of the processes of investment development of economic entities in the village can be facilitated by using public-private partnership institutions. In addition, the most important prerequisite for stimulating the flow of long-term capital into the agrarian sector is the re-establishment of a rational distribution system for agricultural production in the country, which should be closely linked to the uncoupled income support of agrarian commodity producers rationally using agricultural land based on the recommended norms for compliance with crop rotation. In addition, the most important direction for supporting investment development not only in agriculture but also in the food and processing industries is the involvement in the process of capital inflow into these sectors of enterprises that are not only included in agricultural holdings but also those who are independent participants in the production chains of agricultural raw materials and agro-food, especially those belonging to the small business group.

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