Problem Analysis of Agriculture Development in Russia

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Abstract. Currently, in the Russian Federation, there is increasing attention to the country strategic agricultural sector. Since the time of “perestroika” and further collapse of the USSR in 1985-1991, that resulted in breaking of economic ties between economic entities, the agriculture industry slowed down significantly and was in decline. The article conducted the study of key indicators of current state of agricultural sector in RF. The importance of agriculture in the context of counter-sanctions and import substitution is defined, and the state program for agriculture development and regulation of agricultural markets, raw materials and food is determined. To identify structural problems, the indicators of 1940, 1985, and 2018 were compared. Based on data analysis for these periods, structural problems of agricultural industry were identified, which are the result of underfunding of scientific research in this area. According to current forecasts, the budget surplus of the Russian Federation in 2019 will be about 1.6-1.8% of the total GDP. One of the options for improving the efficiency of agriculture is to use these funds to finance applied research in the field of agriculture. In addition, possible measures are suggested to increase the quality of interaction of agricultural market participants.

1. Introduction
As geopolitical contradictions sharpened due to the slowdown in economic development and even stagnant processes in most capitalist countries, the issues of escaping from post-industrialism and market fundamentalism and ensuring the sufficient level of production in the country have become urgent. Agriculture is one of the most important sectors of the national economy in Russia, firstly, because it provides a significant raw material base for production, and secondly, it provides citizens with food products.

Based on this, Russian authorities developed a package of regulatory frameworks for qualitative and quantitative growth of agricultural sector. Among them there are: the state program for agriculture development and regulation of agricultural products, raw materials and food markets for 2013–2020, approved on July 14, 2012, federal law N 264 of Federal Law “On agriculture development”, the federal scientific and technical agriculture development program for 2017 - 2025. The reason for these protectionist measures was primarily food safety and national security. In addition, business and scientific circles discussed the opportunity for sustainable economic growth through close ties with mechanical engineering, processing and chemical industry [1, p 159], [2, p 40].
2. Research goals and objectives
The relevance of this research is explained by increased attention to strategic agricultural sector throughout the country. Since “perestroika” and further collapse of the USSR in 1985-1991, that resulted in breaking of economic ties between economic entities due to political contradictions, the agricultural industry slowed down significantly and was in decline. The political instability of the second half of the 2000s made a significant contribution to strengthening the position to create a strong industry which is capable to supply domestic market with necessary food products, to increase export and raise the budget at the same time.

Counter-sanctions, restricting the food flow from abroad, set the task to provide the country with agricultural products in a short time. According to the President of the Russian Federation V.V. Putin at the meeting on agricultural development in October 2018 that in recent years, the agro-industrial complex has shown positive dynamics, over five years, agricultural production has grown by more than 20 percent and certainly this is a breakthrough, a leap forward. However, agriculture producers at the meetings with government officials complained about the high tariffs for gas and electricity, the quality and price of imported goods, as well as asked to help with work with retail chains.

The aim of the research is to analyze the objective trends in the development of agricultural sector, industry risks, as well as identifying possible ways to overcome stagnation.

3. The objectives of the research
1. To identify key trends in agriculture development in the Russian Federation in comparison with the Soviet period and prospects for further development;
2. To determine strategic problems of the industry and identify reasons;
3. To identify the ways to eliminate negative trends in agriculture development in the Russian Federation.

4. Agricultural development trends in the Russian Federation
The program for the development of agricultural industry came into force in 2012, for seven years it failed to help domestic authorities ensure sustainable economic development: according to A.G. Aganbegyan, Doctor of Economics the Russian economy is in stagnation. [4, p 60]

The similar economic situation in the current time period is associated with the surplus of RF federal budget. According to the draft federal law “On the Federal Budget for 2019 and the Planning Period 2020 and 2021” published by the Ministry of Finance, the budget surplus in 2019 will amount to 1.932 trillion rubles. [5, p 6]

Russia's GDP for 2018 according to the bulletin “On Current Trends in the Russian Economy” for April 2019 amounted to 103.876 trillion rubles. [6, p 11] At the same time, the Fitch rating agency updated its forecast for GDP growth for 2019 by 1.9%.

Thus, the budget surplus will be about 1.6-1.8% of the total GDP. The indicated funds, when released and injected into the Russian economy in the form of investment loans, would increase the efficiency of agriculture and struggle with the stagnation in the economy. In addition, small external and internal public debt, as well as part of foreign exchange reserves, are hidden reserves to secure agricultural financing. To identify the problems of analyzed industry, it is necessary to define its current condition.

We will compare the condition of agriculture in the Russian Federation to the condition of the Russian Soviet Federative Socialist Republic (RSFSR) - one of the Republics of the USSR that is territorially comparable with the Russian Federation, using quantitative indicators. The indicators in table 1 are given according to the State Committee of the RSFSR for Statistics and the Federal State Statistics Service of the Russian Federation, other ministries and departments [7, pp 5-52], [8, p 190], [9, p 694], [10, p 27]

As time periods for comparing indicators are taken the following ones:
1. 1940 - USSR is eighteen years old, the last year before the start of the Great Patriotic War of 1941-1945;
2. 1985 - USSR is sixty-three years old, the active beginning of "perestroika" strategy.

**Table 1.** Comparison of selected agricultural statistics of the RSFSR and the Russian Federation.

| Indicators                                           | Years          |
|------------------------------------------------------|----------------|
|                                                      | 1940 | 1985 | 2018 |
| Employed in agriculture sector, thousand people.     | 1687 | 2792 | 2005 |
| % of all employed in economy                         | 0,076| 0,063| 0,026|
| Crop area in economy of all categories, thousand hectares | 92065| 76167| 59 842|
| Gross grain harvest, mln. tons                       | 56   | 107  | 135,5|
| Grain yields c / ha                                 | 7,9  | 14,7 | 29,2 |
| Cattle, million heads.                               | 27,8 | 59,6 | 18,4 |
| Pigs, million heads.                                 | 12,1 | 39,9 | 23,1 |
| Sheep and goats, million heads.                      | 51,2 | 63,4 | 24,7 |
| Milk, million tons                                   | 17,8 | 50,2 | 30,2 |
| Eggs, million tons                                   | 6,7  | 48,8 | 44,829|
| Tractors in agriculture (at the end of the year), thousand units | 342,2 | *    | 179,5 |
| Combine harvesters in agriculture (at the end of the year), thousand units | 130,1 | *    | 119,7 |

*No data available. In 1985, 261 thousand tractors and 112 thousand combine harvesters for agriculture were produced.

Based on the data given in the table, we can say that the efficiency in crop production has increased significantly. Despite the decrease in crop area, gross grain harvest and productivity are growing. Among the negative trends there is production of raw milk. Despite import restrictions from the EU, the Russian Federation provides only 75%, the rest is import, mainly from Belarus.

One of the reasons is the complexity and cost of this agriculture tendency. Vegetable production will be paid back in 7–8 years, fruit production in 4–5 years. And dairy complexes will be paid back much longer. According to various evaluations, this takes 10-15 years. Many investors are frightened off by such numbers. [11].

Among the negative aspects there is the level of agriculture mechanization due to the high cost of equipment compared to human labor.

5. **The main structural problems of agricultural industry in the Russian Federation**

While in the Russian scientific and business sphere the transition to the fourth technological mode through the revival of industrial production is widely discussed, the need to create a “knowledge economy” is approved [12, p 72], [13, p 85], [14, p 18], [15, p 488], [16, p 157], [17, p 96], the analyzed industry faces a number of certain problems, given in the table below.
Table 2. The main structural problems of agriculture in the Russian Federation.

| Problem                                                                 | Clarification                                                                                                                                 |
|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Lack of funding for applied research that provide reducing place in the structure of science costs, significantly lagging behind the traditionally leading technical (73.4%) and natural (17.4%) sciences. At the same time, federal budget funds provide 59.6% of research and development costs in the field of agriculture sciences (at the end of 2015), which is higher than the national average (56.5%). Subsidies to subordinate organizations of the Federal Agency of Scientific Organizations made 0.0069 trillion rubles in 2016. These subsidies aim to finance state assignments and provide public services as a part of RF state program “Development of science and technology” for 2013 - 2020 for basic scientific research in the field of agriculture. The business contribution to financing such research and development is steadily declining - from 14.8% in 2002 to 9.4% at the beginning of 2016. [18, p 20] |
| Lack of material and technical equipment of agricultural producers        | According to the data in Table 1, by 2018, all types of agricultural producers will use 179.5 thousand tractors and 119.7 thousand combines for harvesting grain. At the same time, in 1985, the industry of the RSFSR produced 145.4% of tractors and 93.5% of the harvesters available in 2018. (For reference: in 1935, about 113 thousand tractors were produced, which is 63% of the available stocks now) [19, p. 14]. The similar trend is with other indicators as well. Without the sufficient level of agricultural technological equipment, it is impossible to create high-performance jobs. [20, p 366] |

According to the research results, the possible solution of identified problems seems to be using state mechanisms to increase new high technology involvement in dairy production in order to reduce its cost and increase labor productivity.

In addition, the prominent specialist in agricultural economics, academician of the Russian Academy of Sciences I. G. Ushachev, in his speech at the international scientific conference “The Agricultural Sector of Russia in the Context of International Sanctions: Challenges and Answers”, outlined four ways to increase the profitability of agricultural producers, which could give agriculture additional financial resources:

1. limiting the price growth for material agriculture resources;
2. increase a final retail price in the share of agriculture producers;
3. stable prices for agricultural products;
4. state support for agro-industrial complex [21, p 6]

6. Conclusion
The article highlights the relevance of agricultural industry for the state as an element of national security and the driver of economic development, taking into account objective interdependence with the sectors of mechanical engineering, machine tool industry, chemical and oil industries. The key trends in the agriculture development in the Russian Federation are identified, the analysis of main agriculture indicators in comparison with the RSFSR is given. As a result of evaluating data in Table
1, it was concluded that the production of raw milk decreased in comparison with the periods when the USSR collapsed. This indicates available reserves to increase volume and insufficient demand.

Scientific novelty is defined as strategic problems of the industry, their solutions are shown, possible ways to eliminate negative trends in agriculture development in the Russian Federation are identified. According to the research results the solutions of key problems seem to be using the state mechanisms to increase high technology involvement into dairy production in order to reduce its cost. Another area that supposes the involvement of state participation is growth of labor productivity. Market mechanisms have shown the inefficiency of their instruments in Russia, and therefore, state participation is recommended in these areas.

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