Problems and Prospects of Ensuring Food Security in Conditions of Economic Instability: Regional Aspect

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Abstract. Food security has come to the fore in the last decade not only in the importance thereof, but also due to the fact that the government of the Russian Federation has given this problem a certain status and legislative support. The priority direction of the state policy for ensuring food security of the Russian Federation covers a wide range of issues related thereto: economic, social, demographic, environmental, etc. Republic of Bashkortostan is able to provide itself with the basic food products and to comply with the basic conditions of food security. However, in this regard, it is required to pursue a more effective investment policy in the agrarian sector of the economy, implement a radical modernisation of the agro-industrial complex, and significantly increase the average per capita income of the population.

1. Introduction

Food security issues were identified at the World Food Conference in Rome in 1974, where the main principles of food security were indicated: 1) availability of sufficient food products; 2) economic affordability of food products; 3) consumption of the required amount of food in accordance with the norms of the diet; and 4) stable access to quality and safe food.

2. Problem Statement

In the modern period, transformation processes are actively taking place, negatively affecting primarily the social sphere. A series of economic crises aggravates the course thereof. In the 1990s there was a twofold drop in Russia in production volumes, in the 2000s the economy was unable to fully recover, the import dependence of the country and regions was increased, in 2020 the pandemic also contributed to the aggravation of the social and economic situation, the outputs and outcomes whereof are to be assessed. As a result of a series of crises, there is deterioration in the quality of the nutritional structure, the replacement of valuable protein elements with cheap carbohydrate ones, as noted by the Institute of Nutrition of the Russian Academy of Medical Sciences. Its studies clearly show a decrease in trace elements required for human life and health - selenium, iodine, and zinc.

The lack of substances required for the human body in food for a long time has a detrimental effect on health, and therefore on the quality and duration of life. Violation of food security means, ultimately, the failure to realise the fundamental human right - the right to life. Failure to comply with the latter comes into open conflict with Article 20 of the Constitution of the Russian Federation. In this regard, the issue of ensuring the food security of the country as a whole and of a specific constituent entity of the Russian Federation inter alia is particularly acute.
According to experts from the authoritative analytical department of the British magazine Economist, with the support of Dupon, the American transnational company, the level of food security of our country has changed little, if at all, in recent years. Therefore, in 2014, according to the rating of 109 countries according to the Global Food Security Index, which includes 28 indicators, the Russian Federation took 40th place (63.8 points), in 2015 and 2016 - 43rd place (63.8 points). Foreign researchers state that the main negative factors that determine the low value of this index in relation to our country are: insufficient incomes of food consumers, high levels of corruption, and undeveloped infrastructure in rural areas.

3. Research methods
The following general scientific methods and techniques were used during the study: analysis and synthesis, description, methods of comparative analysis, grouping and generalisation.

4. Findings
The works of Ch. Madramootoo [15], J. Doelman, E. Stehfest, A. Tabeau, H. Van Meijl [7], A. Martinovic, S. Oh, H. Lelieveld [16], L Revenko, O. Panteleeva, T. Isachenko [18] are dedicated to the global food security issues. Problems of food security in developing countries and ways to solve them are studied in the works of J. Ashley [2]. The Encyclopaedia of Food Security and Sustainable Development [10] (P. Ferranti, E. Berry, A. Jock) analyses the main problem of sustainable food production in relation to the impact of global changes on food resources. Mark J. Cohen [5] addresses a wide range of issues related to food sustainability and safety, examines the problems related to protecting natural resources and meeting human nutritional needs. The relationship between nutrition and human health is substantiated in the studies of R. Watson, R. Singh, T. Takahashi [23], Sh. Kennedy [13]. The rationale for saving food products is given by H. Galanakis [12]. The ways to ensure food security using modern technologies are outlined by J. Gaffney, J. Bing, and J. Habben [11]. The need for attention to the problems and prospects of food security in the Russian Federation is substantiated in the works of A. Delmond, J. McCluskey, M. Yormirzoev, M. Rogova [6], N. Shagaida, V. Uzun [20], M. Kosolapova [14], S. Onishchenko [17], E. Tsvetnova, R. Romashkina, A. Belugin, O. Cherkasova, and M. Avdeeva [22]. At the regional level, ensuring food security under the conditions of economic instability is considered in the scientific research of A. Boyko, V. Kolesnikov [4], V. Trotsenko [21], I. Fedorenko, E. Pogorelskoy [9], Y. Esina, N. Stepanenkova [8], in the previous works of the authors [19, 24, 25].

As of today, there are a lot of interpretations of the concept of ‘food security’. In 1996, the Rome Declaration on World Food Security was adopted, thereby stating as follows: “...the state of the economy, wherein the population of the country as a whole and each citizen individually is guaranteed access to food, drinking water and other food products of quality, range and the volumes required and sufficient for the physical and social development of the individual, ensuring health and expanded reproduction of the country’s population”. At this world meeting, it was noted that the threat to food security is poverty. Furthermore, food security is facilitated by reliable, stable provision of the country’s population with basic food products of the relevant high quality, including those of our own production, that meet all accepted standards. Food security should be ensured by the state of the country in a comprehensive, systematic manner, having a powerful legislative basis both in the Russian Federation as a whole and in individual regions.

The Republic of Bashkortostan takes the leading positions in many indicators of the development of agricultural production among the regions of Russia. The republic is among the top five constituent entities of the Russian Federation in terms of production of a number of agricultural products, and is referred to the self-sufficient regions. However, despite this, there are problems in Bashkortostan related to food security: undersupply of the population with certain types of products (meat, eggs, vegetables and fruits), deterioration of the food structure, decrease in the technical equipment of agriculture, etc. Let us consider in more details the issues related to food security of the Republic of Bashkortostan.
Table 1. Production of basic agricultural products in the Republic of Bashkortostan (per capita per year; kilogrammes).

|                          | 2010  | 2015  | 2018  |
|--------------------------|-------|-------|-------|
| Grain                    | 192   | 738   | 754   |
| Potatoes                 | 87    | 195   | 210   |
| Vegetables               | 59    | 75    | 77    |
| Livestock and poultry production for slaughter | 69    | 61    | 64    |
| Milk                     | 499   | 419   | 400   |
| Eggs, pcs.               | 294   | 219   | 256   |

We can see a significant improvement in the situation in terms of many indicators, which is related to an increase in investment in the agricultural sector in the region, the consistent implementation of the state and federal programmes for the development of agriculture in the republic. This can be considered one of the most effective levers to ensure food security in the republic.

Important factors in ensuring food security are the economic availability of food, the standard of living of the population, which determines the possibility of consuming food, and the family’s diet. The aforementioned factors will be analysed in the table as follows.

Table 2. Disposable resources of households in the Republic of Bashkortostan.

|                                | 2010    | 2015    | 2018    |
|--------------------------------|---------|---------|---------|
| Total, RUB per person per month| 15110.7 | 22618.6 | 30126.9 |
| In % to the total              |         |         |         |
| Cash income                    | 81.4    | 90.6    | 76.2    |
| In-kind value of income        | 5.8     | 5.4     | 3.7     |
| Amount of the raised funds and spent savings | 12.8 | 4.0 | 20.1 |

The value of in-kind receipts in the structure of disposable resources of households is gradually decreasing, as explained by the migration of the population to cities, the outflow from rural areas, and, accordingly, a decrease in the interest of part of the population in agricultural products of their own production. The amount of the raised funds and savings spent upon the recession in 2015, which may be explained by the wave of the crisis and the decline in real incomes of Russians, increased and reached almost double growth in 2018 compared to 2010. If we compare cash income and borrowed funds, there is an increase in loans, which is a global trend. Therefore, the modern households aim not to provide their own agricultural resources to meet their needs, but to improve their financial situation and the ability to acquire what will be needed.
Table 3. Food Purchase in the Republic of Bashkortostan.

| Item                        | 2010   | 2015   | 2018   |
|-----------------------------|--------|--------|--------|
| Total, RUB per person per month | 2807.4 | 4382.7 | 5197.6 |
| In % to the total           |        |        |        |
| Bread and bread products    | 16.8   | 16.1   | 15.1   |
| Potatoes                    | 1.2    | 1.2    | 0.9    |
| Vegetables and melons       | 5.5    | 5.0    | 5.4    |
| Fruits and berries          | 8.1    | 7.6    | 7.7    |
| Meat and meat products      | 30.7   | 32.1   | 31.5   |
| Fish and fish products      | 5.1    | 5.4    | 5.3    |
| Milk and dairy products     | 12.1   | 13.8   | 15.1   |
| Sugar and confectionery     | 9.2    | 7.5    | 7.0    |
| Eggs                        | 1.3    | 1.4    | 1.3    |
| Vegetable oil and other fats | 2.0   | 2.0    | 1.6    |
| Tea, coffee, non-alcoholic drinks, etc. | 8.0 | 8.0 | 8.4 |

The key indicator reflecting the level of food security in the region is the indicator of achievement of scientifically based norms of food consumption, namely, the subsistence minimum established in the Russian Federation, the recommendations of the Federal State Budgetary Scientific Institution Federal Research Centre for Nutrition and Biotechnology and the World Health Organisation.

Households of the republic, when comparing actual data with scientifically grounded dietary norms, consumed more meat and meat products, fish and fish products, sugar and confectionery, and vegetable oil. At the same time, in relation to the established food standards of the subsistence minimum, the recommendations of the Federal State Budgetary Institution Federal Research Centre of Nutrition and Biotechnology and the WHO, it is required to note the insufficient consumption of potatoes, vegetables, milk and dairy products by households in the region.

Let’s note that the cost of a food basket in the Republic of Bashkortostan for the working-age population is RUB 10,842 for children – RUB 9,959, and for pensioners – RUB 8,259. This is a rather low figure for the Volga Federal District and the Russian Federation as a whole. In the Russian Federation, the average cost of a consumer basket is RUB 11.2 thousand per month.

The issues of import and import substitution play a special role for the Republic of Bashkortostan. In the import commodity structure for the region as a whole, the share of food products and agricultural raw materials in 2014 was insignificant (2.6%). That being said, in 2014 compared to 2013, imports of food products and agricultural raw materials increased from USD 27.4 million to USD 30.8 million, or by 12.4%, including from non-CIS countries - from USD 19.3 million to USD 21.7 million.

The analysis enabled for detecting the following threats to the food security of the Republic of Bashkortostan:

1) insufficient consumption of food by the population;
2) incomplete degree of satisfying the needs for components and energy content of the food ration;
3) maintaining a relatively high import dependence for some types of food products.

The reasons for the persistence of the threat of food dependence are as follows:

- maintaining the disparity in prices for industrial and agricultural products;
• lack of food supply for the majority of the republic’s population in accordance with the scientifically grounded norms;
• reduction of agricultural lands;
• insufficient pace of restoration of the destroyed material and technical base;
• soil fertility decrease;
• low level of utilisation of production facilities.

To solve the problems of food security of the population of the Republic of Bashkortostan, in addition to the state support and stimulation of the development of the agrarian and food sector, and actions to reduce poverty, it is required, in our opinion, to develop and legislate mechanisms for increasing the availability and quality of food, based on the objectives of improving the nation’s health.

5. Conclusions

Being the most important component of the state existence food security is under threat. In the modern period, positive trends are unstable, subject to external influences and threats, and depend on the political and economic situation. Food security puts the human capital development and the territory sustainable development at hazard. The quality and availability of food determines the rate of economic growth.

In the 1990s, the Russian agro-industrial complex found itself in a deep crisis. It was imported food that compensated for the sharp drop in the domestic agricultural production. However, according to some estimates, later the share of imported food on the domestic market exceeded 50%, and the country lost food security. After the 2010s, the agricultural sector was increased in production, resulting in strengthening the country’s food security. In general, the all-Russian tendency to change the situation with food security is typical for the Republic of Bashkortostan.

The Strategic Plan for the Development of the Agro-Industrial Complex of the Republic of Bashkortostan for 2016-2020 is being implemented in the territory of the Republic. It is planned to form a stable raw material base to provide food processing enterprises in the Republic of Bashkortostan. The development of the food and processing industry is provided until 2025, and it is planned to enter new sales markets by 2030.

The analysis enables for finding hereby that the Republic of Bashkortostan is able to provide itself with the basic food products and to comply with the basic conditions of food security. However, in this regard, it is required to pursue a more effective investment policy in the agrarian sector of the economy, implement a radical modernisation of the agro-industrial complex, and significantly increase the average per capita income of the population.

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