

SCTMG 2023**International Scientific Conference «Social and Cultural Transformations in the Context of
Modern Globalism»****THREATS TO FOOD SECURITY AND WAYS TO MINIMIZE
THEM**

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Abstract

Providing the population with all necessary food products in the required quantity is one of the main tasks of the state. In the context of the increased sanction pressure on Russia on the part of the Western countries, the problems of providing the country's population with all necessary foodstuffs and reducing food dependence on imports are of particular importance. Threats to food security are aggravated by the significant differentiation of regions, both in terms of income and living standards and climatic conditions. Some regions of the country are practically unsuitable for farming, while, for example, the regions of the Southern and North Caucasus Federal Districts bear the burden of providing fruit and vegetables to all other regions. Declining real incomes of the population and differentiation of the population by an income level threaten to increase social tensions. Among the main problems in the social sphere, we may note: decline in the level of real incomes, increase in the level of poverty, large concentration of incomes in the hands of a small share of the population, etc. This is due to the high level of inflation, which reached almost 12 per cent in 2022. The solution of these problems requires a longer period of time and substantial support from the state, while sanctions pressure and reduction of imported products may give an additional impetus to the development of domestic production.

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Keywords: Agro-industrial complex, economic development, economic growth, food security, import substitution policy



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1. Introduction

Over the past few years, our country has faced a number of new threats to economic security. This is largely due to the 2019–2021 new coronavirus pandemic and the period of self-isolation that was necessary to prevent its spread. During this period, a large number of organisations were either forced to suspend operations or cease operations altogether. There was a sharp increase in unemployment, incomes were falling, and the government was required to provide support measures for entrepreneurs and the population.

The sanctions pressure on Russia brought by the Western countries, which intensified particularly in early 2022, led to the disruption of logistics chains and an increase in prices for imported goods. The import substitution policy implemented since 2014 has shown positive results, but this is not enough to fully provide the population with domestic goods and components. The economy is particularly negatively affected by the high dependence of budget revenues on oil and gas exports, as well as dependence on imports of foreign goods in IT, machine building, chemical industry, agriculture, etc. In addition, the foreign capital market has become inaccessible, and domestic banks have been disconnected from international systems (Ryzhov et al., 2021).

All the above-mentioned threats have an impact on the social sphere, which is expressed in the reduction of real incomes of the population, the growth of unemployment (especially during the pandemic), which, in turn, leads to social tensions. In addition, the growth of the inflation rate leads to a reduction in consumer opportunities, and the poverty rate increases. This fact shows the close dependence of the elements of economic security. The social sphere turns out to be an engine of economic development, as positive trends in the social sphere lead to an increase in demand for goods and services, which, in turn, has a positive impact on the development of organisations. Creation of new jobs in organisations leads to the growth of employment and income of the population (RIA, 2023).

Today, the domestic economy is unable to cope with emerging threats on its own, which requires the participation of the state. In this direction, various state programmes are developed and implemented, aimed at support of entrepreneurship and population, development of domestic technologies, etc.

2. Problem Statement

Providing the population with food in the necessary volume is one of the main tasks of the state. Increased sanctions pressure caused by the Western countries and restrictions on food imports have led to the emergence of threats to food security. If earlier the deficit of food products was compensated by imports, now the main burden falls to domestic food production. The import substitution policy implemented since 2014 has shown positive results, but there is still a significant dependence on imports. In addition to physical accessibility of food, it is necessary to ensure economic accessibility. The reduction in real incomes of the population and, as a consequence, the reduction in the purchasing power of the population's income leads to a reduction in consumption and increased social tensions. In solving the problem, a comprehensive approach is needed, requiring the participation of the state. Thus, identifying the problems of food security will allow taking further measures to eliminate them and support the economic development of the country.

3. Research Questions

A large number of works by both domestic and foreign scientists are devoted to analysing the problems of food security. According to the Strategy of Economic Security of the Russian Federation for the period until 2030, economic security is understood as "the state of protection of the national economy from external and internal threats. It ensures the economic sovereignty of the country, the unity of its economic space, conditions for the implementation of strategic national priorities of the Russian Federation". The main document regulating the issues of food security is the Doctrine of Food Security of the Russian Federation, approved by the Decree of the President of the Russian Federation. The concept of food security is multifaceted and consists of such elements as economic and physical availability of food. These two aspects imply that food must be sufficient to meet the population's demand for it, and the population must have the ability to purchase food, i.e. an appropriate level of income. Thus, food security is directly related to social security. In this regard, the issues of ensuring the monitoring of food security indicators in terms of food sufficiency and the ability of the population to purchase food in order to timely identify threats and take measures to neutralise them and minimise the consequences of their impact are of particular relevance.

4. Purpose of the Study

The purpose of the work is to analyse the threats to food security in modern conditions and identify ways to minimise them in order to ensure progressive economic development.

5. Research Methods

This study uses the method of analysing the level of food security. Statistical data from official sources, as well as expert opinions on the state of the market, are analysed.

6. Findings

The factors affecting food security can be divided into external and internal. Special attention, in our opinion, should be paid to internal factors due to the increased sanctions pressure on our country and the adopted orientation towards reducing imports and fully meeting the needs of the population with domestically produced products. According to the provisions of the Doctrine, it is advisable to distinguish 2 large groups of factors, namely:

- i. factors affecting the availability of sufficient food;
- ii. factors that determine the availability of food for the population.

Thus, on the one hand there is the problem of food production, and on the other hand, the ability of the population to purchase these products. The first group should include, first of all, the problems of food production, technical equipment of agro-industrial enterprises, sufficiency of qualified personnel in the agro-industrial complex. Today, even under the conditions of the import substitution policy, there is still a dependence on imported machinery and equipment, including agricultural equipment, as well as seeds of grain crops and agricultural livestock. Due to climatic conditions, not all crops can be grown in Russia.

The shortage of personnel and equipment leads to crop losses. As a result, according to various sources, from 20 to 40% of the crop remains in the fields. For example, in 2020, the number of employees in the agro-industrial complex was 284 thousand people, and the deficit of machinery (machinery and equipment) was almost 7%.

One of the main reasons for the shortage of personnel is the low wages of workers in this sector. In general, the wages of workers in agriculture, fishing, hunting and forestry are increasing, but in 2019 and 2021, more than 80% of workers had wages below the national average (60% in 2023). It should also be noted that as of April 2023, 2.2 per cent of workers were paid less than the minimum wage (minimum wage).

The volumes of production of the main types of food products are presented in Table 01. For the purpose of analysis, let us correlate the indicators of actual food production in the country with the target indicators from the Doctrine. During the analysed period, there was an increase in production volumes for almost all types of food products, except for sugar and potatoes. Nevertheless, in 2022 the threshold values approved by the Doctrine are not achieved for such types of food products as meat and meat products, milk and dairy products, fruits and berries, cereals.

Table 1. Indicators of availability of basic foodstuffs in the Russian Federation as a whole (Fedstat, 2023)

Production per capita populations	Fact						Prod. safe. (100 per cent of demand)	Threshold value from the Doctrine, %	Actual in 2022, %
	2017	2018	2019	2020	2021	2022			
Meat and meat products, kg	35.2	35.8	35.4	37.1	37.8	40.6	74	85	54.9
Sugar, kg	45.6	42.7	49.8	39.5	40.4	41.3	40	90	103.3
Milk and dairy products, kg	314.1	358.0	384.0	382.9	381.2	375.3	423	90	88.7
Sunflower oil, kg	14.4	13.5	15.7	17.1	15.2	17.5	13	90	134.6
Potatoes, kg	136.8	157.7	157.0	134.4	123.5	119.3	116	95	102.8
Fruit and berries, kg	19.9	22.8	22.7	22.9	27.1	29.5	91	60	32.4
Vegetables, kg	88.3	91.0	95.6	109.9	104.8	123.9	137	90	90.4
Cereals, kg	768.8	778.8	791.4	763.2	750.1	799.5	1000	95	80.0

Speaking about the economic accessibility, we should highlight such problems as a high level of poverty, declining real incomes of the population, which leads to a reduction in the purchasing power of money and changes in the diet. Table 02 presents data for 2021–2022 on the dynamics of the purchasing power of money. Almost for all types of food products, there is a reduction in volumes, which indicates the growth of their prices, i.e. the growth of nominal incomes of the population does not fully compensate for the effects of inflation.

Table 2. Purchasing Power of Average per Capita Cash Income of the Population per Month (Rosstat, 2023)

Types of food	2021	2022
Beef (except boneless meat)	103.9	97.0
Pork (except boneless meat)	138.0	145.2
Mutton (except boneless meat)	84.8	84.8
Chilled and frozen chickens	238.9	246.5
Frozen fish (except salmon species and fish fillets)	188.6	194.5
Drinking milk, litre	570.4	546.2
Chicken eggs, pieces	5201	5709
Sunflower oil, litre	307.9	331.3
Margarine	246.5	198.7
Butter	60.5	55.3
Granulated sugar	783.8	624.6
Table salt	2854.2	2517.9
Black tea (including bagged tea)	32.8	30.9
Potatoes	949.8	1002.3
Fresh white cabbage	1129.4	942.2
Onion	1244.9	1127.9
Carrots	770.3	894.0
Apples	370.2	386.2
Bread and bakery products made of wheat flour	563.3	545.3
Rye and rye-wheat bread	683.7	662.0
Wheat flour	918.4	859.2
Vermicelli	471.7	427.6
Rice	479.5	417.7
Cereals	652.1	619.7

Citizens purchase more low-price products, often of lower quality, and the share of food of animal origin in the daily diet is reduced, which directly affects the energy value of the daily diet, which, in turn, depends on gender, age, level of physical activity and territory of residence. For example, citizens living in the Far North should consume 15 per cent more calories per day. The population below the poverty line can purchase only food and basic necessities. Here we should also note the significant differentiation of the country's population by income level and, accordingly, by standard of living (Kiselev et al., 2022).

The average consumption norm in Russia is about 2800 kcal, depending on the age, gender and level of physical activity of a citizen. At the same time, only 20% of citizens with the highest incomes consume the norm. As for the population with the lowest incomes, their daily caloric intake does not exceed 2000 kcal, which is more than 30 per cent less than the caloric intake of a normal daily diet. This is largely due to the difference in the consumption of animal products. 10% of citizens with the lowest incomes consume them 2 times less than 10% of citizens with the highest incomes. The same difference can be seen in the consumption of fruit, vegetables, fish and seafood, dairy products, eggs (Rosstat, 2023).

The problem of food availability is directly related to the level of income of the population, which continues to decline in real terms (Table 03). During the analysed period, the level of real incomes of the population of the Russian Federation grew insignificantly. To a greater extent, the growth of the indicator

was influenced by additional payments provided for certain categories of the population during the pandemic of a new coronavirus infection. According to the results of 2022, there is a reduction in the level of real incomes of citizens by an average of 1.5–2%.

Table 3. Real monetary income of the population of the Russian Federation, in % of the corresponding period by federal districts

	2017	2018	2019	2020	2021	2022
Russian Federation	99.8	101.7	101.9	98.6	103.8	98.5
Central Federal District	100.3	102.2	103.0	98.7	105.2	97.8
North-Western Federal District	100.9	103.0	100.8	100.2	105.6	98.6
Southern Federal District	99.9	102.2	100.9	99.2	105.4	100.1
North Caucasus Federal District	100.2	99.2	101.1	97.2	101.3	98.8
Volga Federal District	98.2	99.7	101.2	97.2	101.5	98.5
Urals Federal District	98.8	101.8	101.7	97.8	101.5	100.9
Siberian Federal District	99.8	100.9	100.8	98.9	102.1	98.9
Far Eastern Federal District	99.7	103.3	101.8	98.7	102.1	99.0

The decline in real incomes of the population is caused, first of all, by the high inflation rate. Since 2016, the Bank of Russia has been implementing the inflation targeting policy, according to which the target inflation rate is about 4%, while at the end of 2022 it reached 11.92% (Figure 01).

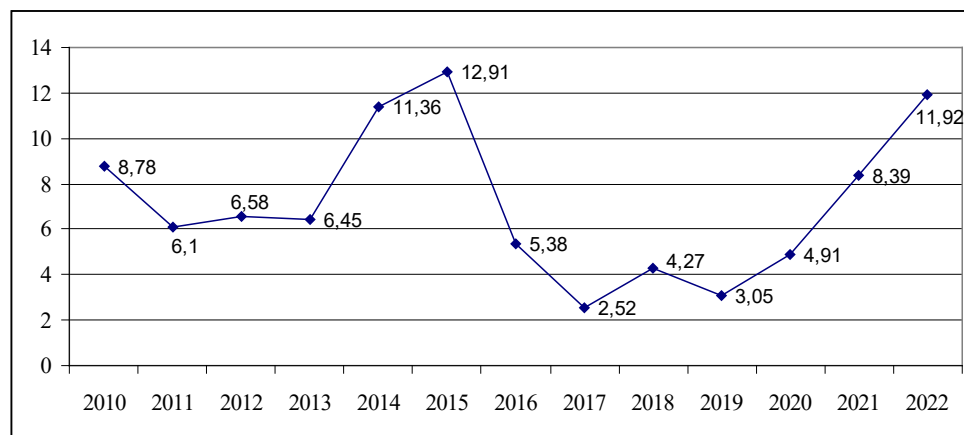


Figure 1. Inflation rate (CBR, 2023)

Figure 02 shows data on the level of the subsistence minimum in Russia for the period of 2017-2023. From 1 January 2023, the subsistence minimum was 14375 roubles, and in 2022 it was 12654 roubles. Thus in Russia, almost 21 million people have an average per capita income of less than 12654 roubles. This indicates that more than 14% of the citizens of our country can only buy food and basic necessities. Durable goods and even more so large purchases are not available to them even in the long term.

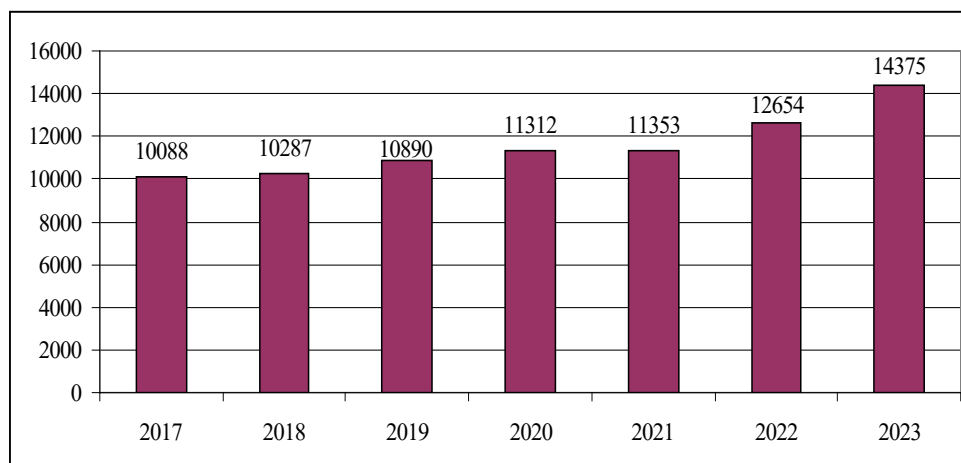


Figure 2. Value of the subsistence minimum in the Russian Federation as a whole and by constituent entities of the Russian Federation, 2023

Table 04 presents data on the distribution of the population by the size of the ratio of cash income and the subsistence minimum in Russia as a whole. According to the data obtained, there is a significant differentiation of the population by income level. Thus, as of the end of 2021, 11 per cent of the population had an income less than or equal to the subsistence minimum. At the same time, almost 13% had an income equal to 6 minimum subsistence levels or more.

Table 4. Distribution of the population by the size of the ratio of cash income to the subsistence minimum in Russia as a whole (Rosstat, 2023)

year	up to 0.5 PM	0.5 PM to 1.0 PM	1.0 PM to 1.5 PM	1.5 PM to 2.0 PM	2.0 PM to 3.0 PM	3.0 PM to 6.0 PM	over 6.0 PM
2017	2.1	10.8	14.6	13.8	21.0	26.7	11.1
2018	2.0	10.5	14.2	13.5	20.8	27.1	11.8
2019	1.9	10.3	14.1	13.5	20.9	27.3	11.9
2020	1.8	10.2	14.3	13.8	21.2	27.3	11.3
2021	1.6	9.4	13.4	13.3	21.1	28.5	12.8

Reduction in the level of real incomes of the population leads to an increase in social tension and crime. In addition, high inflation leading to a reduction in real incomes of the population leads to an increase in demand for consumer lending. According to the data provided by the rating agency RIAreiting, at the beginning of 2022, the average amount of debt per resident in Russia was 328.2 thousand roubles, and the ratio of average per capita debt on loans and annual salary was 55.6%. In general, over the year, the debt per capita increased by 63.2 thousand roubles. The largest amount of debt to banks on average per one resident of the region was recorded in the Yamalo-Nenets Autonomous Okrug at 649.5 thousand roubles, Khanty-Mansiysk Autonomous Okrug – Yugra (593.3 thousand roubles) ranked second, the third was the Republic of Sakha (Yakutia) having 525.4 thousand roubles. As for the ratio of the average per capita amount of debt to the annual salary, the greatest burden fell to the residents of the Republic of Kalmykia (103.5%).

As a result, loans to low-income households are virtually inaccessible (Figure 03). This is due to high requirements of banks to potential borrowers, in particular, to their solvency, availability of a

permanent job and absence of other liabilities. In addition, the high cost of borrowed funds should be noted.

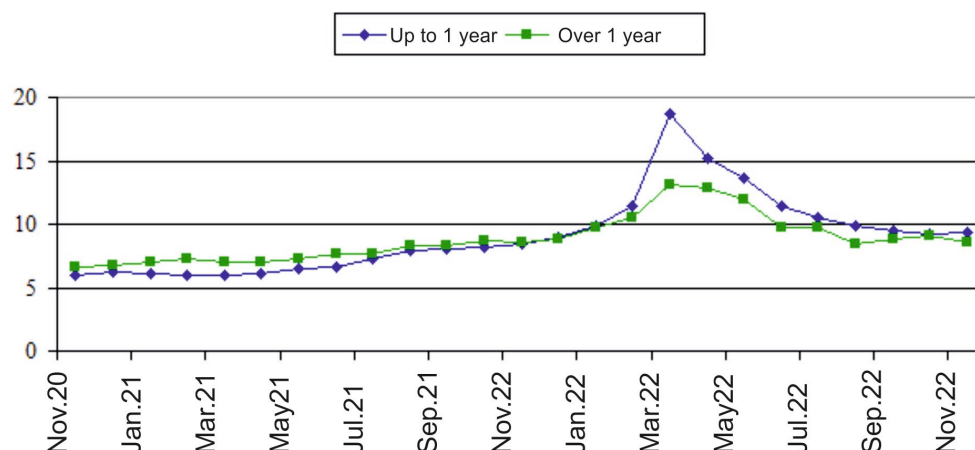


Figure 3. Interest rates and turnover structure on loans granted in roubles (CBR, 2023)

Thus, the main problems in terms of ensuring the physical availability of food are the shortage of agricultural machinery and skilled labour. For this reason, 20 to 40 per cent of the harvest is lost in the fields. A high harvest rate would also have a positive impact on the food availability of the population. The deficit of specialists is caused by low salaries in the sector and the unattractiveness of rural work for young people.

As for the economic accessibility of food for the population, there is a problem of decreasing purchasing power of citizens' monetary incomes as a result of accelerating inflationary processes and significant differentiation of the population by income level. As a result, the consumption of low-price products is increasing, which directly affects the quality of consumed products and their nutritional quality.

7. Conclusion

Thus, ensuring food security plays an important role in supporting the economic development of the country. To date, the main problems are the growth of poverty, reduction in the level of real incomes of the population, high inflation, dependence on imports, shortage of qualified employees in the agro-industrial complex. These problems can lead to a number of threats, in particular, to the growth of social tension and discontent, the growth of the population's borrowing, which as a result can negatively affect the level of economic development of the country.

To date, there is no single approach to assessing the level of food security. At the same time, the most common approach is based on the assessment of food security indicators and their correlation with threshold values. To date, the import substitution policy, launched in 2014, is being actively implemented, which has already demonstrated positive results, but there is still a dependence on imports of machinery and equipment, including agricultural equipment, as well as seeds of various crops and farm animals.

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