International Journal of Economics and Business Administration
Volume VIII, Special Issue 1, 2020

pp. 48-58

The Evaluation of Russia's Economic Security by Selected Indicators during the Sanctions' Period

Submitted 21/05/20, 1st revision 19/06/20, 2nd revision 15/07/20, accepted 30/07/20

M.E. Listopad[1], E.E. Ponomarenko[2], G.I. Smirnova[3]

Abstract:

Purpose: *The study is aimed at modernizing the methodological tools for monitoring and diagnosing national security problems under the influence of significant macroeconomic factors and conditions, one of which is the currently asymmetric economic sanctions against the Russian economy.*
Design/Methodology/Approach: *The authors used a specific method of macroeconomic aggregation that allowed to obtain new scientific results.*
Findings: *The authors made a conclusion about the Russian economy during the period of imposing sanctions and the period when sanctions were in force. The authors confirmed the hypothesis about the growth of adaptability of the national economic system under the sanctions' pressure.*
Practical consequences: *The concepts of optimal, threshold and limit values of indicators are defined in the article. The indicators of economic security of the Russian Federation are summarized by ROSSTAT data in the period from 2013 to 2018.*
Originality/value: *The article evaluates the economic security of the state based on the threshold values of indicators as a unique way to describe the economic concrescences during the sanctions' period.*

Keywords: *Sanctions, Russia, economic security, indicators, threshold value.*

JEL Codes: *F02, F15, F63.*

Paper type: *Research article.*

[1]*D.Sc., in Economics, Associate Professor, Professor of the World Economy Department, Kuban State University, Krasnodar, mlistopad@inbox.ru*
[2]*D.Sc., in Economics, Associate Professor, Professor of the Corporate Economy, Regional and Personal Management Department, Kuban State University, Krasnodar, 2450340@gmail.com*
[3]*Ph.D., in Pedagogics, Moscow Medical College №1, Moscow, smirnova_g_i@mail.ru*

1. Introduction

Many Russian and foreign authors in their articles expressed their opinion about the impact of sanctions on the economic security of the Russian Federation during the period of imposing sanctions and the period when they were in force. These opinions are diverse, and they reflect various aspects of this influence. For example, Russian authors such as Ermakov, Romashova, and Dmitrieva (2019), say that sanctions against Russia have been imposed forever, while the Western community is constantly increasing economic pressure on Russia.

The country is likely to face a decline in foreign investment and recession. Gorbacheva and Frantsuzov (2019) analysed the outflow and inflow of capital in the Russian Federation in the context of the main indicators that record the international movement of capital. The article pays special attention to the impact of the sanctions' regime on the outflow and inflow of capital, as well as the structure of the main indicators of the capital movement. Maglinova (2019) revealed challenges facing modern Russian transnational corporations in the context of economic sanctions. The author pays special attention to Russian TNCs from the oil and gas industry. Gorbunova and Scheglov (2018) turned their gaze towards the sanctions' impact on the country's food security.

Vartanova (2018) notes that financial and economic security should play the main role in science and in the system of national security of Russia, because instability and unpredictability are increasing in modern conditions, as global challenges, risks and threats, civilizational crisis, economic sanctions, and the monetary policy are leading the economy in the phase of stagnation.

Koshkin and Moiseev (2015) investigated the problems of import substitution in the conditions of Western sanctions caused by the events in Ukraine. They note that only the events of recent years have made it possible to change state policy in this area to better, to the real implementation of the developed programs of own production of goods and techniques imported before. Orlova (2014) in her work specified methods, and indicators to evaluate the threshold values affecting Russia's economic security, which should be taken into account in the context of expanding sanctions of Western states. The author suggested scenarios for the restoration and development of economic ties, the use of traditional and new organizational and economic forms of cooperation to strengthen integration processes at the interregional and interstate levels, and the creation of tools to resist Western sanctions.

2. Materials and Methods

Several authors abroad also pay attention to the economic security of Russia. For example, the work by Mandritsa *et al.* (2016) focused on improving the validity and reliability of technical and economic projects in the field of information security. This

team introduced a new category of Budget-Security update. Leschenko and Bolonina (2019) revealed the theoretical approaches to improve the mechanisms for ensuring Russia's foreign economic security in international financial and economic organizations. Ustinova (2019) presented an algorithm for evaluating the state quality of economic space in the aspect of innovative development. Abudjarova (2017) in her article focused on the idea that the sustainable development of the socio-economic system is based on the country as a socio-economic system.

3. Results

The general scheme of actions in the evaluation of the state economic security is shown in Figure 1. In this general scheme of actions, in evaluating the economic security of the country, it is necessary to consider the specifics of this concept. For example, it is extremely difficult to predict the probability of any harm to the economy, and it is impossible to conduct tests of any potential threats on real objects.

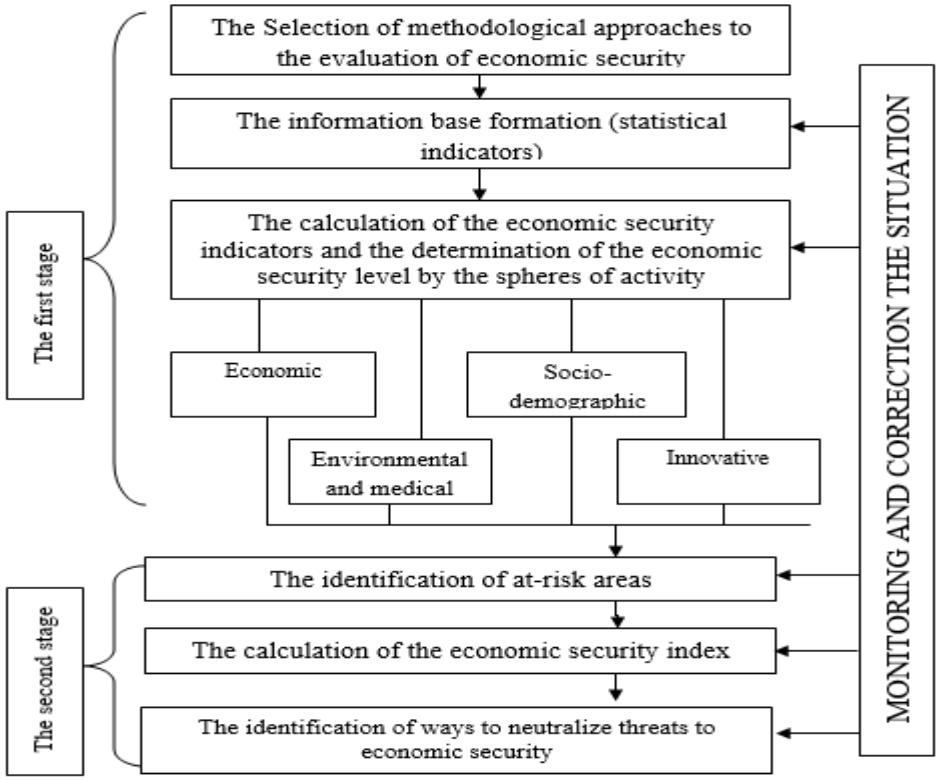
Therefore, we decided that the following algorithm should be used as the main principle of ensuring economic security:

- formulating the main directions of ensuring the state economic security;
- the designation of the economic security indicators list. The indicator system is created using the expert method, and the object's features are considered.

Based on the above system and threshold values, the regular monitoring is organized, the purpose of which is to analyse and evaluate the results and their deviations from the threshold values, the designation of threshold values for economic security indicators. Such calculations can be made if you have reliable statistical information for a long retrospective period. This information makes it possible to correct wrong decisions in time given that:

- the actual value of economic security indicators consists of collecting data on various values of indicators and their summarizing,
- the comparison of calculated values of indicators with their threshold values when the comprehensive evaluation of the threshold values is made, and their analysis is based on the relationship of parameters,
- the definition of external and internal threats to economic security, in other words, the determination of the reasons for the difference between actual and threshold values where the *"weak points"* in the system of the object economic security and the main threats are emerging,
- the development of measures to eliminate threats and reduce negative consequences for the economic security of the state.

Figure 1. *The general scheme of actions for evaluating the economic security of the state (based on Oleinikov, 2005).*



Source: *Authors.*

Russia has developed an Economic Security Strategy. It is designed until 2030. It states that it is necessary for the Russian economy to meet common security requirements, and for this it should have quality criteria. Certain threshold values are set for these criteria. And achieving or non-achieving the established thresholds will indicate the standard of life of the population, the social policy of the country, its military potential and, the ability to overcome any threats.

Talking about economic security criteria, we mean such evaluation of indicator levels that can prove the formation of the stable level of security in the country. Economic security indicators describe economic phenomena in the country and record their values in statistical data.

Let us determine how the indicators work. Their role is to evaluate the economic security of the country, which is expressed in their meaning, i.e., they carry some information about compliance/non-compliance.

Further detailing shows that indicators are divided into blocks, which, in turn, are represented by specific indicators. The importance of the described process is that quantitative parameter values should correspond to the levels of the economic security formation (Kuznetsov and Rudenko, 2015). It is important to evaluate the economic security of the state on the base of the presented values. After all, the correct interpretation of these values will make it possible to prevent in time harmful processes in the state economy. For this purpose, special thresholds for each indicator have been developed. Moreover, their interpretation is different.

Let us define the concept of optimal, threshold and limit values of indicators. The first concept defines such intervals that are most favourable for all the economic processes. The second concept contains quantitative values that show exactly the threshold, the overcoming of which turn into irreversible disastrous consequences. And the last concept is something like a point of no return. In other words, these are quantitative indicators threaten the economy in the country.

Glaziev (1997) investigated this sphere at the macroeconomic level. He described and proved the values of economic security indicators of the state. Data is presented without reference to any state. They can be used to evaluate the economic security of any country.

4. Discussion

We used the main specific method of macroeconomics – macroeconomic aggregation. This method involves collecting all the phenomena and processes as a whole. In other words, aggregated values describe the market situation and its dynamics. Let us calculate the economic security indicators and the values of their thresholds in Table 1.

Table 1. *The economic security indicators (based on Kuznetsov and Rudenko, 2015)*

Indicator	Threshold values
GDP per capita, %	50
Share in industrial production of manufacturing industry, %	70
Share in industrial production of mechanical engineering, %	20
Investment, % of GDP	25
Costs for Research and development activity, % of GDP	2
Share of new types of products in mechanical engineering, %	6
Share of people with incomes below the subsistence minimum, %	7
Life expectancy, number of years	70
Income differentiation, how many times	8
Crime rate (number of crimes per 100 thousand people populations)	5 000
Unemployment rate, %	7
Rate of inflation, %	20
Domestic debt, % of GDP	30

Current demand for servicing domestic debt, % of budget income	25
External debt, % of GDP	25

Source: *Authors.*

Let us turn to ROSSTAT data (GKS, 2020). We denote the values of economic security indicators in the Russian Federation in the period before and during the sanctions (2013-2018). The period was chosen one year before the investigated phenomena in order to see the dynamics that had existed in the economic processes of the country before this period. Unfortunately, it is not possible to provide data based on the end date of sanctions, since there is not even a trend to reducing sanctions, as well as their complete termination. These values are listed in Table 2.

Table 2. *The economic security indicators of the Russian Federation for 2013-2018 (based on GKS, 2020)*

Indicators	Year					
	2013	2014	2015	2016	2017	2018
The volume of GDP, billion RUB	71017	79200	83387	86149	92037,2	103875,8
GDP per capita, RUB	494866	542127	569561	587345	626775	707453
Industrial production, billion RUB	40546	44064	49091	50771	57204	69086
Share in industrial production of the manufacturing industry, billion RUB (%)	26840 (66,2)	29661 (67,3)	33087 (67,3)	33898 (66,7)	37331 (65,3)	43950 (63,6)
Share in industrial production of mechanical engineering, billion RUB (%)	1005 (24,6)	10834 (24,5)	11832 (24,1)	11827 (23,3)	14438 (25,2)	16408 (23,7)
Investments in fixed assets, billion RUB	13450	13903	13897	14749	15967	17595
Investment, % of GDP	18,9	17,5	16,6	17,1	17,3	16,3
Costs for Research and development activity, % of GDP	0,58	0,55	0,53	0,47	0,41	0,40
Share of people with incomes below the subsistence minimum, %	10,8	11,2	13,3	13,3	13,2	12,9
Life expectancy, number of years	70,8	70,9	71,4	71,9	72,7	72,9
Differentiation of income, how many times	16,3	16,0	15,7	15,5	15,3	15,5
Number of registered crimes, thousand units	2206	2191	2388	2160	2058	1992
Crime rate (number of crimes per 100 thousand people populations)	15351	14976	16300	14713	14009	13569
Unemployment rate, %	5,5	5,2	5,6	5,5	5,2	4,8
Rate of inflation, %	6,45	11,36	12,91	5,38	2,52	4,3
The volume of domestic debt, billion RUB.	3634,8	4593,2	4990,5	5611,4	6719,1	9137,5

Domestic debt, % of GDP	8,1	9,3	9,0	9,5	10,6	11,3
External debt, US $ billion	728,9	599,9	518,5	511,7	518,9	490,7
External debt, % of GDP	2,6	3,9	4,5	3,7	4,0	3,6

Source: *Authors.*

Let us analyse Table 2. The volume of GDP per capita has exceeded its threshold value (50%) and it is in the stable range: 68-69%. Gross domestic product (GDP) is a key indicator that characterizes the cost of goods and services produced in the country in all the sectors of the economy and intended for final consumption, accumulation, and export (minus import). GDP per capita is the whole GDP produced by the country, divided by the number of inhabitants. In fact, it is the production efficiency of this GDP, the economic development level of the state. The growth of GDP per capita indicates that there is economic growth in the country, as well as the productivity growth.

The next indicator is investment in fixed assets. Despite the fact that their nominal volume is increasing, the threshold value (25%) as a percentage of GDP has not been reached. In addition, from 2013 to 2015, there was a sharp decline in this indicator, and even after stabilization in 2016-2017, the level of pre-sanction value was not reached. In 2018, this indicator was reduced again.

Investment in fixed assets are the costs in the construction, reconstruction (including the development and modernization) of objects, which, in turn, lead to an increase in their original cost, the purchase of machinery, equipment, vehicles, production and economic inventory, accounting for which is carried out in accordance with the procedure established for accounting investments in non-current assets, investment in intellectual property (since 2013), and cultivated biological resources. Investments in fixed assets also include costs made at the expense of funds of citizens and legal entities attracted by developer organizations for shared construction.

Let consider the share of manufacturing and mechanical engineering in industrial production. Both indicators are within an acceptable range of values from the threshold. Thus, the manufacturing industry has almost reached the threshold (70%); 66.2, 67.3, 67.3, 66.7, 65.3, and 63.6% (from 2013 to 2018) of total industrial production. A small range of values indicates the stability of the industry. Mechanical engineering, in turn, exceeded the threshold level (20%); 24.6, 24.5, 24.1, 23.3, 25.2, and 23.7% (from 2013 to 2018) of industrial production, which allows to make a conclusion about the development of the following industries that make up the mechanical engineering block:

- the metallurgical production,
- manufacturing finished metal goods, except machines and equipment,
- manufacturing computers, electronic and optical products,
- manufacturing electrical equipment,
- manufacturing machines and equipment not included in other groups,

- production of motor vehicles, trailers, and semi-trailers,
- manufacturing other vehicles and equipment.

It is important to consider the indicator "Research and development activity". The statistics include information that describes organizations involved in research and development. These enterprises are divided into several areas of activity: government, business, higher education, and non-profit organizations. At the threshold of 2% of GDP, this indicator is consistently less than almost 4 times, i.e., it is in the range from 0.4 to 0.58%.

An important indicator of economic security is the share of people with incomes below the subsistence minimum. This indicator is based on the information about the stratification of population by average per capita money income. It is a result of their comparison with the subsistence minimum. And this important indicator of economic security was a failure. Even before sanctions, its value was higher than the threshold value, and at the beginning of the investigated period it increased and exceeded the threshold almost twice.

Analysing this indicator, we can note that the opposite indicator (income differentiation) was initially overestimated twice; at the threshold of 8, it was 16.3. Imposing sanctions weakened it only to the value of 15.3. It is also far from the threshold. It describes the level of social stratification. It can be found by the ratio between the average levels of monetary income of 10% of the population with the most exorbitant incomes and 10% of the population with the smallest income. However, the unemployment rate was below the threshold both before and during sanctions. With a threshold of 7%, its maximum value reached 5.6% in 2015. This indicator shows the ratio of the number of unemployed people in a particular age group to the number of workers in that age group. The crime rate is approximately 3 times higher; its threshold value is 5,000, in the study period the indicators range from 14,009 to 16,300 (Table 2). The next sharp increase was in 2015. A registered crime is a socially dangerous act that has been identified and officially registered and which is punishable by criminal law. All the law enforcement bodies conducting criminal prosecution can register such violations.

Life expectancy at birth is the number of years that a person from the generation could live on average, provided that during the life of this generation, age-related mortality will be recorded at the level of the year for which the indicator is calculated. Life expectancy increased from 70.8 years in 2013 to 72.7 years in 2018.

Inflation is the overabundance of the circulation sphere with paper money, which is excessive in comparison with the needs of commodity turnover. A result of this overabundance is rising prices for goods and services, and the falling purchasing power of money.

The inflation rate after sanctions increased from 6.45% to 12.91% in 2015, but in 2017 it fell to 2.52%, although the threshold value of this indicator is 20%, i.e., actually it is 10 times higher than the real indicator. However, in 2018, it almost reached the level of 2016 again. The increase in inflation had happened in mid-2014 to early-2015. The reason was the devaluation of the ruble. This process was based on several reasons. The first of them is the situation in Ukraine in 2014. And as a result of mutually dependent processes, the second reason is the fall in the price of oil and the fall of the Russian monetary unit.

The country's domestic debt is the financial obligation of the state. The domestic debt arises from the use of funds from non-governmental organizations and the population for state programs and orders. The volume of domestic debt at the threshold value of 30%, although it increased from 5.1% to 7.3% at the beginning and the end of the investigated period, still remains much lower than the acceptable indicator. External debt at the 25% threshold did not exceed 2.8% in 2013.

Table 3 presents the summary of the impact of sanctions on the country's economic security on a three-point scale:

– did not affect;
– affected in a negative way;
– affected in a positive way.

***Table 3**. Impact of sanctions on Russian economic security indicators*

Indicator	Impact of sanctions
GDP per capita, RUB (%)	affected in a positive way
Share of manufacturing industry in industrial production, %	did not affect
Share of mechanical engineering in industrial production, %	did not affect
Investment, % of GDP	affected in a negative way
Costs for Research and development activity, % of GDP	did not affect
Share of people with incomes below the subsistence minimum, %	affected in a negative way
Life expectancy, number of years	affected in a positive way
Differentiation of income, how many times	affected in a negative way
Crime rate (number of crimes per 100 thousand people populations)	did not affect, consistently high indicator
Unemployment rate, %	did not affect
Rate of inflation, %	affected in a negative way
Domestic debt, % of GDP	affected in a negative way
External debt, % of GDP	affected in a positive way

***Source:** Authors.*

5. Conclusion

According to our research, the comparison of the real macroeconomic indicators with their threshold values present that the Russian economy during the period of economic sanctions on the territory of our state is satisfactory. But the value of some criteria clearly indicates that their deterioration is due from the effect of economic sanctions to a decrease in investment, an increase in the share of people with incomes below the subsistence minimum, and as a result, a greater differentiation of income, a jump in inflation and an increase in the country's domestic debt.

We can assume that the country's economy has become less sensitive to negative trends and even, on the contrary, has learned to benefit from the current circumstances. However, it is too early to draw definite conclusions, since the sanctions against the Russian Federation have not ceased to apply yet, but on the contrary, their number increases every year.

References:

Abudjarova, M.I. 2017. Criteria for subsystems' sustainability of the socio-economic system. Modern Economy Success, 3, 5-9.

Ermakov, A.R., Romashova, I.B., Dmitrieva, N.Yu. 2019. The influence of the "Crimean" sanctions on the Russian economy and the struggle for their abolition. State adviser, 3(27), 116-127.

GKS. 2020. Federal state statistics service. Available at: http://www.gks.ru.

Glaziev, S.Y. 1997. The Basis of ensuring the economic security of the country: alternative reformation rate. Russian journal, 1(4), 5-6.

Gorbacheva, A.A., Frantsuzov, I.V. 2019. The problem of capital flight from Russia: the impact of the sanction's regime. Modern Economy Success, 2, 57-63.

Gorbunova, A.A., Scheglov, V.Y. 2018. The impact of sanctions on food security of Russia. Economic relations, 3(8), 381-388.

Koshkin, A.P., Moiseev, V.V. 2015. Economic problems and prospects of import substitution in Russia. CITESA, 4(4), 3.

Kuznetsov, D.A., Rudenko, M.N. 2015. System of indicators for evaluating the country's economic security. National interests: priorities and security, 23(308).

Leschenko, Yu.G., Bolonina, S.E. 2019. Theoretical approaches to the improvement of mechanisms to ensure the external economic security of Russia in international financial and economic organizations. Economic relations, 1(9), 11-26.

Listopad, M.E., Smirnova, G.I. 2018. The analysis of the sensitivity of the national economy of Russia to external negative trends. Economics: theory and practice, 4(52).

Maglinova, T.G. 2019. Activities of Russian transnational corporations in the conditions of economic sanctions. Economic relations, 2(9), 589-596.

Mandritsa, I.V., Stefano, S., Mandritsa, O.V., Petrenko, V.I. 2016. Mechanism of economic security relating to market agents on possible leaks of business information. Modern Economy Success, 1, 19-31.

Oleinikov, E.A. 2005. Economic and national security. Moscow, Publishing House "Exam", 768.

Orlova, D.V. 2014. Evaluation of the impact of the break in production links of strategic industries on the economic security of the country under sanctions. State adviser, 4(8), 18-24.

Ustinova, O.E. 2019. The state impact of the economic space in Russia on the innovative development of regions. Economic relations, 2(9), 895-910.

Vartanova, M.L. 2018. Analysis and evaluation of risks and threats to the financial and economic security of the Russian Federation: the impact of economic sanctions on the development of monetary policy. Economic relations, 4(8), 727-740.