



International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at <http://www.econjournals.com>

International Journal of Economics and Financial Issues, 2016, 6(4), 1702-1706.



Assessment of the Level of Economic Security in the Conditions of Uncertainty

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ABSTRACT

The article is devoted to assessing the economic security of the state, projecting the resulting efficiency factor of socio-economic development in general. Assessment of economic security is presented as a set of socio-economic development indicators based on those parameters that reflect the impact of uncertainty on the conditions of economy security of the state. The values of economy security indicators of the Russian Federation are calculated for the period 2009-2014.

Keywords: Economic Security, Assessment of Economic Security, Conditions of Uncertainty

JEL Classifications: D8, F63, O1

1. INTRODUCTION

In modern conditions it has acquired special urgency the problem of ensuring Russia's economic security, the protection of national interests. The scale of the threats and the economic losses inflicted by the economic sanctions of the west, pushing the problem among the highest priorities. The importance of developing and implementing an effective strategy for economic security, corresponding to the national interests of Russia in a geopolitical crisis and the sanctions policy of the leading world powers increases manifold.

In recent years, it became obvious that the problem cannot be solved by the existing arsenal of techniques and tools without taking into account the features of the present crisis, the irrationality of the behavior of the leading market players, price volatility, market volatility and requires scientific understanding and detailed analysis.

2. METHODOLOGICAL FRAMEWORK

To date, a single methodology for assessing the level of economic security does not exist. There are only different views on the

definition of its basic elements (Aretova and Litvinsky, 2013; Afanasyev, 2005; Blinov, 2006; Oleynikov, 2001; Romashchenko, 2003; Skopin, 2005; Starkov et al., 2015). When assessing the economic security an often used approach is based on a comparison of the threshold values of indicators calculated on the basis of international experience and the experience of the studied states with their actual values. However, the composition of the indicators and their meanings by different authors greatly differ. In Russia, one of the typical representatives of this approach are Glazyev (1997a; 1997b) and Senchagov (2007), Senchagov and Mityakov (2011). A comparative analysis of the indicators proposed has shown that of the 19 indicators proposed by Senchagov (2007), Senchagov and Mityakov (2011) and 20 by Glazyev (1997a; 1997b; 2007), 11 are general. The values of the indicators 6 (50%) differ from each other. In addition, it is believed that the thresholds proposed levels are too high, and on this basis it is impossible to assess the real threat to a particular sector of the state economy. Worthy of note also of the work Illarionov (1998), which states that of the 20 indicators proposed by Glazyev (2007) for which there is an international comparative statistics, more than half the number of countries do not meet the proposed threshold values of 14 indicators.

There are other approaches to defining thresholds. For example, Bogdanov (2001) proposes thresholds significantly expand through additional social indicators. It should be noted that Bogdanov (2001) determines thresholds are not absolute values and indexes. All the indicators proposed to them relative.

In most cases, to assess the economic security level using indicators derived from statistical information. This raises the complexity of the selection of indicators and their threshold values that would conduct a comprehensive analysis of the state of the economy. The main disadvantage of all the procedures appears incompatibility of statistical data and the inability to assess the indicators with their thresholds without further study the degree of threat in one direction or another (Ursul and Romanovich, 2004; Ushvitsky and Parahina, 2005).

Assessment of Russia's economic security was based on the definition of each component of the indicator: Indicators of the real economy, financial sphere, the social sphere, the sphere of foreign trade. This system of indicators has an annual periodicity that allows the analysis of trends in the development of the national economy, predict and make the best decisions at strategic planning of socio-economic development of the state.

The sphere of the real economy indicators include:

- Gross domestic product (GDP) - the benchmark system of national accounts;
- Investments in fixed assets - a factor of economic growth and technological development.

Social protection includes the following indicators:

- The unemployment rate according to ILO methodology - identifies a threat to economic security in the social sphere;
- The ratio of per capita income to the living world - reflects the real incomes of the population;
- The ratio of the average pension to the average wage - characterizes the quality of life of the population.

Monetary and financial sector is represented by the following indicators:

- The total amount of foreign exchange reserves - allows you to repay public debt;
- The annual rate of inflation - characterizes the change in prices of a market basket;
- The level of monetization of the economy - allows for the reproduction of low GDP growth rates.

The composition of the foreign economic sphere includes:

- External debt - a threat to the economic security of the state during the growth of this indicator;
- Import and export of goods - characterize the efficiency of foreign trade activities of the state.

Stock indicators are key indicators of the Russian economy, which depends greatly on them. With their help it is possible to evaluate the country's economic security in the face of uncertainty.

Table 1 contains 12 basic economic security indicators. It presents the thresholds of indicators, most of which are substantiated by scientists of the Institute of Economics Academy of Sciences. In addition, the Table 1 shows the most commonly used stock indicators, the analysis of which allows us to trace the dependence of the economy on them.

Analysis of Table 1 shows that the indicators react differently to the economic crisis of 2008-2009, and 2014. Since the social sphere and the sphere of the real economy is characterized by the improvement of the indicator values and there is economic growth. However, indicators of the monetary and financial sphere, the sphere of foreign trade and stock indices deteriorate. Figures 1-5 shows the dynamics of the economic security of Russia indicators.

From the Figures 1-5 it is clear that, despite the growth of GDP by 2014, the level of performance and quality of life deteriorated. Also, inflation is an increase of almost 2-fold in the last year. In addition, the oil price dropped sharply by almost 2 times in 2014 and, accordingly, the exchange rate rose. Russian Foreign economic activity in 2014 decreased.

The analysis of the current state of economic security indicators of Russia for 2009-2014, leads to the conclusion that the domestic economy is now subject to both internal and external threats. Thus indicators do not reveal the overall economic decline in all areas, but their inconsistency causes serious damage to the level of Russia's economic security.

Figure 1: Dynamics of gross domestic product in the Russian Federation for the period 2009-2014

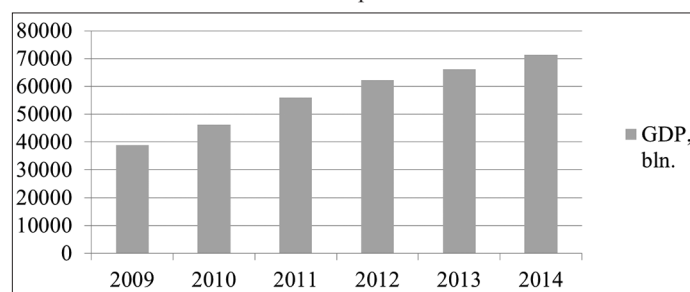


Figure 2: Dynamics of the Russian social indicators for 2009-2014

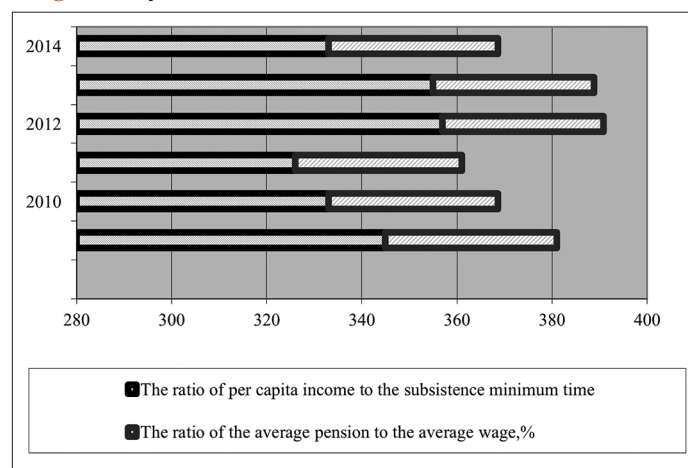
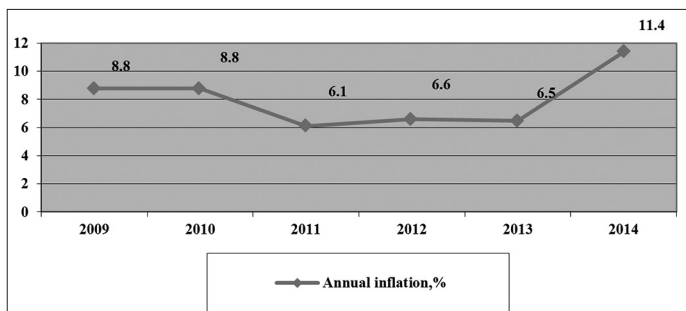
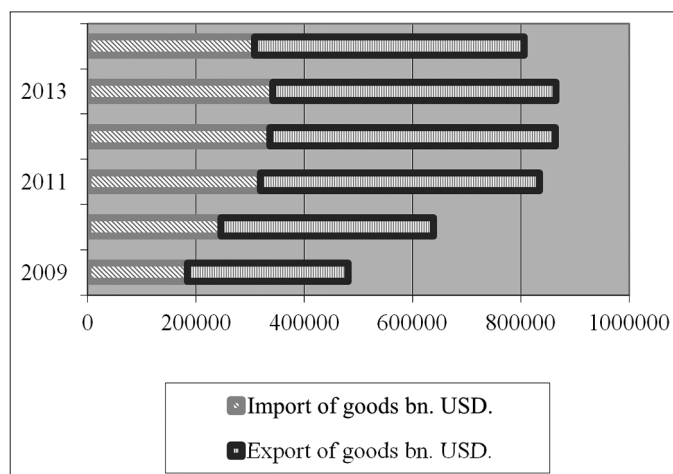


Table 1: Indicators of economic security for the 2009-2014 period and their threshold values

Title of indicator	Threshold	2009	2010	2011	2012	2013	2014*
The sphere of the real economy							
GDP (billion rubles)	It is calculated taking into account the deflator	38807.2	46308.5	55967.2	62176.5	66190.1	71406.4
Investments in fixed assets (billion rubles)	It is calculated taking into account the deflator	7976	9152	11036	12586	13255	-
Social sphere							
Unemployment rate (%)	Less than 4	8.3	7.3	6.5	5.5	5.5	5.2
The ratio of per capita income to the subsistence minimum, rate	3.5 or more	345	333	326	357	355	333
The ratio of the average pension to the average wage (%)	40 or more	36.0	35.7	35.1	33.9	33.9	35.7
Monetary and financial sector							
The total amount of foreign exchange reserves (billion rubles)	Every year restated	22979	35788	44697	39990	51039	45222
The annual rate of inflation (%)	Less than 10.6	8.8	8.8	6.1	6.6	6.5	11.4
The level of monetization of the economy, % at GDP	50 or more	14121.75	17639.75	22247.5	25944.25	29405.05	31757.6
Foreign economic sphere							
Foreign debt, % at GDP	Less than 60	480.5	467.2	488.9	538.9	636.4	728.9
Imports (billion rubles)	It is calculated taking into account the deflator	183924	245680	318555	335771	341337	308026
Export (billion rubles)	It is calculated taking into account the deflator	297155	392674	515409	527434	523275	497763
Stock market indicators							
The price of Brent, USD/barrel		78.65	92.87	108.00	110.35	111.18	57.35
Ruble's exchange rate		30.19	30.48	32.19	30.37	32.73	53.11

Source: Based on: Rosstat (2014). GDP: Gross domestic product

Figure 3: The dynamics of the annual inflation rate in the Russian Federation for 2009-2014**Figure 4:** Dynamics of Russian foreign economic activity indicators for 2009-2014

The used indicators and thresholds in the process of evaluating the economic security of the country reveals the point of increased risk in the various spheres of the economy, which faces the threat by an imbalance occurs and the development of the constituent elements of the economic system, followed by the onset of the crisis. Therefore, to assess the likelihood of the crisis is necessary to carry out the calculation of the complex index of economic security. According to the proposed method of application index, is possible to obtain comparable indicators and the comprehensive index of economic security.

To this end, we propose association of private normalized economic security indicators in a single integrated indicator (I), the application of which means that all indicators are interchangeable and decrease the value of one of the standardized indicators is fully compensated in an integrated assessment of other positive changes in the value of the normalized index:

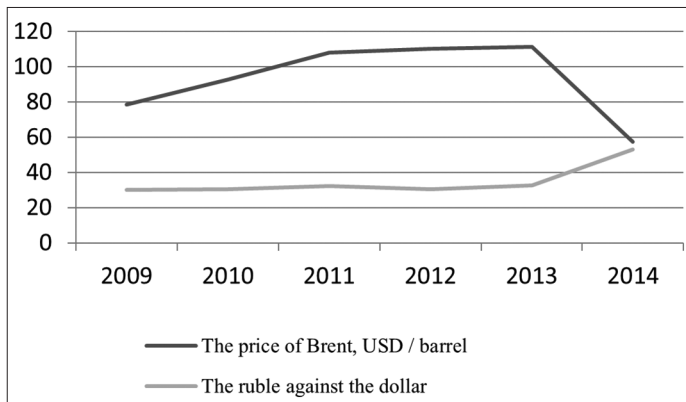
$$I = \frac{\sum I_m}{n} \quad (1)$$

Where,

I_m - The normalized value of the index of economic security of the region;

n - The number of strategic directions of economic analysis of the region's security.

It is necessary to take into account the level of importance of each indicator of economic security, which should be defined as the ratio of actual and threshold values of the indicators. This method

Figure 5: Dynamics of the Russian stock exchange indicators for 2009-2014**Table 2: Interpretation of economic security and the state of the economy**

The level of economic security	The amount of deviation from the mean (%)	State of the economy
Minimum	0-10	The acceptable level of safety
Heightened	10-25	Critical situation
Critical	25-50	Economic crisis
Unallowable	over 50	Economic catastrophe

allows you to move to a single dimensionless quantity, which is very important for a system of proposed indicators with different units of measurement and regulation of conduct with respect to the threshold value, which is taken as one.

Application of the proposed methodology for assessing the economic security level will allow to characterize the socio-economic development of the state as an integrated system with a variety of structural elements and levels of relations between them. The proposed method determines the best available and the level of economic security of the national economy. It also helps to identify threats and dangers affecting the economic system of the state, to develop appropriate measures for their prevention and overcoming.

It should also be noted that the economic security indicators are quantitative deviations of the actual value of the threshold. In connection with this economic security level assessment system should not be "rigidly" tied to a fixed value, but must have a certain tolerance range.

In this quantitative indices of deviation from the threshold values can range from 0% to 100%. Therefore, it is necessary to allocate four levels of economic security (Table 2).

The low level of economic security (the first - from 0% to 10%) reflects the optimal level of safety economy and higher (fourth - 50%) - brings economic losses to the state of the economy.

The calculation of the data in Table 1, we have the value of an integrated level of economic security of Russia:

$$I = \frac{106.020}{13} = 8.16$$

According to the scale of the economic interpretation of the level of security we can say that in 2014 the economy of our state had a minimum level of security, which testifies to its admissibility.

3. CONCLUSION

Powered by article review of the basic economic security indicators revealed substantial differences in the state of the economy. Emerging picture is quite heterogeneous, and on its basis it is possible to allocate the sphere of economic development, are most exposed to the impact of economic sanctions entered. The dynamics of social indicators, the foreign economic sphere and stock indices reflect the overall decline in the economic development of the state, which adversely affects the level of economic security. However, the GDP volume growth prevents a sharp decline in the level of economic security.

Listed in the indicators of economic security and provided the thresholds should be considered in a comprehensive assessment of economic security that affects the stability of the national economy.

Based on a comprehensive assessment of economic security it can be concluded that the level of development of the national economy is acceptable. However, foreign economic and political situation will continue to have a negative impact on the level of economic security of the Russian Federation. In this context, the current policy support the competitiveness of the domestic economy and producers is an undeniable potential for sustainable socio-economic development of Russia and ensuring its economic security.

4. ACKNOWLEDGMENT

The study is sponsored by the Grant President of the Russian Federation in the framework of the research project "Social and economic construction of economic security in an uncertain environment," project number MK-4833.2016. 6.

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