

# Assessment of Factors Shaping Sustainable Development of Kursk Region

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**Keywords:** Sustainable Development, Gross Regional Product, per Capita Income, Inflation, Economic Security, Social Security, Environmental Security, Integrated Sustainable Development Indicator of the Region.

**Abstract:** One of the state policy priorities in ensuring economic security is the sustainable development of regions. The article deals with the problems of sustainable development of the region in modern challenges and threats. The problems of theoretical and methodological substantiation of the main directions, mechanisms, and factors of the region's transition to sustainable economic development were investigated. The main approaches to determining the level of influence of factors on the stability of the regional economic development are substantiated. The methodology for assessing the region's sustainable development based on the calculation of private indicators of sustainable development, such as economic, social, and environmental security, is proposed. The factors that have a dominant influence on the level of sustainable development of Kursk region were identified. On their basis, the necessary conditions for the development of the economy of Kursk region were determined.

## 1 INTRODUCTION

Globalization poses completely new challenges to society in shaping the concept of international security, including economic security of the global space. Decree of the President of the Russian Federation, dated May 13 2017, approved the strategy No. 208 "On the strategy of economic security of the Russian Federation for the period up to 2030". This document reflects challenges and threats to the economic security of the Russian Federation, as well as the goals, main directions, and objectives of state policy in the sphere of economic security. One of the state policy priorities in ensuring economic security is the sustainable development of regions.

Sustainable development characterizes the strength and reliability of all elements, horizontal, vertical, and other links within the system. One sign of sustainability is the long-term stability of development without sharp fluctuations in economic, social, and environmental indicators and the gradual but steady elimination of existing imbalances (Tsiklauri et al, 2019). The main property that


determines the system's safety is the balance of internal and external conditions of its existence, allowing the system to realize the interests of both its present and future development.


Russia's security is made up of each territory's capabilities, so the state of sustainability of socio-economic development of a single subject of the Russian Federation is important (Tsiklauri et al, 2017).


## 2 RESEARCH METHODOLOGY

This article will investigate theoretical and methodological justification of the main directions, mechanisms, and factors for the region's transition to sustainable economic development.

K.V. Kopteva notes in her work that sustainable development combines global, regional, and local aspects of security into a single systemic whole based on planetary imperatives. Its synergetic nature is also manifested in the fact that it integrates at least three spheres of human activity - economic, social, and

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environmental - into a coherent system, creating a systemic effect of sustainable development that did not exist before because it focuses on at least three compatible goals - ensuring economic efficiency, social justice and environmental imperatives (Kopteva, 2008).

The problems of sustainability and economic security of the region should be studied in the same context due to their proximity and ideological orientation to ensure normal, effective development of the region. Sustainable development and security are essential characteristics of the economy as a single system (Galbreath et al, 2020).

### 3 RESEARCH RESULTS

One of the most important indicators of the region's economic development is the gross regional product, which characterizes the process of production of goods and services for final consumption. This indicator should be considered in the dynamics over several years in the region as a whole, per capita and square kilometer.

The dynamics of the gross regional product indicator in current prices, in the region as a whole, per capita, and per square kilometer in the Kursk region for 2015-2020 are presented in Table 1.

Table 1: Analysis of gross regional product indicator of Kursk region for 2015-2020, at the beginning of the year

Interpretation of the indicator	2015	2016	2017	2018	2019	2020
In the region as a whole, bln. rub.	298.3	336.9	362.4	387.3	428.4	496.7
Per capita, thsd rub	266.8	301.2	323.1	346.1	385.6	449.3
Per square kilometer, mln rub	9.94	11.23	12.08	12.91	14.28	15.08
Index of physical volume of gross regional product (in constant prices), in % to the previous year	104.5	102.9	103.9	102.5	102.6	102.7

From 2015 to 2020, the absolute value of the gross regional product in the region increased by 198.4 billion rubles (+66.5%), which is a positive trend.

As of 2020, there are four key sectors: "Agriculture, Forestry, Hunting, Fishing and Fish farming", "Manufacturing industries", "Mining", "Wholesale and retail trade; repair of motor vehicles and motorcycles" in the structure of gross value added in Kursk region.

The development of the socio-economic forecast for Kursk region this year was in a state of uncertainty due to the spread of coronavirus. At the end of 2020, there was a decline in the number of economic indicators. The economy is not expected to recover until 2021. Moreover, this forecast is moderately optimistic.

So, the results of 2020 in the Kursk region show a decrease in GDP by about 3.4%. The Governor has stated that agriculture in the region is the only industry that has shown a profit in the current coronavirus year.

Also, one of the key indicators characterizing the level of economic security of the region is "Investment in fixed capital". It is advisable to analyze this indicator not only in terms of dynamics over a certain time period, but also to determine its share in the total volume of gross regional product in the relevant year.

Table 2 presents the analysis of the indicator "Investment in fixed capital" (in current prices) for Kursk region for 2015-2020.

In total, from 2015 to 2020, the volume of investment in fixed capital in the economy of Kursk region increased twofold, which in absolute terms amounts to +79.5 billion rubles. At the same time, at the end of the analyzed period in the structure of investments in fixed capital by types of economic activity, the priority sectors are "Agriculture, forestry, hunting, fishing and fish farming", "Manufacturing", "Provision with electric energy, gas, and steam; air conditioning".

Table 2: Vertical and horizontal analysis of investment in fixed capital (in current prices) in Kursk region for 2015-2020.

Interpretation of the indicator	2015	2016	2017	2018	2019	2020
Volume of investment in fixed capital, bln. rub.	73.7	93.7	100.9	120.7	142.7	153.2
Growth rate of investment in fixed assets compared to the previous year %	100.07	127.00	107.73	119.66	118.23	107.36
Volume of investment in fixed capital to gross regional product, %	21.88	25.84	26.05	28.18	28.73	29.57

One of the necessary conditions for ensuring sustainable development and economic security of the region is the socio-economic well-being of citizens. The analysis of the values and dynamics of

these indicators reflecting the socio-economic situation of the population of Kursk region in 2015-2020 is presented in Table 3.

Table 3: Analysis of indicators reflecting the socio-economic situation of the population of Kursk region in 2015-2020.

Name of indicator	2015	2016	2017	2018	2019	2020
Average per capita cash income of the population per month, rub.	25330.2	25354.9	26211.8	27275.4	29246.6	29706.4
Average monthly nominal accrued salary of employees of organizations, rub.	23921.4	25326.6	27274.1	29937.1	32709.4	35952.0
Number of population with monetary income below the subsistence minimum from the total population of the region, %	10.4	10.5	10.3	9.9	9.9	11.0
Officially registered unemployment rate, %	1.2	0.97	0.76	0.69	0.61	2.62

Despite positive growth dynamics of average cash income per capita (+11.72% in 2015-2020), average nominal monthly accrued wage (+50.29% in 2015-2020), the number of people with cash income below the minimum subsistence level remains at a rather high level - 11% of the total population in the region as of 2020. There has also been an increase in officially registered unemployment (by 2.2 times in 2020 compared to 2015 and by 4.3 times compared to 2019).

Special attention should be paid to the crime rate in the region. Ensuring a high level of economic security and development of the region should be achieved through economic, social as well as law enforcement measures. Thus, according to the materials of information and analytical notes on the results of operational and service activities of the Ministry of Internal Affairs of Russia in the Kursk region for 2015-2020, we can determine the dynamics of the total number of registered crimes in the region (figure 1).

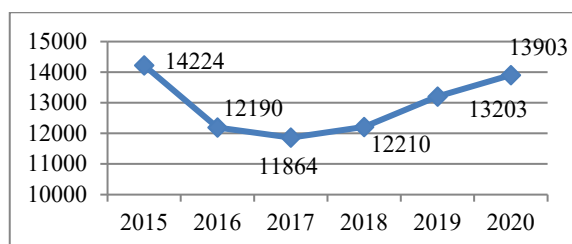


Figure 1: Dynamics of the value of the indicator "number of crimes registered in the territory of Kursk region".

Over the analyzed time interval crime in Kursk region decreased until 2017, then there is a steady trend, so in 2020 the indicator is higher than the level of 2019 by 5.3%, which is a negative trend and a

negative factor in economic security of the region as a whole.

#### 4 DISCUSSION OF RESULTS

The basis for the diagnostics of the region's sustainable development are the methods of indicative analysis, according to which the diagnosis is carried out by a set of indicators of economic, social and environmental security (Kirilchuk et al, 2018). On this basis, the methodology for assessing the sustainable development of the region is presented in Figure 2.

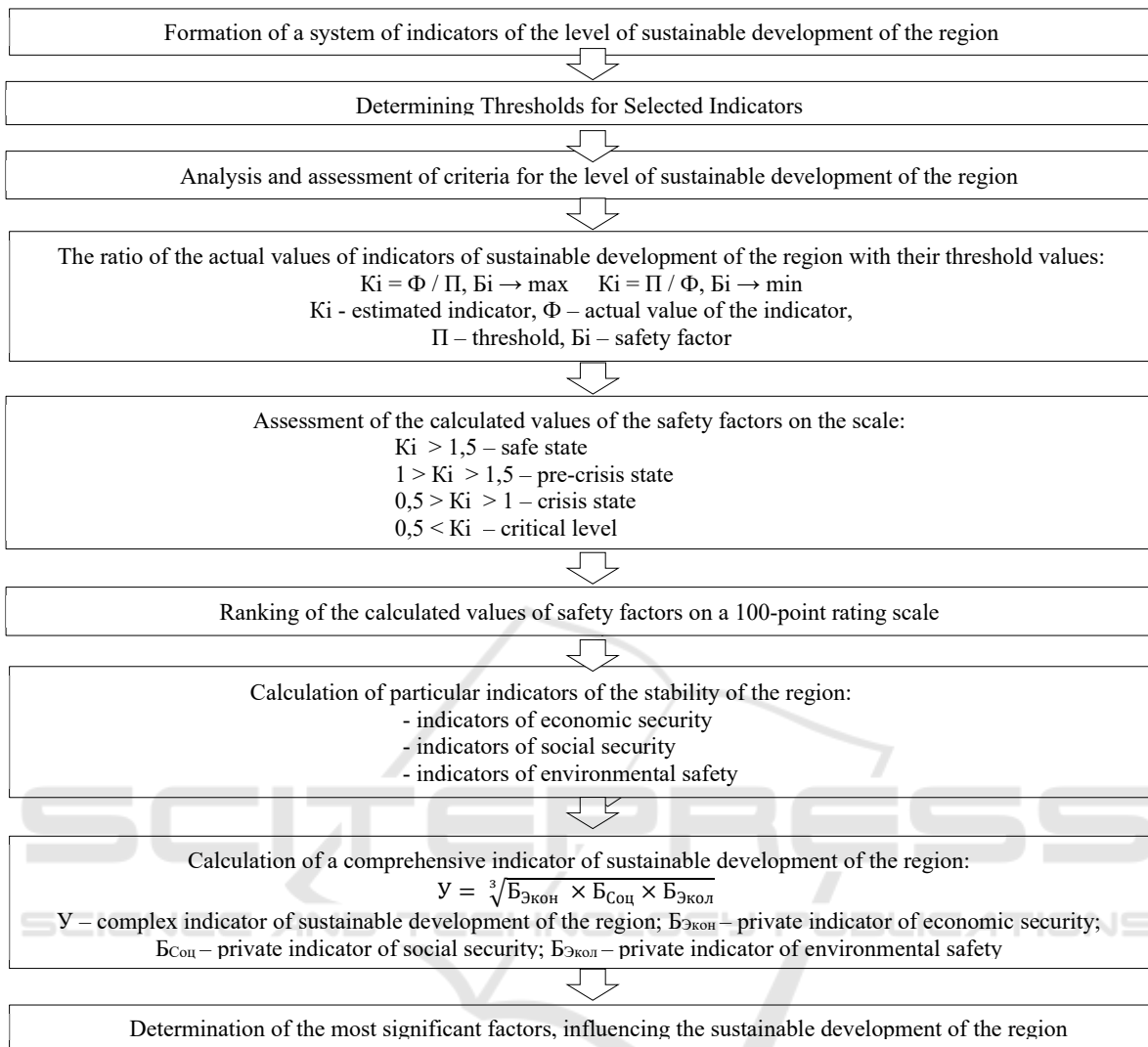


Figure 2: Methodology for assessing the sustainable development of the region.

On the basis of the proposed methodology, the calculation and assessment of particular indicators of sustainable development of Kursk region was carried out, the results of the calculations are shown in Figure 3.

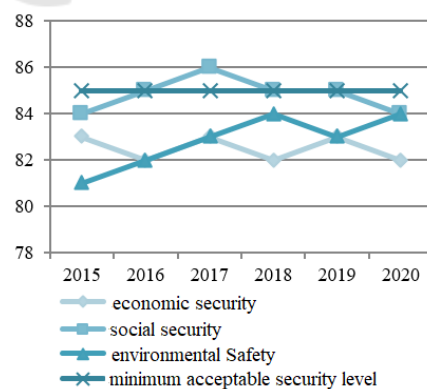


Figure 3: Dynamics of particular indicators of sustainable development of Kursk region.

Figure 3 clearly shows that in Kursk region, the majority of private indicators of sustainable

development during the study period were below the minimum acceptable level, and in 2020 the indicators showed negative dynamics and did not reach the safe level.

The calculated composite indicator of the region's sustainable development (Fig. 4) allows us to determine the dependence of Kursk region development on destabilizing external and internal influences.

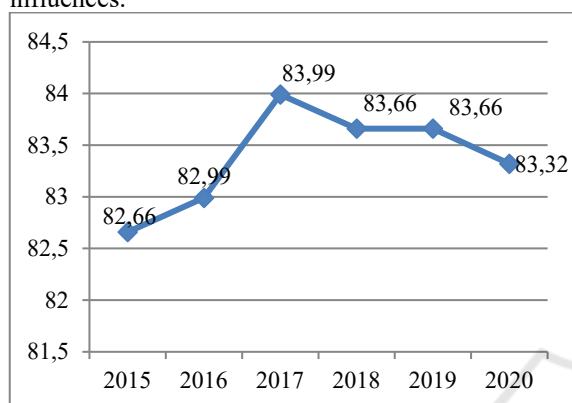


Figure 4: Dynamics of the complex indicator of sustainable development of Kursk region.

Based on the data of Figure 3, we can conclude that the Kursk region is characterized by cyclical changes in the presented indicator, which largely depends on the economic situation in the Russian Federation. There is low resilience to external factors in terms of sustainability.

The use of factor analysis, made it possible to establish the factors that have a dominant influence on the level of sustainable development of Kursk region out of the totality of the analyzed indicators. Such factors include: GRP; investment in fixed capital; average per capita income of the population; population density; generation and use of toxic waste.

The listed main factors will allow us to determine the ways to improve the effectiveness and sustainability of individual economic entities, as an integral part of the unified socio-economic system of Kursk region in the future.

## 5 CONCLUSION

Summarizing the above, we can conclude that the state of economic security of Kursk region is characterized by the growth trend of gross regional product, which is achieved mainly through the effective functioning and development of agriculture, metallurgy and industrial production, which products

are successfully exported to neighboring and distant foreign countries.

Another positive factor is the growth of investment in fixed assets in the economy of Kursk region, which allows to increase the volume and quality of products.

However, the pressing economic and social problems in Kursk region include a high number of people with incomes below the subsistence level - almost every 11th inhabitant of Kursk region belongs to this group.

The level of economic security in Kursk region is below threshold only by one of 6 indicators - it is the unemployment rate, which is 0.3% higher than the permissible norm. In general, the state of economic security of the region can be considered stable.

Thus, the Kursk region was among the regions that ensured sustainable development of industry. Despite the coronavirus pandemic and related restrictions, the industrial production index for 2020 was 101.7%, above the national average.

The necessary conditions for the development of the economy of Kursk region are: increasing the gross regional product; providing the necessary level of the social and economic well-being of the inhabitants; ensuring a low level of crime; stability of the economy of the region as a whole.

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