



## ORIGINAL PAPER



DOI: 10.26794/2220-6469-2024-18-4-69-80  
UDC 311.14(045)  
JEL C23, C43, C51, E32

# Business Activity in the Context of Western Sanctions and Turbulence in Russia's Strategic Development

A.A. Frenkel, B.I. Tikhomirov, A.A. Surkov  
Institute of Economics RAS, Moscow, Russia

## ABSTRACT

The article examines the trends in the development of the Russian economy in the period 2020 – April 2024. For this purpose, the Business Activity Index of the Institute of Economics of the Russian Academy of Sciences (IE RAS Index) is used, the construction of which is based on monthly statistical data on basic areas of the economy. The results obtained are compared with the Index of output of goods and services by basic types of economic activity of Rosstat (Rosstat Index). Authors analyze the impact of business activity on economic growth in 2020–2021 during the coronavirus pandemic, as well as in 2022–2024 during the special military operation in Donbas and Ukraine (SVO). It is noted that the structural restructuring that began in Russia under these conditions has become the main factor in accelerating strategic development. Business activity also had a strong impact on this process. As a result, the authors conclude that the IE RAS Index provides a more accurate estimate of gross domestic product than the Rosstat Index. This is an additional justification for its advantages, which should ensure its wider application both in the analysis of trends in the economic development of the state, and in the forecasting and analytical work of the Ministry of Economic Development of Russia and Rosstat.

**Keywords:** economy; business activity; GDP; investment activity; turbulence; sovereignty power; SVO

**For citation:** Frenkel A.A., Tikhomirov B.I., Surkov A.A. Business activity in the context of western sanctions and turbulence in Russia's strategic development. *The World of New Economy*. 2024;18(4):69-80. DOI: 10.26794/2220-6469-2024-18-4-69-80

## INTRODUCTION

The time period under consideration — from 2020 to April 2024. It is characterised by highly unsteady strategic development of industries and spheres of Russia's national economy, which requires from public administration very selective steps in choosing flexible and sensitive tools to detect and eliminate negative processes that hinder economic growth and social progress.

Business activity becomes the most important indicator and, at the same time, a tool to overcome growing obstacles in order to accelerate strategic development and increase the level of state sovereignty of the country. In the last four years, its dynamics has not been stable enough due to the coronavirus pandemic, as well as unprecedented Western sanctions after the start of the special military operation (SMO).

Business activity, along with evaluation of economic sentiment, become the leading indicator of state economic development and GDP growth [1–3], which makes it even more important for the study.

Exploration and selection of new methods remain relevant to evaluate the level of business activity, based on the use of its quantitative measures, despite a long history of research and many domestic and foreign research works [4].

The most well-known evaluation instruments are the Rosstat Index of Output of Goods and Services by Basic Types of Economic Activity (Rosstat Index), the Economic Activity Aggregate of the Centre for Macroeconomic Analysis and Short-Term Forecasting (CMASTF) and rating assessments of the level of business performance, primarily within the framework of the “Doing Business” rating.

The CMASTF aggregate has advantages over other indexes: it is based on the dynamics' indicators of value added of goods and services created by industries. It also includes fee-based services to the population, which are not included in the Rosstat index.

However, the most complete evaluation of the national economy is covered by the integral index of business activity by the Institute of Economics of the Russian Academy of Sciences (IE RAS Index), with the data provided by ten major industries and spheres of the national economy.

A critical review and analysis of approaches for assessments of business activity in Russia and worldwide were covered in the previous publications of the authors in the articles [5–7], as well as in some other domestic [4, 8, 9] and foreign research works [10–12]. This paper highlights three new circumstances, related primarily to the special military operation.

Firstly, the authors identified and analysed a growing dependence of the quality of gross domestic product (GDP) and gross value added (GVA), which was clearly manifested in 2023 and the first half of 2024 in accelerated business activity of high-tech industries and spheres of the national economy.

Secondly, in 2023 and the first quarter of 2024, in the context of the special military operation, structural transformation and significant changes occurred to change specific weights of high-tech industries and spheres of the national economy, which influenced the level of the IE RAS Index.

And, thirdly, structural transformation and mobilisation of the economy and other spheres of the national economy aimed at advancing the success of the special military operation, especially from the beginning of 2024, contributed to the convergence of turbulence indicators of the dynamics of the business activity indexes of IE RAS and Rosstat, which, in January-April 2024, resulted to the maximum growth of the paired correlation coefficient between them for the entire period under study.

These novel circumstances become an indicator of the advantages of the IE RAS Index compared to the others, primarily over the Rosstat Index.

## METHODOLOGICAL BASIS FOR CALCULATING THE INDEX OF BUSINESS ACTIVITY

The main difference between the Rosstat Index and the IE RAS Index is that the latter takes into account a number of macroeconomic indicators, which specify more accurately the development of the Russian economy.

Within the period from 2020 to April 2024, IE RAS Index takes into account macroeconomic indicators of ten basic industries and spheres of the national economy, which predominantly determine the dynamics of GDP and GVA growth.

It should be noted, that this index is calculated on the basis of their growth rates, rather than on the basis of value figures of indicators, as their dynamics is more stable within the framework of constant revision by Rosstat of average annual prices.

The weights of individual indicators are characterised by their share in the integral index. Thus, the condition is observed, according to which the sum of weights should equal one. Therefore, the weight of each private indicator should be regulated through their sum.

Among many ways of calculating the weights of indicators, the authors of this research work have chosen the method based on calculating the weights of private indicators of business activity by the pair correlation coefficients between them. This approach and its mathematical justification were described in detail in the previous works of the authors [5–7].

The proposed method allows us to more accurately take into account the impact of the real sector of the domestic economy and non-production spheres on the dynamics of the business activity index.

The methodology used to calculate the weights and the IE RAS integral index in the most concise form is presented by the following calculations [6].

Let us assume, that  $r_{ij}$  constitutes the pair correlation coefficient between the private indicators of business activity  $i$  and  $j$  ( $X$ )

( $i, j = 1, 2, \dots, m$ ). If so, then the weights for the index  $W_j$  are determined by the following formula:

$$W_j = \frac{\sum_{j=1}^m |r_{ij}|}{\sum_{i=1}^m \sum_{j=1}^m |r_{ij}|}, \quad (1)$$

where:  $j$  and  $m$  are the serial number of the industry and the number of industries, respectively.

In general, the integral indicator of business activity ( $Y$ ) can be presented as follows:

$$Y = \sum_{j=1}^m X_j W_j, \quad (2)$$

where:  $X_j$  as a private indicator of business activity  $j$ ; and  $m$  is the number of  $X$ .

In the considered practical application of this methodology  $m = 10$ , in accordance with the number of private indicators used in the IE RAS Index.

## BUSINESS ACTIVITIES AND ECONOMIC GROWTH

The Russian economy in the period from 2020 to April 2024 has achieved higher development indicators despite all pessimistic Western and domestic forecasts and even despite the increasing impact of a good deal of negative factors of the collective efforts undertaken by Western states due to the special military operation.

GDP, output of goods and services by basic types of economic activity, real incomes of the society turned out to be all above the forecast values, as well as labour, demographic and other social indicators have improved [13, 14].

The trend is also clearly proved by the dynamics of GDP and GVA, which serves to characterise the quality and level of economic diversification and social progress.

These new trends were apparent most extensively in early 2024, during the period mobilizing of resources, when all factors of acceleration of strategic development by the public adminis-

tration system were pulled together to achieve success in the special military operation.

Thus, in the first quarter of 2024, GDP growth was 5.4 per cent, as compared to 1.6 per cent decline in the first quarter of 2023.<sup>1</sup> The growth rate of output of goods and services by basic types of economic activities reached 5.8 per cent in the first half of 2024. The share of value added in the GVA in the national economy turned out 14.2 per cent in comparison with 11.7 per cent in the first quarter of 2023. In the field of manufacturing industries of the machine-building complex, it increased from 13.0 to 13.6 per cent, and in the field of information and communication reached 2.7 per cent (in the first quarter of 2023–2.5 per cent). It should be noted that, according to Rosstat data<sup>2</sup> in 2023 the situation related to the dynamics of value added in these industries was obviously quite negative. A particularly deep concern was caused by a shortfall in the sector of high-tech industries (extractive, manufacturing, etc.). Therefore, its acceleration, mainly in such industries, as well as in the spheres of digital development, robotics, artificial intelligence, research and development etc., which indicate the level of national technological sovereignty, should become a task of absolute priority for decision-making process of strategic planning development. Exactly these areas provide the absolute maximum of growth of value added in GDP and generate the level of its quality, especially in the circumstances of developing digitalisation of the national economy [15, 16].

Business activity, and especially investment activity [17], are of paramount importance for the resolution of this problem.

The high upward trend of growing investments in fixed assets which was registered by Rosstat in 2023 and the first quarter of 2024 gives a clear evidence of an immediate relationship between the quality of GDP and business activities.

Thus, within the first quarter, the first half of the year, three quarters and the whole year

of 2023, the investments increased from 0.7 per cent to 7.6, 10.0 and 9.8 per cent, respectively, against 6.7 per cent in 2022.<sup>3</sup>

In early 2024 the upward trend maintained. The first quarter of 2024 revealed supplementary reserves and opportunities for the growth of business activities, providing a record figure of 14.5 per cent increase of investments in fixed assets. Taking into account the time lag, the results of this phenomena should become apparent already by 2024–2025, which will obviously have a positive effect on the level and quality of GDP and GVA.

### PRACTICAL ESTIMATION OF THE IE RAS INDEX IN COMPARISON WITH THE ROSSTAT INDEX

In accordance with the stated methodology, this study presents calculations of the weights of industries and spheres of the national economy of Russia (*Table 1*) for the timeframe period starting from 2020 to April 2024 inclusive.

This timeframe period involves all the most turbulent years: pandemic 2020, then post-pandemic 2021 and 2022–2023 of the initial stage of economic mobilisation in response to the initial stage of economic unprecedented sanctions of the collective West states [18] followed up by the period of large-scale structural adjustment of the national economy in January–April 2024 as the final phase of the special military operation started.

This time is generally distinguished by a higher turbulence in the dynamics of macro-indicators, which was caused by specific conditions of socio-economic development [5, 6] compared to the previously studied by the authors from January 2016 to June 2021 and from January 2018 to July 2022.

The analysis of turbulence of the weights of industries and spheres of the national economy is of paramount importance for making prognosis of changes in the indicators of business activity in such extreme conditions.

<sup>1</sup> URL: <https://rosstat.gov.ru/storage/mediabank/osn-06-2024.pdf>

<sup>2</sup> URL: <https://rosstat.gov.ru/storage/mediabank/osn-12-2023.pdf>

<sup>3</sup> URL: <https://rosstat.gov.ru/storage/mediabank/osn-02-2024.pdf>

Table

**Weights of the IE RAS Index for Basic Spheres of the National Economy**

No. of indicator	Macroindicator	Weights of the industries
		2020 – April 2024
1	Volume of industrial output	0.147
2	Volume of agricultural output	0.005
3	Volume of construction operations	0.105
4	Transportation turnover	0.122
5	Passenger transportation turnover	0.139
6	Retail trade turnover	0.133
7	Wholesale trade turnover	0.094
8	Volume of paid services to the population	0.155
9	M2	0.004
10	Total accounts payable of entities	0.096

Source: compiled by the authors.

**Sectoral turbulence**

In the given period under consideration — from 2020 to April 2024 — the first three positions of the ten top-list take the sphere of paid services to the population, industry and transport passenger turnover in terms of variability of dynamics and, accordingly, the weights of the level of business activity.

Retail trade takes the fourth position, which is quite close to the previous trio. It indicates a high instability in the dynamics of development, primarily in the social sphere and significant structural changes in industry. At this stage these industries are of remarkably highest turbulence of dynamics with specific weights of 0.155, 0.147, 0.139 and 0.133 respectively (*Table 1*).

Moreover, the indicated weights of the industries significantly exceed the similar indicators of the other previously studied periods [5, 6].

Thus, these industries also maintained the first four positions in the same sequence in the top-list from January 2016 to June 2021, only with lower indicated weights: 0.127, 0.121, 0.118 and 0.116, respectively [6].

From January 2018 to July 2022, the composition changed among the industries ranked in

the first four positions in terms of turbulence [5]. Passenger transportation turnover took the 1st position with a weight of 0.148, while industrial production, paid services to the population and transport freight turnover took the 2nd, 3rd and 4th positions, respectively, with weights of 0.143, 0.130 and 0.127.

It should be especially emphasised that industry, as the most advanced high-tech sector, has consistently maintained the second place in terms of the level of influence on the IE RAS Index within all these three periods under consideration.

The new stage of the industry's re-structure launched in 2024 aimed at increasing the share of value added in the national economy and ensuring technological sovereignty, should be accomplished by means of a more significant change in business activity in all its constituent national economic complexes: machine-building, fuel and energy, chemical, forestry etc.

New national projects and state programmes are developed and implemented within the framework of the budget process for the period of 2025–2027 aiming to accomplish these objectives.

From 2020 to April 2024, rather similar weighting coefficients were detected in the

sphere of transport cargo turnover (0.122), construction operations (0.105), total accounts payables and other debts of entities (0.096) and wholesale trade turnover (0.094).

However, the most interesting part of the research work is the comparison of the weights of industries with minimal variability in the dynamics of macroindicators.

Thus, from 2020 to April 2024, the minimum variability was found in the monetary aggregate M2, which took the last, 10th position in the top-ten list with a weight of 0.004, and agricultural production in the 9th position, with a slight difference of the weight – 0.005.

Besides, in the time periods studied earlier, they also occupied the two last positions in terms of turbulence. However, from January 2018 to July 2022, the maximum stability of agricultural production dynamics was observed with a record low turbulence level of 0.002 [5].

In the period from 2016 to June 2021, agriculture also took the 10th position in terms of the turbulence rating with the coefficient of influence on the IE RAS Index of 0.041, surpassing the monetary aggregate M2 with a weight of 0.068 [6].

The indicated minimum values of the weights of industries could be attributed to the most stable dynamics of these macroindicators both in the periods of exacerbation of the pandemic and tightening regime of Western sanctions and in the period of economic growth recovery during the special military operation.

Thus, we can conclude that the dynamics of the weights of high-tech industries and the observed trend of increasing their turbulence confirm the growth of business activities aimed at increasing the quality and the level of diversification of the national economy in the period from 2020 to April 2024.

This conclusion is also confirmed by research work and studies, which compared regional business activities. Usually, the financial and economic centres of highly developed regions and developed regions with diversified economies show high volatility in business activities, while the less developed agrarian and raw materials regions show low volatility [19].

#### Turbulence in business activity indexes

The calculated weights of industries in the period from 2020 to April 2024 (*Table 1*) gener-

*Table 2*

**Dynamics of the IE RAS and Rosstat indexes in the period of 2020 – April 2024  
(in per cent of the previous year)**

Month & Year	IE RAS index	Rosstat index	Divergence between the indexes of IE RAS and Rosstat
01.20	103.0	101.8	1.2
02.20	104.0	104.7	-0.7
03.20	98.2	102.3	-4.1
04.20	77.3	91.1	-13.8
05.20	77.4	90.8	-13.4
06.20	76.1	93.5	-17.4
07.20	88.3	95.8	-7.5
08.20	91.9	97.1	-5.2
09.20	94.5	98.2	-3.7
10.20	93.1	95.5	-2.4
11.20	93.2	98.8	-5.6
12.20	95.1	102.4	-7.3
<b>Annual average indication</b>	<b>91.0</b>	<b>97.7</b>	<b>-6.7</b>

Continued Table 2

Month & Year	IE RAS index	Rosstat index	Divergence between the indexes of IE RAS and Rosstat
01.21	95.1	98.5	-3.4
02.21	95.7	97.9	-2.2
03.21	103.3	103.4	-0.1
04.21	129.3	113.7	15.6
05.21	125.9	114.3	11.6
06.21	120.6	111.3	9.3
07.21	120.5	106.2	14.3
08.21	113.4	104.0	9.4
09.21	110.7	104.1	6.6
10.21	113.0	106.0	7.0
11.21	114.3	107.0	7.3
12.21	112.7	105.6	7.1
<b>Annual average indication</b>	<b>112.9</b>	<b>106.0</b>	<b>6.9</b>
01.22	112.7	108.5	4.2
02.22	110.0	106.0	4.0
03.22	104.7	102.7	2.0
04.22	99.0	97.6	1.4
05.22	98.2	97.2	1.0
06.22	97.1	96.2	0.9
07.22	98.4	98.3	0.1
08.22	99.2	99.8	-0.6
09.22	96.9	97.7	-0.8
10.22	96.7	98.1	-1.4
11.22	98.9	98.8	0.1
12.22	99.2	97.4	1.8
<b>Annual average indication</b>	<b>100.9</b>	<b>99.9</b>	<b>1.0</b>
01.23	100.6	96.8	3.8
02.23	102.4	97.5	4.9
03.23	104.8	100.0	4.8
04.23	108.9	105.0	3.9
05.23	110.3	108.5	1.8
06.23	109.9	108.5	1.4
07.23	109.8	107.8	2.0
08.23	109.8	107.7	2.1
09.23	109.7	108.8	0.9
10.23	110.3	107.6	2.7
11.23	109.5	105.3	4.2
12.23	108.2	105.2	3.0
<b>Annual average indication</b>	<b>107.9</b>	<b>104.9</b>	<b>3.0</b>
01.24	107.6	105.6	2.0
02.24	109.9	109.7	0.2
03.24	107.1	105.0	2.1
04.24	107.3	105.5	1.8
<b>Average indication for 4 months</b>	<b>107.9</b>	<b>106.5</b>	<b>1.4</b>

Source: Rosstat, compiled by the authors.

ate the basis to determine the IE RAS Index and comparing its dynamics with the dynamics of the Rosstat Index (*Table 2*).

Analyzing the dynamics of IE RAS and Rosstat indexes for this period, it well indicates that, despite the convergence of trends, nevertheless, the rates of growth and decline in business activity 'change their positions', which is particularly clear in the graph (see *Figure*). For example, in the recession periods (in the years of 2020 and 2022) the IE RAS Index had a dramatic drop, meanwhile in the periods of revival of business activity (from the 3rd quarter of 2021 and from the beginning of 2023 and 2024) it significantly outstrips the growth of the Rosstat Index.

It is necessary to point out, that the numerical values of the level of business activity indexes and their gaps do not always converge, although they are registered for the same calendar years and months in the periods considered.

This occurs mainly due to the fact, that Rosstat introduces adjustments to make more clarifications for estimates to statistical data on the results of the development of industries, including those involved in the definition of indexes.

Comparative analysis of both dynamics for the period from 2020 to April 2024 indicates, that the maximum average annual decline in the indices of IE RAS and Rosstat was registered in the pandemic year of 2020:  $-9.0$  and  $-2.3$  per cent, respectively.

This conclusion is also verified by the results of index calculations for the periods from 2016 to June 2021 and from 2018 to July 2022.

In these periods, it was established that average annual weights of the drop of the IE RAS Index were nearly converging:  $-8.9$  and  $-8.5$  per cent, respectively [5, 6], with the Rosstat Index falling by  $-2.3$  per cent.

It should be pointed out, that the decline in business activity in 2020 started in March:  $-1.8$  per cent, whereas, according to Rosstat, it occurred in April:  $-8.9$  per cent. However, according to the IE RAS Index, the decline in business activity in April was already  $-22.7$  per

cent, and the downward trend in both indexes maintained its decrease until December 2020.

The time estimates of the maximum decline of indexes did not converge either.

Thus, in the period from 2020 to April 2024, the maximum downturn of the IE RAS Index ( $-23.9$  per cent) was recorded in June 2020, as  $-22.3$  per cent in the period from 2018 to July 2022 [5]. However, according to Rosstat estimates, such a month is May with a drop in the Rosstat Index of only  $-9.2$  per cent.

By the way, the maximum gap in the level of indexes' decline is also noted in June (*Table 2*).

According to our calculations [6], the maximum decline in the IE RAS Index in the period from 2016 to June 2021 was registered in April and it amounted to  $-22.2$  per cent, and, according to Rosstat data, it occurred in May ( $-9.2$  per cent).

Moreover, the maximum gap in the level of decline of the indexes in April ( $13.3$  per cent) indicated a deeper drop of business activity into negative territory than the Rosstat Index.

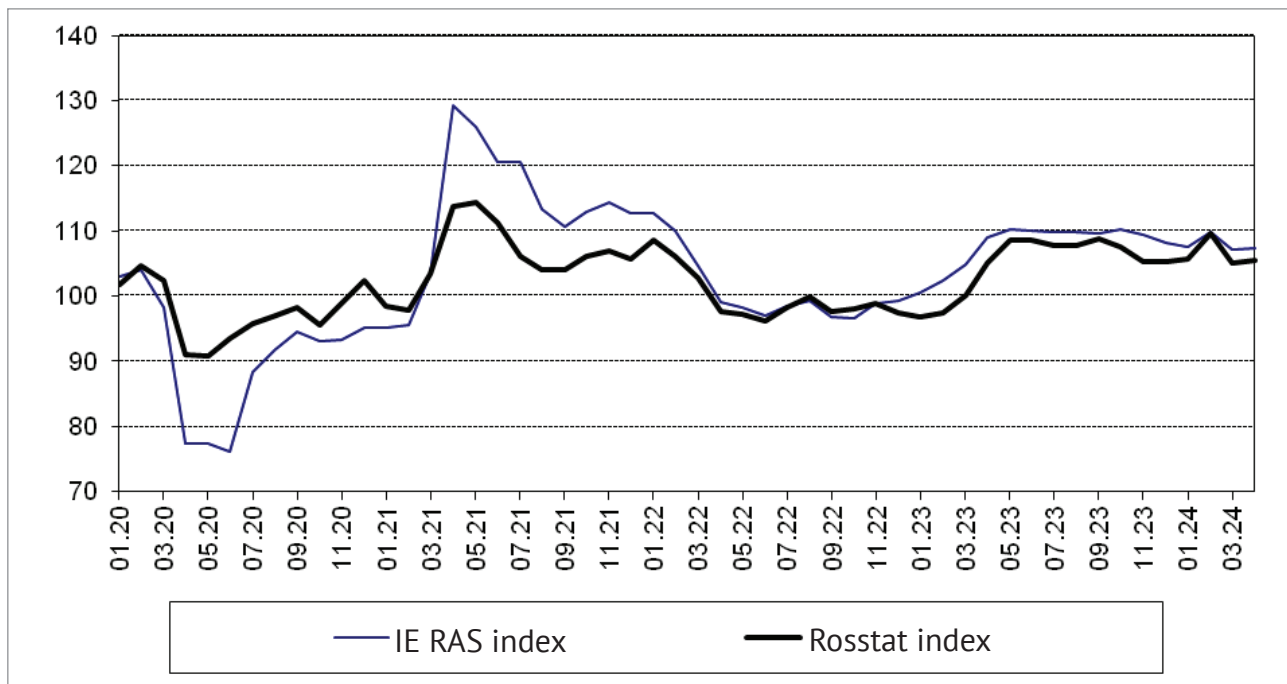
In the period from 2018 to July 2022, according to our calculations [5], the maximum plummet in the IE RAS Index also occurred in June 2020 and it amounted to  $-23.9$  per cent, and, according to Rosstat data, in May of the same year:  $-9.2$  per cent.

An important feature of the period from 2020 to April 2024 is the wave-like nature of the dip in the dynamics of business activity, which began in April 2022, into the negative area, which can be traced in both indices (*Table 2*).

An important specific aspect of the period from 2020 to April 2024 is the undulating nature of the decline curve in the dynamics of business activity, which began in April 2022, into the negative area, which can be traced in both indexes (*Table 2*).

During the first wave, the indicators of the Rosstat Index (from April to July inclusive) were less optimistic, and the gap was in favour of the IE RAS Index.

The second wave started from August to October inclusively and the IE RAS Index made a deeper nosedive. However, the third wave from January 2023 to April 2024 again changed the



**Fig. Dynamics of the IE RAS and Rosstat Indexes in the period 2020 – April 2024 (in per cent of the previous year)**

Source: Rosstat, compiled by the authors.

dynamics of turbulence, so that the gap was again in favour of the IE RAS Index.

The IE RAS Index ceased indicating negative values in December 2022, while the Rosstat Index followed the suite only at the end of February 2023, reaching the zero level only by March 2023 (Table 2).

In addition to the above point, in 2022, the IE RAS Index indicated an inconsiderable growth by 0.9 per cent, while the Rosstat Index still showed a slight decrease by  $-0.01$  per cent.

In general, the dynamics of curves for the indexes converge in the recovery period of 2023, when the sanctions impact on the domestic economy levelled off [20]. The maximum values of the indexes are in May-June (10.3 and 9.9 per cent for the IE RAS Index and 8.5 per cent for the Rosstat Index) and in September-October (9.7 and 10.3 per cent for the IE RAS Index and 8.8 and 7.6 per cent for the Rosstat Index). At the same time, the recovery rate of the IE RAS Index in 2023 is higher (average value for the year – 7.9) per cent than that of the Rosstat Index (4.9 per cent).

This indicates a higher mobilisation of state and business resources within the framework of the adopted anti-crisis measures (which is related to the preparation and implementation of the special military operation) than in the pandemic year 2020.

Analytical advantages of the IE RAS Index over the Rosstat Index are also evident when considering the dynamics of maximum growth of business activity. Comparison of annual trends of both indices for the period from 2020 to April 2024 reveals their maximum average annual growth in post-pandemic 2021: by 12.9 and 6.0 per cent, respectively, with the maximum growth gap of 6.9 per cent in favour of the IE RAS Index.

These estimates are also largely valid for the periods from 2018 to July 2022 and from 2016 to June 2021 [5, 6].

Thus, from 2018 to July 2022, the maximum average annual growth of IE RAS and Rosstat indexes was observed in 2021 and amounted to 13.2 and 6.0 per cent, respectively, with a maximum gap of their growth level by 7.2 per cent [5].

In the period from 2016 to June 2021, the maximum surge was also observed in 2021, despite the fact that the dynamics were analysed only for the first half of the year. At the same time, the indexes went down at a lower level of 9.5 and 6.8 per cent, and the gap was only 2.7 per cent in favour of the IE RAS Index, which is quite lower than the maximum gap for this period, equal to 2.9 per cent, observed in 2017 [6].

Even more significant fluctuations in the indexes' growths were found when comparing their monthly dynamics.

Thus, the maximum increase in the IE RAS Index for the period from 2020 to April 2024 by 29.3 per cent was observed in April 2021 with the Rosstat Index of 13.7 per cent, which is lower than the maximum estimate of 14.3 per cent established by Rosstat and adopted for May of 2024. That is, compared to the Index of IE RAS, it lags by a month (*Table 2*).

It is necessary to pay attention to the convergence of the changes of both indexes at the beginning of the economic mobilisation period and during the reorganisation of the national economy structure for the needs of the special military operation, taking into account the experience accumulated during the coronavirus pandemic.

At the same time, the synchronisation of both indexes' dynamics is confirmed by exceptionally high correlation coefficients of their dynamics — both for the entire period under study from 2020 to April 2024 (0.947) and by years (*Table 3*).

If we take into account relatively stable indicators in 2024, it is worth noting the positive values of both indexes.

Thus, we can make the conclusion that both indexes in stable periods have the same dynamics of changes, but in such conditions as pandemic, sanctions, etc., the index of IE RAS fixes the change in dynamics earlier and determines its level more accurately.

As a result of the performed calculations (*Table 2* and *Figure*), additional evidence of advan-

tages of the IE RAS Index has been obtained. The main advantage is that it more accurately determines the critical moments of trend change, the level of business activity and the terms of overcoming crisis processes in socio-economic development.

*Table 3*

### Correlation of the IE RAS and Rosstat indexes in the period from 2020 to April 2024

Year	Correlation
2020	92.5
2021	95.5
2022	97.7
2023	97.3
2024	98.6
Total period	94.7

*Source:* compiled by the authors.

## CONCLUSIONS

The time period from 2020 to April 2024 is generally characterised by variability in the dynamics of macroindicators, which is caused by the unique conditions of strategic development, including the COVID-pandemic, the initial stage of economic mobilisation in response to the sanctions of the collective West and a large-scale structural adjustment of the national economy in January-April 2024 in the framework of the start of the final stage of the special military operation.

The dynamics of GDP and GVA, as well as the trend of increasing turbulence of the share of value added in high-tech sectors of the national economy observed during this period, confirm the increase in business activity in order to improve the quality and diversification of the economy and social sphere.

The absolute priority in making decisions on strategic development issues should be to increase the share of value added in industry, primarily in the extractive and manufacturing industries, as well as in digital development, robotics, artificial intelligence, research and

development, etc. The calculations revealed that the main advantage of the IE RAS Index over the Rosstat Index is that it more accurately determines the critical moments of change in the trend of business activity and the timeframe for overcoming the crisis processes.

The calculations helped to reveal, that the main advantage of the IE RAS Index over the Rosstat Index is that it more accurately determines the critical moments of changes in the trend of business activity and the timeframe for overcoming crisis processes in socio-economic development.

## REFERENCES

1. Kitrar L.A., Lipkind T.M., Usov N.A. Forecasting GDP growth considering crisis shocks based on business survey results. *Voprosy statistiki*. 2021;28(4):80–95. (In Russ.). DOI: 10.34023/2313-6383-2021-28-4-80-95
2. Lola I.S., Manukov A.B., Bakeev M.B. Stress testing in statistical modeling of business activity in conditions of market shocks. *Voprosy statistiki*. 2020;27(4):5–23. (In Russ.). DOI: 10.34023/2313-6383-2020-27-4-5-23
3. Demidov O. Various indices for forecasting economic activity in Russia. *Kvantil'*. 2005;(5):83–102. (In Russ.).
4. Loseva O.V., Fedotova M.A., Khotinskaya G.I. Business activity as a leading indicator of economic development: Foreign and Russian experience. *Finansy: teoriya i praktika = Finance: Theory and Practice*. 2015;(3):26–37. (In Russ.).
5. Frenkel A.A., Tikhomirov B.I., Surkov A.A. Ups and downs of business activity in the waves of crises, the coronavirus pandemic and unprecedented Western sanctions. *Finance: theory and practice*. 2023;27(1):6–17. (In Russ.). DOI: 10.26794/2587-5671-2023-27-1-6-17
6. Frenkel A.A., Tikhomirov B.I., Sergienko Ya.V., Surkov A.A. The integral index of business activity: Methods of construction. *Ekonomicheskaya nauka sovremennoi Rossii = Economics of Contemporary Russia*. 2021;(4):78–88. (In Russ.). DOI: 10.33293/1609-1442-2021-4(95)-78-88
7. Frenkel A.A., Tikhomirov B.I., Sergienko Ya.V., Surkov A.A. Business activity and economic growth: An economic and statistical study. *Voprosy statistiki*. 2020;27(6):66–78. (In Russ.). DOI: 10.34023/2313-6383-2020-27-6-66-78
8. Shcherbinina L. Yu., Peres'ko Yu.A. Review of methods for assessing business activity indices. *Voprosy ekonomiki i upravleniya*. 2016;1(3):52–55. (In Russ.).
9. Fatkhullina A.A. Business activity as a multi-level category. *Aktual'nye problemy ekonomiki i prava = Actual Problems of Economics and Law*. 2014;(1):166–172. (In Russ.).
10. Burcu E., Lombardi M.J., Dubravko M., Hyun S.S. Financial conditions and purchasing managers' indices: Exploring the links. *BIS Quarterly Review*. 2019;(Sep.):65–79. URL: [https://www.bis.org/publ/qtrpdf/r\\_qt1909g.pdf](https://www.bis.org/publ/qtrpdf/r_qt1909g.pdf)
11. Zhang D., Xiao M., Yang X., He Y. The analysis of manufacturing PMI potential trends of the US, EU, Japan and China. *Procedia Computer Science*. 2015;55:43–51. DOI: 10.1016/j.procs.2015.07.006
12. Ravazzolo F., Vespignani J. World steel production: A new monthly indicator of global real economic activity. *Canadian Journal of Economics*. 2020;53(2):743–766. DOI: 10.1111/caje.12442
13. Aganbegyan A.G. Reducing the catastrophically high mortality rate and restoring the undermined security of the Russian people. *Ekonomicheskie strategii = Economic Strategies*. 2024;26(1):6–11. (In Russ.).
14. Blokhin A.A. Russian economy: From defensive strategy to ambitious one. *Ekonomicheskie strategii = Economic Strategies*. 2023;25(5):54–63. (In Russ.). DOI: 10.33917/es-5.191.2023.54-63
15. Lebedeva P.A. Business activity fluctuations in the terms of digitalization. *Vestnik evraziiskoi nauki = The Eurasian Scientific Journal*. 2022;14(5):1–13. URL: <https://esj.today/PDF/07ECVN 522.pdf> (In Russ.).
16. Olczyk M., Kuc-Czarnecka M. Digital transformation and economic growth – DESI improvement and implementation. *Technological and Economic Development of Economy*. 2022;28(3):775–803. DOI: 10.3846/tede.2022.16766
17. Kharlamov A.V., Fedorov M.K. Public administration of business activity as a prerequisite for the development of innovation climate. *Ekonomika i upravlenie = Economics and Management*. 2023;29(3):288–296. (In Russ.). DOI: 10.35854/1998-1627-2023-3-288-296

18. Zemtsov S.P., Barinova V.A., Mikhailov A.A. Sanctions, exit of foreign companies and business activity in the Russian regions. *Ekonomicheskaya politika = Economic Policy*. 2023;18(2):44–79. (In Russ.). DOI: 10.18288/1994-5124-2023-2-44-79
19. Fedyunina A.A., Yurevich M.A., Gorodny N.A. Pandemic, sanctions and anxiety in Russia's regions: Business expectations nowcasting. *Voprosy ekonomiki*. 2024;(3):96–119. (In Russ.). DOI: 10.32609/0042-8736-2024-3-96-119
20. Degtyarev K. Yu. Assessment of economic sanctions impact on the real sector of the Russian economy. *Gosudarstvennoe upravlenie. Elektronnyi vestnik = Public Administration. E-Journal*. 2024;(102):7–16. (In Russ.). DOI: 10.55959/MSU 2070–1381–102–2024–7–16

## ABOUT THE AUTHORS



**Aleksandr A. Frenkel** — Dr. Sci. (Econ.), Professor, Chief Research Fellow at the Institute of Economics of the Russian Academy of Sciences, Moscow, Russia  
<https://orcid.org/0021-3402-6860-2118>  
ie\_901@inecon.ru



**Boris I. Tikhomirov** — Cand. Sci. (Econ.), Leading Research Fellow at the Institute of Economics of the Russian Academy of Sciences, Moscow, Russia  
<https://orcid.org/0000-0003-2255-7144>  
ie\_901@inecon.ru



**Anton A. Surkov** — Cand. Sci. (Econ.), Senior Research Fellow at the Institute of Economics of the Russian Academy of Sciences, Moscow, Russia  
<https://orcid.org/0000-0002-2464-5853>  
*Corresponding author:*  
ie\_901@inecon.ru

### **Authors' contributions:**

**A.A. Frenkel** — statement of the problem, development of the concept of the article, formation of the conclusions of the study.

**B.I. Tikhomirov** — formation of the text of the article, description of the results and formation of the conclusions of the study.

**A.A. Surkov** — description of the methodology, calculation, preparation of the article for submission to the editor.

*Conflicts of Interest Statement: The authors have no conflicts of interest to declare.*

*The article was received on 12.07.2024; revised on 10.08.2024 and accepted for publication on 30.08.2024. The authors read and approved the final version of the manuscript.*