Transformation in industrial specialisation and features of economic development across the subjects of the Russian Federation

Abstract. Crisis phenomena in Russia stimulate interest in researching the influence of regions’ industrial specialisation on the rates and trajectories of their economic development. The paper aims to examine the transformation of industrial specialisation across the Russian regions and correlate it with their economic development. The methodological basis of the study rests on the theoretical concepts of regional and spatial economics, systems analysis, and strategic management. The authors monitor the changes in the industrial specialisation across the subjects of the Russian Federation in 2008–2016, as well as the dynamics of their economic development by using a combination of methods: dialectical, causal, comparative, structural and cluster analysis. The paper identifies the strategic challenges and priority areas for the modern development of the regions of the Russian Federation. Based on the analysis of the economy of 61 subjects of the Russian Federation, the authors draw conclusions on the transformation of regional industrial specialisation in a specific type of economic activity; on the relationship between economic development and the nature of specialisation (mono-specialisation, multi-specialisation); on the dynamics of developed regions among the groups of mono-specialised and multi-specialised ones. The study detects the types of economic activity, which affect economic development the most. The analysis of the dynamics of industrial specialisation results in the conclusion that there are regions with stable and unstable specialisation. The article proposes promising directions of the state structural policy for different types of regions. The theoretical and practical significance of the study lies in the fact that the developed method allows not only evaluating the transformations in the industrial specialisation of the regions, but also correlating them with the economic development of the subjects of the Russian Federation.

Keywords: region; industrial specialisation; mono-specialisation; multi-specialisation; economic development; stable regional specialisation; unstable regional specialisation; structural policy.

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Introduction

Industrial specialisation of the subjects of the Russian Federation is a highly topical area of research since the region’s orientation towards any specific economic activities determines the structure of its output and, thereby, sets the pathway and rate of its socioeconomic development.
Considering the current recessionary state of the Russian economy, the nature of changes in the industrial specialisation represents a vital line of research.

It is important to note that a high concentration of specific industries in a region leads to a situation when by manufacturing products, the region can satisfy not only its own internal needs, but also external needs of other regions in the country and, in some cases, export its products abroad. Therefore, the total output of product that a subject of the Russian Federation specialises in will account for a significant share in the total national output [Granberg, 2000]. In addition, one should remember that a lower level of industrial specialisation of a region means its deeper diversification, which results in various kinds of production being dispersed among separate industries.

Industrial specialisation of the regions of the Russian Federation evolves under the influence of a large number of both objective and subjective factors. On the one hand, industrial specialisation of a territory objectively depends on its geographical, natural and climatic conditions, as well as on the maturity of its productive forces. It is determined by the relative advantages of a region enabling it to manufacture products at lower cost compared to other areas. On the other hand, the current state of industrial specialisation results from a subjective factor – an outcome of the state's structural policy implemented at federal and regional levels in the past.

Industrial specialisation of the regions is being transformed under the influence of both objective and subjective factors, which necessitates a continuous monitoring of changes in their production profile with a view to make timely adjustments to the pursued structural policy of support for the specialised industries, and to determine the optimal directions for the diversification of the region's manufacturing complex.

The purpose of the research is to study the distinctive features of transformation in the industrial specialisation and the specificity of economic development of the subjects of the Russian Federation in 2008–2016 to elaborate recommendations for the state's structural policy.

Based on the stated purpose, the following objectives can be derived:
- to develop a method to monitor the transformation in industrial specialisation of the subjects of the Russian Federation and to assess the dynamics of regional economic development;
- to conduct a test of the proposed method and categorise the subjects of the Russian Federation over the period of 2008–2016;
- propose the targets for the state's structural policy for different types of regions.

Specificity of transformation in industrial specialisation at the current stage of regional economic development in Russia

The theory of industrial specialisation of a territory originates in the 18th century, when the first theories of regional science and production location appeared. Among the founders of this theory were Francois Quesnay [1960], Adam Smith, David Ricardo, and Leon Walras [see Blaug, 2008], who studied the sectoral structure of the economy, investigated the role of individual industries in the economic system and the main factors affecting them.

Later on in the 19th century, there appeared the first studies on how factors of economic space affect the development of various industries, namely: the theory of agricultural location (standort) by Johann Heinrich von Thünen, theory of optimum location for a manufacturing plant by Wilhelm Launhardt, and the theory of industrial location by Alfred Weber [Granberg, 2000].

In the 20th century, the role of individual sectors in the economic development of a country also received a lot of attention. In particular, the highest emphasis was placed on the role of agriculture [Thornton, 1973; Schoonover, 1977]. Sdasuk [1976], Sheffler [1982], Shu-Zhen [1983] discussed the topic of regional planning and zoning. In the Soviet period, Abalkin [1970],
Granberg [1973], Tatarkin [Chichkanov, Tatarkin, 1990] and others addressed the problems of industrial specialisation of the regions.

Among the contemporary economists, in-depth studies of the regional development of industries are presented by Gizatullin, Rizvanov [2005], Silin, Animitsa, Novikova [2017] and others. Industrial specialisation of regions is assessed by Maudos, Pastor, Serrano [2000], Debaere [2004], Šimanová, Trešl [2011], Henning [2009], Safiullin, Ravezzea [2016], Aivazian, Afanasiev, Kudrov [2016], Tsepelev, Serikov [2017].

Diversification of industrial structure and the impact of industrial specialisation on the economic development of a territory are relevant topics for scientific research [Van Der Panne, 2004; Henning, 2009].

Dokholyan, Petrosyants [2008] propose new approaches to forming the industrial structure of a subject of the Russian Federation by making a forecast of the prospects for the economic development of its specialisation areas and selecting the specialisation industries that have high-level competitive advantages.

Kofanov [2010] develops a scientific concept of tendencies, forms, and effectiveness of strategic planning of the regions’ structural development. Pankova and Boris [2012] present the analysis of the main strategies in relation to regional diversification.

A study of the effect that diversification has on the regional economy performance is presented by Ankudinov, Belyaeva, Lebedev [2012] and others.

Ženka et al. [2015] believe that historical specificity and structural characteristics of regional economies should be taken into account when assessing the impact of industrial specialisation on the region’s development and vulnerability indicators. They conclude that the share of people employed in production is a criterion that determines the greatest impact that the strategy of specialisation or diversification of the region’s sectoral structure has on its economic development.

Another research focuses on developing the methodological support for the problem of monitoring and assessing the level of region’s social development and specialisation (evidence from territories specialised in agriculture) [Taranova et al., 2015].

Mikheeva [2017] concludes that the diversification of the sectoral structures of employment, gross value added, and industrial production can ensure the stable growth of regional economy, but cannot provide high growth rates that would require a stronger specialisation.

A fairly large number of publications address the problems with implementation of the “smart specialisation” strategy currently employed by the European Union in its innovation policy [Chrysomallidis, Tsakanikas, 2017; Serbanica, Constantin, 2017; Radosevic, Ciampi Stancova, 2018].

There is a whole line of research in the current economic literature focusing on the problems of diversification of the Russian economy. For example, Boyko [2018] justifies the need for a deep technological diversification of the Russian economy in order to improve the stability and strengthen the country’s economic space.

It should be noted that the theory of industrial specialisation of a region is closely related to the theories of economic growth, the theory of growth poles, and the theory of cyclic economic development [Silin, Animitsa, Novikova, 2019].

At the same time, such important problems as defining the regions’ mono-specialisation and multi-specialisation criteria, monitoring the transformational changes in the industrial specialisation of territories and the impact that these changes have on the economic development of the regions, accommodating the transformational features of the regional industrial specialisation when developing the state structural policy, remain understudied in economic literature.
The research aims to study the changes in industrial specialisation that occurred in the subjects of the Russian Federation during the 2008 recession and in the post-crisis period up to 2016, to observe to what extent they affected the economic development of the regions, as well as to determine the promising areas of the state’s structural policy that should be pursued in this regard.

The paper analyses the industrial specialisation of 80 subjects of the Russian Federation as of 2008, 2011, 2013, and 2016, and assesses the economic development of regions based on the cluster analysis for the similar periods to identify the regions with stable and unstable industrial specialisation.

**Method to monitor the transformation in industrial specialisation and assess the dynamics of economic development across the subjects of the Russian Federation**

The following approach can be used to monitor and analyse the changes in the industrial specialisation of the subjects of the Russian Federation.

**Step 1.** Determine the nature of region’s specialisation (mono-specialisation, multi-specialisation).

a) Define the productive sectors (economic activities) of the subjects of the Russian Federation.

For this purpose, the authors identified productive sectors and included the following economic activities: agriculture, hunting, and forestry; fishing and fish farming; mining; manufacturing industries; generation and distribution of electricity, gas and water; construction; wholesale and retail trade; hotels and restaurants; transport and communications [Antonyuk, Vansovich, 2013, p. 44].

b) Determine the industrial specialisation of the country’s regions by calculating the ratio of specialisation (location quotient) in production.

To this end, we used the production specialisation ratio (location quotient) that shows how many times the concentration of an industry in a given region is more or less (if less than unity) than the national average.

\[ L_q = \frac{\frac{L_i}{T_i} \times 100}{\frac{L_c}{T_c} \times 100} \]

where \( L_i \) is the gross output of this industry in the region; \( L_c \) is the gross output of the same industry in the country; \( T_i \) is the total gross output of this region; \( T_c \) is the total gross output of the country [Vasilev, 2007].

Based on the ratio of specialisation, the sectors of industrial specialisation were determined across 80 subjects of the Russian Federation as of 2008, 2011, 2013, and 2016.

c) Define the mono-specialisation and multi-specialisation criteria for a territory.

The mono-specialisation criteria for a region include the following:

1) ratio of specialisation in production for a particular economic activity (EA) ≥ 1;

2) minimum share of a particular economic activity in the sectoral structure of GRP (for agriculture, hunting, and forestry – 18 %; for mining – 26 %; for manufacturing industries – 29 %) [Antonyuk, Vansovich, 2013, p. 49].

The multi-specialisation criteria for a region are as follows:

1) number of industrial specialisation industries (EAs) ≥ 3 (ratio of specialisation for each EA ≥ 1);

2) minimum share of each EA in the sectoral structure of GRP – 9 % [Antonyuk, Vansovich, 2013, p. 50].
Based on these mono-specialisation and multi-specialisation criteria, the mono-specialised and multi-specialised subjects of the Russian Federation as of 2008, 2011, 2013, and 2016 will be selected from the total of 80 subjects.

d) Classification of regions into mono-specialised and multi-specialised.

After filtering the regions by the above criteria, all the subjects of the Russian Federation will be classified into those specialising in one industry – i.e. mono-specialised, and those specialising in several industries – i.e. multi-specialised. The mono-specialisation industries include agriculture, hunting and forestry, mining, and manufacturing. This choice is based on these being the basic industries of individual regions [Antonyuk, Vansovich, 2013, p. 47].

Step II. Determine the level of economic development of the regions as of 2008, 2011, 2013, and 2016.

a) Define the indicators of economic development of the regions.

The level of economic development of the regions as of 2008, 2011, 2013, and 2016 based on the cluster analysis can be assessed using the indicators presented in Fig. 1.

### Indicators of a region’s economic development

1. region’s share in the average annual number of people employed in the economy
2. region’s share in the gross regional product
3. region’s share in the capital investment of the economy
4. region’s share in the housing commissioning
5. region’s share in the retail turnover
6. region’s share in the tax revenues collected to the Russia’s budget system
7. region’s share in the investment in fixed assets
8. unemployment rate
9. number of people with monetary income below the living wage (% of region’s total population)
10. share of loss-making organisations

Fig. 1. Indicators of a region’s economic development

Рис. 1. Показатели экономического развития региона

b) Group the regions by their level of economic development on the basis of the cluster analysis.

Using the SPSS Statistics software, the regions of the Russian Federation were divided into five clusters, namely: leading regions, developed regions, mid-level regions, outsider regions, and regions of particular concern.

Step III. Determine the distinctive features of transformation in the regions’ industrial specialisation. This step implies identifying the regions with stable and unstable specialisation in order to consider their performance when implementing the structural policy.
Results

At step 1, the regions were divided into two groups: mono-specialised and multi-specialised. The analysis demonstrated a pronounced specialisation (mono-specialisation or multi-specialisation) of most of the regions (> 50%).

The division of the subjects of the Russian Federation into the mono-specialised and multi-specialised regions for the period of 2008–2016 is summarised in Fig. 2.

By comparing the diagrams, it can be seen that the number of mono-specialised regions remained virtually the same (the average number of regions for the period was 27), except for 2013 when their number dropped to 21. However, their share accounted for 46–55 % among all mono- and multi-specialised regions. The number of multi-specialised regions varied from 23 to 31.

Groups of regions by their level of economic development as of 2016 (fragment of analysis) are shown in Fig. 3.

- **Cluster 1** contains leading regions – Moscow and Tyumen oblast.
- **Cluster 2** consists of developed regions (37 regions) performing better than the national average and with a high potential for development.
- **Cluster 3** – the mid-level regions (27 regions) – is a group of regions demonstrating the average level of development.
- **Cluster 4** – the outsider regions (12 regions) – is a group of regions lagging behind most of the regions in terms of development and performing worse than the national average.
- **Cluster 5** – the regions of particular concern – is a group of two regions with the depressed state of the economy.
The table presents the results of the cluster analysis: mean values, number of regions, standard deviation, and maximum and minimum values for each cluster.

The distribution of the mono-specialised regions by the level of their economic development in 2008–2016 is shown in Fig. 4.

Analysis of regions specialising in agriculture, hunting and forestry indicated that between 2008 and 2016 the average number of regions in this group equalled 5. At the same time, their economic development demonstrates an upward trend. While in 2008 the largest share was comprised of the outsider regions, in 2016, more than a half of the subjects of the Russian Federation were either developed or mid-level regions.

The number of regions specialising in mining varied from 7 to 11. The level of economic development in these regions trended upward. By 2016, the number of outsider regions decreased from 5 in 2008 to 2, the number of mid-level and developed regions increased from 2 to 4 and from 1 to 4, respectively, over the same period.
The results of cluster analysis
Результаты кластерного анализа

| Ward Method         | Indicator 1   | Indicator 2   | Indicator 3   | Indicator 4   | Indicator 5   | Indicator 6   | Indicator 7   | Indicator 8   | Indicator 9   | Indicator 10 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Developed regions   | 1.5311        | 1.3378        | 1.2162        | 1.7838        | 1.5765        | 1.2432        | 1.3703        | 5.5541        | 12.4811       | 27.6838       |
|                     | 37            | 37            | 37            | 37            | 37            | 37            | 37            | 37            | 37            | 37            |
|                     | 0.20          | 0.10          | 0.10          | 0.10          | 0.20          | 0.10          | 0.10          | 0.10          | 1.60          | 7.50          |
|                     | 4.70          | 5.40          | 3.90          | 11.10         | 6.70          | 6.30          | 4.40          | 10.90         | 20.40         | 32.80         |
| Mid-level regions   | 0.7429        | 0.5464        | 0.5286        | 0.7286        | 0.6321        | 0.4786        | 0.6071        | 7.2107        | 17.0357       | 33.3964       |
|                     | 27            | 27            | 27            | 27            | 27            | 27            | 27            | 27            | 27            | 27            |
|                     | 0.10          | 0.10          | 0.10          | 0.00          | 0.10          | 0.00          | 0.10          | 0.10          | 4.20          | 12.70         |
|                     | 1.90          | 2.60          | 1.80          | 2.80          | 1.80          | 2.60          | 2.90          | 15.80         | 25.90         | 37.40         |
| Outsider regions    | 0.5492        | 0.4538        | 0.5385        | 0.4308        | 0.4400        | 0.3000        | 0.4385        | 7.5538        | 18.6358       | 42.3385       |
|                     | 12            | 12            | 12            | 12            | 12            | 12            | 12            | 12            | 12            | 12            |
|                     | 0.04          | 0.10          | 0.10          | 0.00          | 0.02          | 0.00          | 0.10          | 0.10          | 3.50          | 9.10          |
|                     | 1.10          | 1.10          | 1.70          | 1.20          | 0.80          | 1.00          | 1.40          | 10.80         | 31.60         | 50.00         |
| Leading regions     | 7.6000        | 14.5500       | 16.4500       | 3.7500        | 9.0000        | 18.3500       | 13.2000       | 3.2000        | 11.7500       | 30.2000       |
|                     | 2             | 2             | 2             | 2             | 2             | 2             | 2             | 2             | 2             | 2             |
|                     | 6.36396       | 8.5599        | 4.73762       | 0.63640       | 8.62670       | 0.07071       | 2.26274       | 1.97990       | 4.03051       | 0.98995       |
|                     | 3.10          | 8.50          | 13.10         | 3.30          | 2.90          | 18.30         | 11.60         | 1.80          | 8.90          | 29.50         |
|                     | 12.10         | 20.60         | 19.80         | 4.20          | 15.10         | 18.40         | 14.80         | 4.60          | 14.60         | 30.90         |
| Regions of particular concern | 0.1500      | 0.1000        | 0.1000        | 0.2000        | 0.1000        | 0.0000        | 0.1000        | 23.4000       | 37.0500       | 35.2000       |
|                     | 2             | 2             | 2             | 2             | 2             | 2             | 2             | 2             | 2             | 2             |
|                     | 0.07071       | 0.00000       | 0.00000       | 0.14142       | 0.00000       | 0.00000       | 0.00000       | 9.61665       | 7.14178       | 2.96985       |
|                     | 0.10          | 0.10          | 0.10          | 0.10          | 0.10          | 0.00          | 0.10          | 16.60         | 32.00         | 33.10         |
|                     | 0.20          | 0.10          | 0.10          | 0.30          | 0.10          | 0.00          | 0.10          | 30.20         | 42.10         | 37.30         |
| Total               | 1.2206        | 1.2195        | 1.2183        | 1.2183        | 1.2189        | 1.2195        | 1.2195        | 6.8146        | 15.5963       | 32.2024       |
|                     | 80            | 80            | 80            | 80            | 80            | 80            | 80            | 80            | 80            | 80            |
|                     | 1.53881       | 2.51384       | 2.60295       | 1.53367       | 1.91534       | 2.91198       | 2.13602       | 3.76154       | 5.76320       | 5.86128       |
|                     | 0.04          | 0.10          | 0.10          | 0.00          | 0.02          | 0.00          | 0.10          | 1.60          | 7.50          | 17.50         |
|                     | 12.10         | 20.60         | 19.80         | 11.10         | 15.10         | 18.40         | 14.80         | 30.20         | 42.10         | 50.00         |
Of all the mono-specialised regions, the largest share was comprised of the territories specialising in manufacturing (the average number of regions in 2008–2016 equalled 13). The distribution of regions by their level of economic development changed over the period of 2008–2016: the group of outsider regions disappeared (it included 2 regions in 2008), the number of mid-level subjects of the Russian Federation decreased (7 in 2008, 3 in 2016), while the amount of developed regions increased (5 in 2008, 10 in 2016).

The distribution of mono-specialised and multi-specialised regions by the level of their economic development in 2008–2016 is shown in Fig. 5.
Over the analysed period, the share of outsiders among the mono-specialised subjects of the Russian Federation tended to decrease (from 39% in 2008 to 10% in 2016). The share of the same group of regions among the multi-specialised subjects of the Russian Federation remained at the same level (17% in 2008 vs. 19% in 2016). The share of mid-level mono-specialised (33.33% in 2016) and multi-specialised regions (35% in 2016) underwent an insignificant change but tended to decrease over the given period (61% in 2008). Among all the regions, we observed a trend towards a higher share of developed regions that almost doubled.

The categorisation of regions into mono-specialised and multi-specialised ones is 2016 is given in Fig. 6.

Fig. 6. Mono-specialised and multi-specialised subjects of the Russian Federation in 2016.

Fig. 6 shows that in 2016, the number of mono-specialised regions slightly changed compared to 2008 due to an increase in the number of the subjects of the Russian Federation specialising in mining. The number of multi-specialised regions increased significantly (from 23 in 2008 to 31 in 2016). The shift in the nature of specialisation (from multi- to mono-specialisation) in 2008–2016 occurred in the following regions: Kursk and Tambov oblasts (mono-specialisation in agriculture), Arkhangelsk oblast (mining), Ryazan, Kirov oblasts and the Mari El Republic (mono-specialisation in manufacturing industries). It is worthwhile mentioning the emergence of the new regions among those mono-specialised in mining – Irkutsk and Magadan oblasts.

A comparative analysis of the groups of mono-specialised and multi-specialised regions in 2008–2016 suggests that most of the regions retained the nature of their specialisation (in Fig. 6 these subjects of the Russian Federation are shown in bold). The subjects of the Russian Federation not included into the presented groups in 2008 are in italics; their presence in this group was registered for the first time.
It is important to note the change in the nature of specialisation in such regions as the Kabardino-Balkarian Republic, Astrakhan, Volgograd, Nizhny Novgorod, and Sverdlovsk oblasts (the shift from mono-specialisation to multi-specialisation). In this way, we can observe the strengthening or weakening of the region's specialisation in a particular EA (appearance or disappearance of a region), as well as any changes in the nature of specialisation (from mono-specialisation to multi-specialisation and vice versa). At the same time, the level of economic development in most of the regions remained unchanged.

**Conclusion**

The paper conducts research into the distinctive features of transformation in the industrial specialisation across the subjects of the Russian Federation and how these changes affect their economic development, which is a major issue in scientific circles. The findings suggest the following.

First of all, monitoring changes in the industrial specialisation across the subjects of the Russian Federation required developing a method to assess the distinctive features of transformation in the industrial specialisation and their impact on the region's economic development.

The method presented in the paper was tested and used to identify the features of the industrial specialisation in 61 subjects of the Russian Federation over the period of 2008–2016 which allowed the authors to make the following conclusions.

1. Typically, the subjects of the Russian Federation specialising in manufacturing industries have the highest level of economic development.

2. A comparative analysis of the mono-specialised and multi-specialised subjects of the Russian Federation by their level of economic development suggests that there is no clear relationship between the nature of specialisation (mono-specialisation, multi-specialisation) and the level of economic development.

3. There was only one leader identified among the regions within the four analysed periods (2008, 2011, 2013, and 2016) – Tyumen oblast. Moreover, none of those were identified over the entire analysed period in the group of multi-specialised subjects of the Russian Federation.

4. As compared to 2008, the share of the developed regions almost doubled by 2016 (mono-specialised regions: from 21 % in 2008 to 53 % in 2016; multi-specialised regions: from 22 % in 2008 to 45 % in 2016). Moreover, the trends in the share of analysed regions are similar: a sharp decrease in the share of developed regions in 2011 was replaced by its steep increase. This results from a general decrease in the level of economic development of the regions during the 2008 recession. We observed a particularly strong decrease in the level of economic development in the group of mono-specialised regions that indicated a significant vulnerability of these regions' economies and their dependence on the market conditions as a whole and the products that make up their specialisation in particular.

5. In terms of consistency of the region's nature of specialisation (mono-specialisation, multi-specialisation), we identified the regions with both stable and unstable industrial specialisation (“wavering” regions).

By consistency of the regional specialisation we understand maintaining the nature of the region's specialisation (mono-specialisation, multi-specialisation) for a long period of time, as well as the change in the nature of specialisation (from mono-specialisation to multi-specialisation) with the core economic activity remaining unchanged. In this regard, the mono-specialised regions the development of which depends on the market conditions for their industry of specialisation may have a highly stationary sectoral structure. These regions need the additional support from the state which may take the form of special economic zones, tax credits (benefits), and a system of state orders for the products of their industry of specialisation.
The development strategies formulated for the industries of specialisation and the related industries should become a critical element of the Russian federal and regional industrial policies. Particular attention in implementing the state’s structural policy should be given to the regions with unstable industrial specialisation. This group of regions includes those that first appeared as mono-specialised (strengthening industrial specialisation) or multi-specialised. In these subjects of the Russian Federation, the changes in the industrial specialisation and the dynamics of economic development should be monitored annually to allow for adjustments to the structural policy goals, instruments, and mechanisms.

In each case, active support from the federal and regional authorities is needed to facilitate the development of industrial specialisation and the related industries including setting the promising directions for their modernisation and transformation. The analysis suggests the most optimal directions of the state’s structural policy at the federal and regional levels, which, on the one hand, will contribute to a deeper industrial specialisation and, on the other, to the search for effective sectors of diversification in the subjects of the Russian Federation.

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Трансформация производственной специализации и особенности экономического развития субъектов РФ

Аннотация. Статья посвящена исследованию влияния производственной специализации регионов на их экономическое развитие. Методологическая база исследования включает теоретические положения региональной и пространственной экономики, стратегического менеджмента. Мониторинг трансформации производственной специализации субъектов РФ за 2008–2016 гг., а также динамики их экономического развития проведен путем использования совокупности методов: диалектического, причинно-следственного, сравнительного, структурного и кластерного анализа. Выделены стратегические вызовы и приоритетные направления современного развития регионов Российской Федерации. На основе проведенного анализа экономики 61 субъекта РФ...
были сделаны выводы о трансформации производственной специализации региона на конкретном виде экономической деятельности; о взаимосвязи между экономическим развитием и характером специализации (моноспециализация, полиспециализация); о динамике развитых регионов среди моноспециализированных и полиспециализированных. Исследование показало, какие виды экономической деятельности в большей степени влияют на экономическое развитие. Анализ динамики производственной специализации привел к выводу о наличии регионов с устойчивой и неустойчивой специализацией. Предложены перспективные направления государственной структурной политики для разных типов регионов. Теоретическая и практическая значимость исследования заключается в том, что разработанная методика позволяет не только оценивать трансформацию производственной специализации регионов, но и соотносить ее с экономическим развитием субъектов РФ.

**Ключевые слова:** регион; производственная специализация; моноспециализация; полиспециализация; экономическое развитие; устойчивая региональная специализация; неустойчивая региональная специализация; структурная политика.

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