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Research Podgorica

Montenegrin Journal of Economics

Vertakova, Y., Treshchevsky, Y., Kosobutskaya, A., Opoikova, E. (2022),
“Foreign economic activity of Russian regions - trends of the XXI century”,
Montenegrin Journal of Economics, Vol.18, No. 2, pp. 29-37.

Foreign Economic Activity of Russian Regions – Trends of the XXI Century

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ARTICLE INFO

Received August 20, 2021

Revised from September 20, 2021

Accepted October 20, 2021

Available online June 15, 2022

JEL classification: C1; R11; R13

DOI: 10.14254/1800-5845/2022.18-2.3

Keywords:

Foreign economic activity,
region,
clusters

ABSTRACT

Target. Assess the level and features of the foreign economic activity of the regions of Russia in 2000-2018, characterized by different economic and political conditions. Research methods. The study used cluster, comparative and logical analysis. The combination of these methods made it possible to group the indicators of foreign economic activity of Russian regions in three aspects: temporal, spatial and functional. Results. Most regions of Russia have insignificant volumes of foreign economic activity, regardless of the state of the economic and political environment. The main volumes of foreign economic activity are concentrated in a limited number of regions - from 8 to 13 in different years. During the entire period, the separation of 1-3 regions of the most developed cluster (Moscow region, St. Petersburg, Tyumen region) from other regions, including those included in the leading clusters of the second and third level, is clearly expressed. The most significant types of activity in 2000-2005 for ensuring leadership in foreign economic relations: export to the CIS countries and far abroad. Subsequently, the import of technology, technical services and foreign direct investment increased in importance. In 2018, the importance of certain types of foreign economic activity to ensure leadership is leveled.

INTRODUCTION

In scientific research it has been established that the external economic relations of systems of macro- and meso-levels are influenced by trends in the economy and politics at the global level (Freire, 2019; Head and Mayer, 2010; Dorin et al., 2016; Kasťakova and Bebiakova, 2016; Conrad, 2020; Diabaté et al., 2020). The whole complex of economic and political relations between specific countries and their groups is essential (Kuzmina et al., 2020; Timokhin, 2019; Gazi, 2021; Sağlam, 2018). For Russian re-

gions, spatial transformation is essential (Bitarova et al., 2020) and differentiation of socio-economic development, including in the innovation sphere (Endovitsky et al., 2020).

Some provisions characterizing the author's approach to the study of foreign economic activity in the regions were presented by us earlier (Treshchevsky et al. 2020).

1. METHODOLOGY

For the analysis, the period from 2000 to 2018 was adopted. Statistical data are presented in years characterized by different economic and political conditions (2000, 2005, 2009, 2012, 2018). Initial information on foreign economic activity in the regions of the country was obtained from official statistical sources. (Goscomstat Rossii, 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018; 2019).

As analyzed indicators, two are taken, reflecting the level of economic development of the regions: Var1 – gross regional product (GRP) и Var2 – GRP per capita. The development of foreign economic activity is characterized by indicators: Var3 – export to the countries of the Commonwealth of Independent States (CIS); Var4 – export to non-CIS countries; Var5 – import from CIS countries; Var6 – import from non-CIS countries; Var7 – export of technologies and services of a technical nature; Var8 – import of technologies and services of a technical nature; Var9 – foreign direct investment (inflow).

Cluster analysis was carried out using a generally accepted method (Hartigan and Wong, 1979; Mandel, 1988). Traditionally, in the cluster analysis of Russian regions, from 5 to 7 virtual clusters are recorded, which make up rather homogeneous groups. This circumstance has been repeatedly noted in scientific research, including in relation to foreign economic activity (Abdalhussain et al., 2015). In the presented study, good results were also obtained for dividing Russian regions into five clusters according to the F-criterion and p-criterion. Traditionally excluded from the analysis is the city of Moscow, which is very different from other regions in terms of most parameters of socio-economic activity. Separately, in order to avoid double counting, the regions of the “second level” included in larger ones (autonomous districts of the Arkhangelsk and Tyumen regions) were not considered. The regions for which there are no data for the entire analyzed period are excluded from the calculations.

Virtual clusters are ranked from A (best) to E (worst). Given the small number of regions that make up the leading groups, clusters "A", "B", "C" are considered as leaders in foreign economic activity.

1. RESULT OF RESEARCH AND DISCUSSION

The most developed from the point of view of the general level of economic development and the state of foreign economic activity, cluster "A" during the analyzed period changed its configuration. At the beginning of the analyzed one (2000, 2005), it included only one region - the Tyumen region. Subsequently, the cluster was supplemented by the Moscow region and the city of St. Petersburg. This, of course, affected the values of general economic indicators and the results of foreign economic activity (Table 1, Figure 1).

Table 1. Average normalized values of indicators of cluster "A" by years

Indicators	Average normalized values of indicators by years (units)					
	2000	2005	2009	2012	2015	2018
Var1	1	1	0,68118	0,667534	0,558063	0,697342
Var2	1	1	0,526012	0,532645	0,271366	0,521344
Var3	1	1	0,732550	0,768836	0,978251	0,758449
Var4	1	1	0,470962	0,464753	0,564825	0,685194
Var5	0,162776	0,069140	0,253461	0,276023	0,914968	0,487993
Var6	0,925422	0,059626	0,616474	0,641475	0,888697	0,648501
Var7	0,051439	0,470757	0,495474	0,455662	0,545941	0,359950
Var8	0,228319	1	0,492487	0,468259	0,268411	0,664484
Var9	0,154341	0,193301	0,534854	0,744173	0,622796	0,780426
Sum	5,522295	5,792824	4,803453	5,019359	5,613318	5,603682

Source: author's research

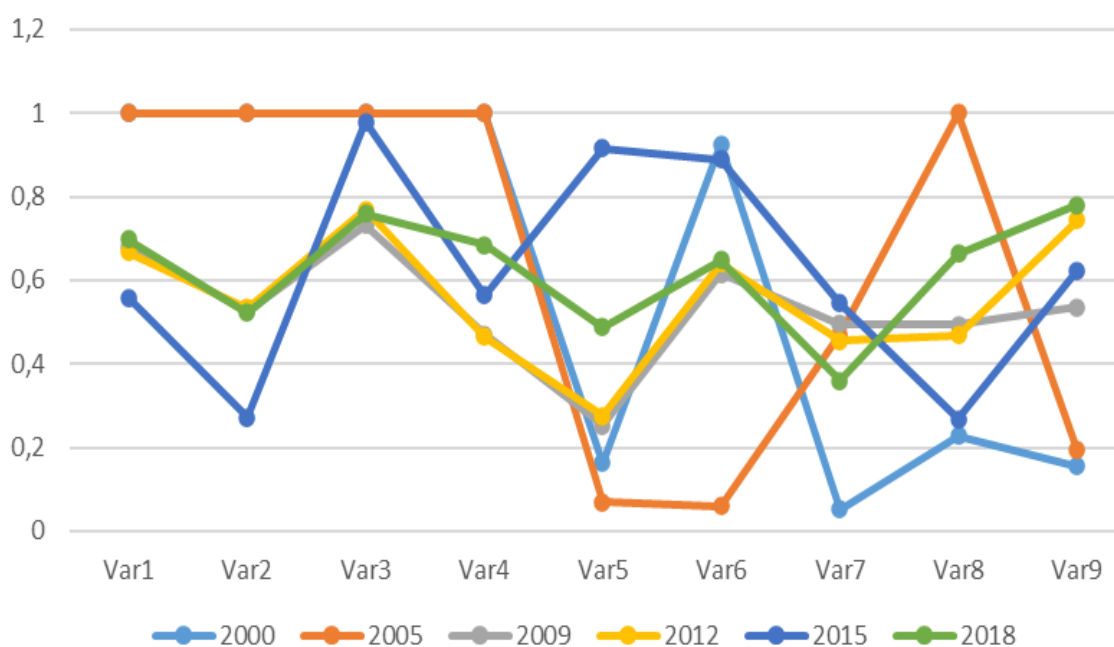


Figure 1. Average normalized values of indicators of cluster "A" by years.

Source: author's research

As can be seen from the data presented in Table 1 and Figure 1, the cluster indicators in 2000, 2005 actually reflected the state of the economy and foreign economic activity of one region - the Tyumen region. Hence - the highest level of GRP and GRP per capita and export to the countries of near and far abroad. The sum of the normalized indicators of cluster "A" in this period exceeds five units (with the maximum possible value of 9 units).

One of the features of the development of foreign economic relations of this period is a sharp increase in the share of imports of technology and services of a technical nature in 2005. At the same time, the share of imports from the CIS and non-CIS countries is sharply decreasing.

The global economic crisis of 2008-2009 led to the spatial and functional diversification of the economy of the leading regions of Russia - the Moscow Region and St. Petersburg were included in the

cluster-leader. This led to a sharp increase in the share of foreign direct investment in the regions of the cluster for all subsequent periods. Some decrease occurred in 2015, but recovered in 2018. The share of imports from non-CIS countries increased significantly in the crisis year. Moreover, in 2015 it reached the highest value for all analyzed years. The same applies to imports from the CIS countries - in 2015 it reached almost the maximum possible value.

The general trend for the entire analyzed period is the equalization in 2018 of the shares of various types of foreign economic activity. The cluster's weakest position is the export of technologies and technical services.

Cluster B unites the second most developed group of regions that are leaders in economic development and foreign economic activity. The composition of the cluster changes in different years. In 2000, it included the Murmansk, Nizhny Novgorod, Samara, Novosibirsk regions, St. Petersburg, Krasnodar Territory; in 2005 - Belgorod, Moscow, Rostov, Chelyabinsk regions, St. Petersburg; in 2009 - Belgorod, Rostov, Orenburg, Chelyabinsk regions; in 2012 - Kaluga, Leningrad regions, Krasnodar Territory, Krasnoyarsk Territory; in 2015, the composition was reduced to two regions: Tyumen and Sakhalin regions; in 2018, the composition became the widest for the entire analyzed period and included the Leningrad, Rostov, Nizhny Novgorod, Samara, Sverdlovsk, Chelyabinsk, Kemerovo regions, the Republic of Tatarstan, Krasnodar, Krasnoyarsk Territories.

The results of general economic and foreign economic activity of cluster "B" are presented in table 2 and figure 2).

Table 2. Average normalized values of indicators of cluster "B" by years

Indicators	Average normalized values of indicators by years (units)					
	2000	2005	2009	2012	2015	2018
Var1	0,203805	0,192496	0,159448	0,194577	0,568452	0,219681
Var2	0,211025	0,149190	0,197985	0,256221	0,971868	0,189620
Var3	0,135654	0,280819	0,268414	0,119369	0,227535	0,392455
Var4	0,091154	0,084559	0,070992	0,143451	0,906299	0,288785
Var5	0,219293	0,585660	0,801234	0,064045	0,023087	0,188062
Var6	0,080778	0,357725	0,054839	0,137564	0,079151	0,105365
Var7	0,662013	0,266455	0,011236	0,190755	0,434070	0,072781
Var8	0,191785	0,051366	0,033225	0,730676	0,500555	0,313721
Var9	0,238774	0,075759	0,035927	0,094179	0,788434	0,186445
Sum	2,034278	2,04403	1,633298	1,930839	4,49945	1,956914

Source: author's research

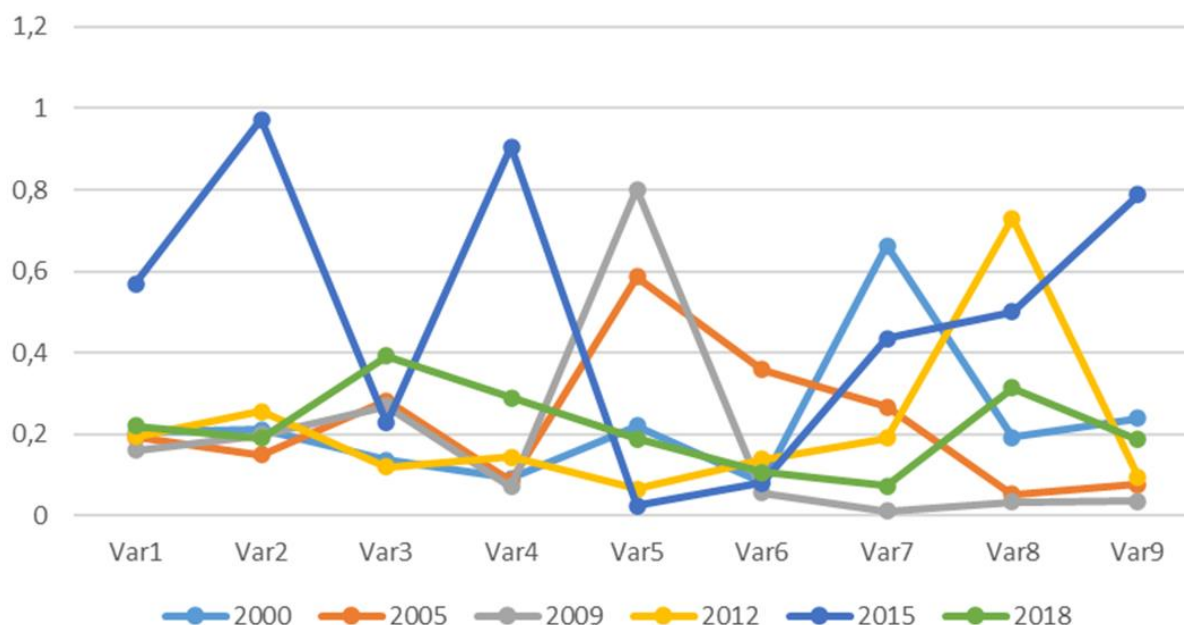


Figure 2. Average normalized values of indicators of cluster "B" by years.

Source: author's research

The data presented in Table 2 and Figure 2 lead to the following conclusions. Despite belonging to the group of leaders, cluster "B" is more than twice inferior to cluster "A" in terms of the general level of development of foreign economic activity. The only exception is 2005, when the cluster included two regions with a high level of development of foreign economic relations - the Tyumen and Sakhalin regions. This year, cluster "B" approached cluster "A" in terms of the sum of normalized indicators.

Belonging to the leading group was provided in cluster "B" in 2000 by the export of technologies and services of a technical nature. However, this was the result of a general low level of development of this form of foreign economic relations in most regions of Russia. In 2005, there was a certain diversification of relatively developed types of foreign economic activity; imports from the CIS countries intensified to the greatest extent. The crisis year 2009 led to the further expansion of this type of activity in the regions of cluster "B".

In 2012, the leadership of the cluster was largely ensured by the import of technologies and services of a technical nature. In 2015, two developed regions (Tyumen and Sakhalin regions), which were at that time in cluster "B", achieved a high position due to most types of economic, including foreign economic activity. The weaknesses of the foreign economic were: export-import relations with the CIS countries and imports from non-CIS countries. In 2018, the structure of the sub-leader cluster was leveled not only in the spatial aspect (10 economically developed regions), but also in the functional aspect - the relative level of development of foreign economic activity became more homogeneous. A low level of development is characteristic of the import from non-CIS countries and the export of technologies and services of a technical nature.

The leading cluster of the third level, like the two previous ones, is not numerous. It included: in 2000 - Belgorod, Moscow, Rostov, Orenburg, Sverdlovsk, Chelyabinsk regions; in 2005 - Omsk, Sakhalin regions; in 2009 - Sakhalin Region, Chukotka Autonomous Okrug; in 2012, the composition is as wide as possible - Belgorod, Volgograd, Rostov, Nizhny Novgorod, Orenburg, Samara, Sverdlovsk, Chelyabinsk, Kemerovo regions, Republic of Bashkortostan, Republic of Tatarstan, Perm Territory; in 2015 - the Republic of Bashkortostan, the Republic of Tatarstan, Samara, Sverdlovsk, Chelyabinsk, Kemerovo regions; in 2018 - the Republic of Sakha (Yakutia), Magadan, Sakhalin regions, Chukotka Autonomous Okrug.

Indicators of the development of cluster "B" are presented in Table 3 and Figure 3.

Table 3. Average normalized values of indicators of cluster "B" by years

Indicators	Average normalized values of indicators by years (units)					
	2000	2005	2009	2012	2015	2018
Var1	0,192921	0,077113	0,076203	0,195668	0,231556	0,062519
Var2	0,166248	0,251979	0,946999	0,217643	0,169369	0,636270
Var3	0,175404	0,129449	0,000299	0,350017	0,691351	0,015683
Var4	0,091615	0,134503	0,121227	0,120011	0,446017	0,197975
Var5	0,687973	0,056124	0,000323	0,253358	0,302873	0,000440
Var6	0,053308	0,132420	0,029566	0,050876	0,075596	0,010620
Var7	0,031940	0,009746	0,037102	0,084602	0,051836	0,000229
Var8	0,020505	0,015629	0,008022	0,112172	0,103160	0,035456
Var9	0,069885	0,905317	0,277438	0,066170	0,063295	0,090708
Sum	1,489798	1,71228	1,497177	1,450517	2,135053	1,049899

Source: author's research

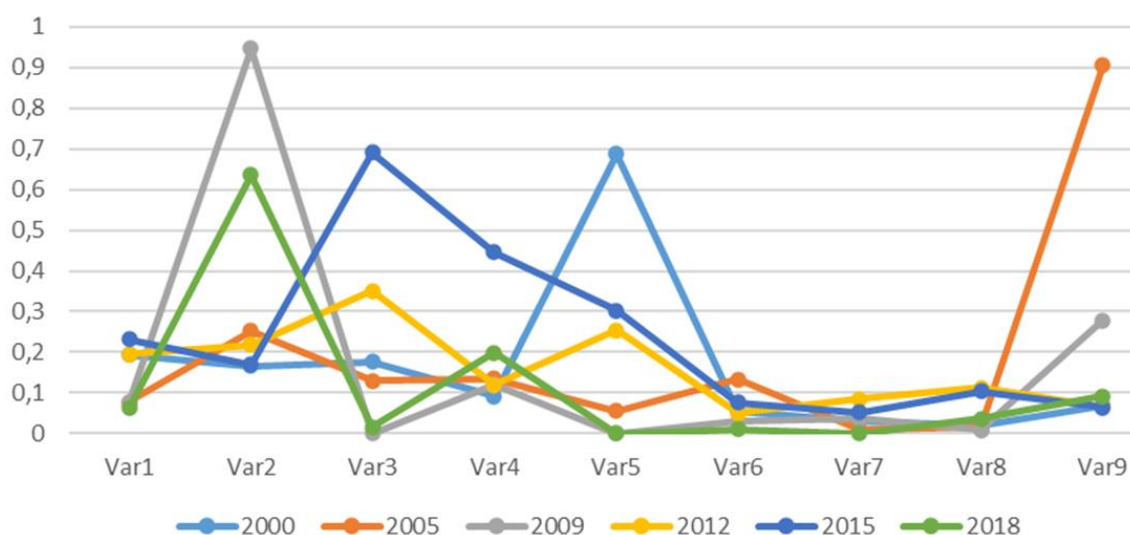


Figure 3. Average normalized values of indicators of cluster "C" by years.

Source: author's research

As can be seen from the data presented in Table 3 and Figure 3, the overall level of economic development and foreign economic activity is slightly lower than that of cluster "B". In 2000, a relatively high level of foreign economic activity was ensured by imports from the CIS countries. In 2005, the leadership ensured the inflow of foreign direct investment, which we associate with the implementation of large international projects in the Sakhalin Oblast. In 2009, the foreign economic activity of the cluster is poorly expressed, a rather high position is due to the presence of GRP per capita in the composition of indicators, which is traditionally high in the Far Eastern regions.

The expansion of the composition of economically developed regions included in cluster "C" in 2012 led to the diversification of "sources of foreign economic activity." Most of them are relatively developed, with the exception of imports from non-CIS countries, exports of technologies, technical services, and foreign investment. Foreign policy and accompanying economic processes in 2015 retained a low level of development of imports from non-CIS countries, exports of technologies and services of a technical nature, and foreign investments. The role of exports to the CIS countries and far abroad has increased. In

2018, the cluster was represented by four Far Eastern regions. The high position of the cluster is due to the volume of GRP per capita. In fact, the only developed type of foreign economic activity is export to non-CIS countries.

Clusters "D" and "E" do not have any developed types of foreign economic activity (Figures 4, 5).

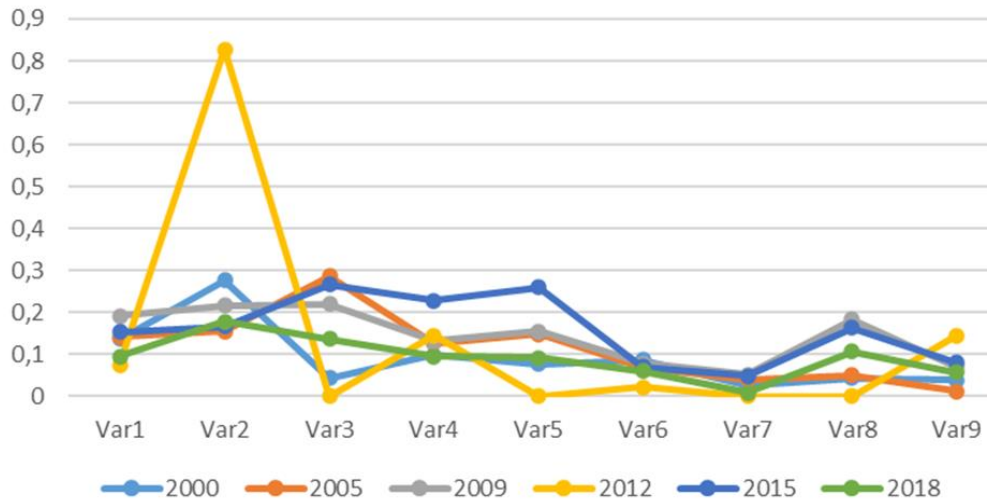


Figure 4. Average normalized values of indicators of cluster "D" by years.

Source: author's research

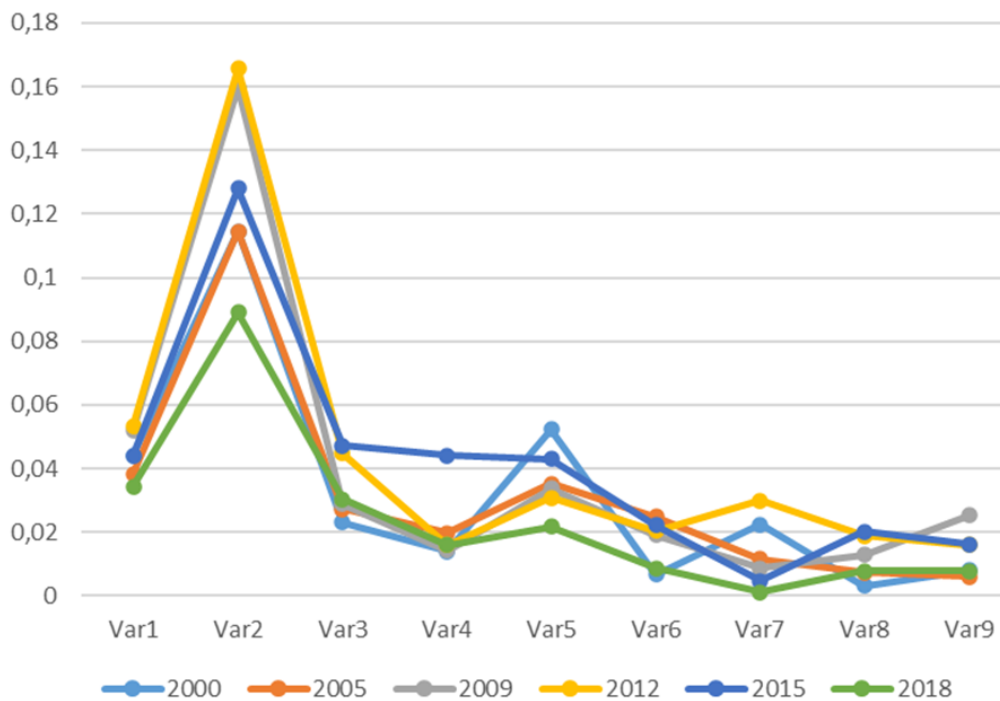


Figure 5. Average normalized values of indicators of cluster "E" by years.

Source: ???

The configuration of clusters "D" and "E" demonstrates an unstable level of economic development of the regions as a whole (Var2) and insignificant volumes of foreign economic activity in most regions of the country, regardless of the state of the economic and political situation.

CONCLUSION

Most regions of Russia have insignificant volumes of foreign economic activity, regardless of the state of the economic and political environment.

The main volumes of foreign economic activity are concentrated (excluding Moscow, which was excluded from the analysis due to the extremely high excess of economic, including foreign economic activity, over the results of other regions of the countries) in a limited number of regions. During the period of favorable market conditions in 2000-2005, their number decreased from 13 to 8 regions.

The crisis year of 2009 practically did not change the number of developed regions (9 regions), while the concentration of foreign economic activity in the most developed regions (Moscow, Tyumen regions, St. Petersburg) and the Far Eastern regions (Sakhalin region, Chukotka Autonomous Okrug) increased.

In the “calm” 2012, the number of regions characterized by increased activity in foreign economic activity increased to 19, in the crisis year of 2015 it decreased to 11. In 2018, it increased again and amounted to 17 units.

The most significant types of activity in 2000-2005 for ensuring leadership in foreign economic relations: export to the CIS countries and far abroad. By 2005, the import of technologies and services of a technical nature also becomes significant. The global economic crisis of 2008-2009 increased the role of foreign direct investment and imports from non-CIS countries. In the future, while some fluctuations persisted with changes in the economic and political environment, the importance of these types of activities for ensuring leadership in foreign economic activity remained. In 2018, there is an equalization of the importance of certain types of foreign economic activity to ensure leadership. The exception is the export of technologies and services of a technical nature.

During the entire period, the separation of 1-3 regions of the most developed cluster (Moscow region, St. Petersburg, Tyumen region) from other regions, including those included in the leading clusters of the second and third level, is clearly expressed.

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