

YOUNG RESEARCHERS

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Influence of investment subsystem on the region's socio-economic development

The article contains the analysis of socio-economic development of the regions by a ranking method. The author has proved the influence of the investment processes on the level of the region development and has revealed the relationship between the specific allocation of the investment subsystem resources and the level of the region development. The methods of statistical analysis are used in this study, and the information basis of the study is statistical materials of the Federal State Statistics Service.

Region, investment subsystem, socio-economic development, financing of fixed capital, investment resources.



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Stability and economic growth in the regional socio-economic systems are largely predetermined by the scale of investment as a factor of economic dynamics, its formation being carried out in the course of social reproduction. In the reproduction system the investment has an important role in renewing and increasing of production resources, and therefore in providing some economic growth of the region. If you think of social reproduction as a system of production, distribution, exchange and consumption, the investment mainly relates to the first link - production, and we can say that it is the material basis of its development. In the system of relationship of the expanded reproduction the investments

perform the most important structure-forming function. The future structure of the economy depends on what economic sectors are invested to be developed.

The growth of regional economy on a new basis means restoring the proportions between the increase in labor productivity and the growth of gross regional product, creating a new economic structure and improving its energy efficiency and providing the conditions for business development and investment attraction. The orientation of socio-economic transformations in the country as a whole and in its individual regions largely depends on the successful development of the investment process.

Consequently, the work of the investment subsystem affects every component of the regional socio-economic system without exception.

To identify the specific impact of the investment subsystem on the region's development the present study analyzes a group of the regions of the North-West Federal District (NWFED). The level of the region's socio-economic development is determined on the basis of one of the blocks of region development rating methodology created by the group promoting the channel to the regions of the Directorate for developing the Broadcasting Company "Petersburg". This block is called "the calculation of the starting rating of the regions".

The rating of the region development is a list in which the regions are sorted by the level of their development: the most developed region ranks first, and in the least developed one is at the last place [1].

To calculate the rating the ranking method is used. At the first step the region is assigned to the place by 15 statistical indicators related to three aspects of development: social sphere, economy, social and economic infrastructure (tab. 1).

According to the method the region with the best indicator ranks first, the region with the worst indicator ranks last. Then the places are summed by all 15 indicators. The final place of the region is determined according

Table 1. Assessment of the socio-economic development of the regions and their characteristics

Indicator	Characteristics and the calculation features
<i>Social sphere</i>	
1. Life expectancy at birth	The most probable age which will be attained by the child born in this region in the given year.
2. The infant mortality rate	The number of children deaths at the age under one year old per 1000 newborns.
3. Morbidity	The number of patients with newly established diagnosis in life, detected during the year when applying to a health care institution or when routine inspecting per 1000 people
4. Crime rate	The number of murders and the attempts on one's life per 1000 people.
5. Migration balance	The difference between the number of people who came to the region and the number of people who left the region. It characterizes the region's attractiveness for the citizens
<i>Economy development</i>	
6. Gross regional product per capita	It characterizes the total volume of goods and services produced in the region
7. Investments in fixed capital per capita	It determines the future potential of the economy development.
8. The growth of energy consumption in the region	It shows the development of energy-intensive industry in the region and the increase in the welfare of citizens.
9. The volume of wage debts	The indicator is adjusted to the living wage in the region
10. The nominal income per capita	The indicator is adjusted to the living wage in the region
11. The retail trade turnover and the volume of paid services	It is calculated per capita.
<i>Social and economic infrastructure</i>	
12. Average construction growth rate in the region	It reflects the further development of the territory
13. Communication revenues	The indicator is revenue of all telecom operators obtained for the volume of postal and telecommunication services sold to the consumers, per capita.
14. Density of highways	The length of hard-surface roads per 1000 square km in the region. It characterizes the degree of development of the region.
15. Provision of the population with social infrastructure facilities	It is calculated on the basis of three indicators.
15.1. The number of sport grounds and gyms	It is calculated per 1000 people.
15.2. The number of kindergartens and schools.	It is calculated per 1000 people.
15.3. The number of students studied at the state higher educational establishments.	It is calculated per 1000 people.

to the amount of places of the region by each indicator: the smaller the amount of seats, the higher the region's place in the starting rating. If two or more regions receive the same amount of places, they are re-ranked according to the economy development: one of them that has received a higher place in the economy development gets a higher place.

The indicator of provision of the population with social and economic infrastructure facilities is calculated in the similar way: the regions are ranked by each of the three indicators, the amount of places of the region by all three indicators is calculated for each region. Then regions are sorted based on the value of this amount of places: the region with the best provision gets the first place, with the worst - the last one.

A distinctive feature of this technique in our study is determining the independent ratings by each of these spheres, as well as determining the final place of the region based on the private ratings of each sphere. The method is similar to the starting rating method of the region development. From the author's point of view, this approach makes it possible to smooth the shortcomings of the integral indicator to some extent, not taking into account the weight importance of individual quantities that characterize the level of development of various spheres.

The addition to the used method is also adjusting the indicator of GRP per capita by the coefficient of the level of purchasing power, replacing the indicator of sports grounds and gyms per 1000 people figure by the indicator of provision of the population with outpatient clinics in order to take account into the health subsystem development, as well as the exclusion of the energy consumption indicator due to its inclusion in the analysis of the northern regions which are originally characterized by high energy consumption.

The rank assessment of the distribution of regions by the level of socio-economic development is presented in *table 2*.

According to the results of the calculations performed, the region under the study can be roughly divided into four groups: strong regions (with leading positions in all areas), poor regions (with the weak development in all three areas), unevenly developing regions (with the development asymmetry of the spheres) and medium regions with deteriorating position (their level of socio-economic development is steadily decreasing).

The leadership among the North-West regions belongs to the northern capital - St. Petersburg. This is the only area referred to the group of strong regions. It has a high level in all three areas.

Table 2. The rank score of the level of socio-economic development of the regions

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
The Republic of Karelia	8	6	7	10	11	8	7	9	9	10	10
The Komi Republic	3	3	5	5	5	2	3	2	2	4	3
The Arkhangelsk Oblast	4	8	3	8	5	5	10	8	3	8	7
Nenets Autonomous Area	10	10	3	10	4	8	9	10	11	9	9
The Vologda Oblast	8	7	6	3	2	4	2	5	8	6	4
The Kaliningrad Oblast	6	5	8	6	9	7	6	2	5	3	6
The Leningrad Oblast	6	8	8	4	5	6	4	4	5	2	5
The Murmansk Oblast	2	2	2	2	3	2	5	7	3	5	2
The Novgorod Oblast	4	3	11	7	8	10	8	5	7	7	8
The Pskov Oblast	11	11	10	9	10	11	11	11	9	11	11
St. Petersburg	1	1	1	1	1	1	1	1	1	1	1

It ranks second only in the field of economic development, interior to the Nenets Autonomous Okrug (*tab. 3*).

The structure of weak regions includes the Republic of Karelia and the Pskov Oblast. However, the distinguishing feature of the Pskov Oblast is rather good place to develop the social sphere - the sixth place. The development of this sector in the depressed region is caused by the previously established priorities in the allocation, first of all, the help for social purposes from the center, due to it even the poor developed regions have a high provision (*tab. 4*).

The group - medium regions with the deteriorating position - is composed of two regions: the Murmansk Oblast and the Vologda Oblast. These regions show the average level of development during the period under review by the social and the economic spheres. In the recent times the situation of these regions is deteriorating steadily.

The fourth group - unevenly developing regions – is the largest group by its composition and it integrates the regions with the asymmetry of social and economic development. It includes three northern regions and three non-northern regions: the Arkhangelsk Oblast, Nenets Autonomous Area, the Komi Republic, the Kaliningrad Oblast, the Leningrad Oblast and the Novgorod Oblast.

At the same time the northern regions of this group take high rank for the economy development, and this is explained by the presence of a large-scale production of oil and gas producing industry, and the social development in these regions is very far behind and did not correspond to its economic potential. On the contrary, the non-northern regions are characterized by poor economic development and a strong enough social sphere.

Table 3. The rank score of the regions for the economy development

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
The Republic of Karelia	5	5	5	7	9	9	10	10	11	11	9
The Komi Republic	4	3	2	3	3	1	3	3	3	3	3
The Arkhangelsk Oblast	8	6	6	7	7	4	7	5	4	5	5
Nenets Autonomous Area	1	1	1	2	1	3	1	2	1	1	1
The Vologda Oblast	6	6	7	5	3	4	5	7	9	9	6
The Kaliningrad Oblast	7	6	8	9	8	8	8	5	7	8	8
The Leningrad Oblast	10	10	9	6	6	6	4	4	5	4	7
The Murmansk Oblast	2	2	4	4	5	7	6	8	6	6	4
The Novgorod Oblast	9	9	10	10	10	10	9	9	8	7	10
The Pskov Oblast	11	11	11	11	11	11	11	11	10	10	11
St. Petersburg	3	4	3	1	2	2	1	1	2	2	2

Table 4. The rank score of the regions for the development of social sphere

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
The Republic of Karelia	10	10	6	8	11	5	5	4	6	7	8
The Komi Republic	6	6	11	10	10	9	8	9	10	11	10
The Arkhangelsk Oblast	8	7	6	4	5	9	10	10	8	7	9
Nenets Autonomous Area	11	11	4	11	4	8	11	10	11	10	11
The Vologda Oblast	6	9	10	7	5	6	4	5	4	5	5
The Kaliningrad Oblast	3	3	6	4	8	4	3	3	2	3	3
The Leningrad Oblast	2	2	2	2	2	2	2	2	3	2	2
The Murmansk Oblast	4	5	3	3	3	3	5	7	7	4	4
The Novgorod Oblast	5	3	9	8	5	7	7	7	8	9	6
The Pskov Oblast	9	7	4	6	9	9	9	5	5	5	6
St. Petersburg	1	1	1	1	1	1	1	1	1	1	1

The Leningrad Oblast in the sphere of social and economic infrastructure ranks the 10th place, but it can be explained by the fact that it is situated around the federal city and it grows due to the agglomeration effect (*tab. 5*).

The differentiation of the regions by the level of their socio-economic development, the features and the uneven development of the studied spheres in the regions cause an objective need for revealing the specifics of the investment processes in the regions.

The indicator of investment activity in the regions is an indicator of the investment share in the GRP. High activity of attracting the investment resources is typical of the Arkhangelsk Oblast (including its member Nenets Autonomous Area), the Republic of Komi, the Leningrad Oblast and the Kaliningrad Oblast.

High financial provision of the investment process in the first three subjects of the Federation explains their leading position in the field of economic development. The high investment resources of the Leningrad Oblast and the Kaliningrad Oblast are reflected in ensuring of high places for the development of social sphere (*tab. 6*).

The Novgorod Oblast referring to the group of unevenly developing regions has a developed sphere of social and economic infrastructure (it ranks 3rd). The active development of this sector is connected with the GRP investment share having increased since 2004.

The minimum value of the indicator of GRP investment share is typical of the Murmansk Oblast, its economic development has fallen from 2nd place in 2000 to 7th in 2005, and in subsequent years it did not rise above the 6th place till the crisis year.

Table 5. The rank score of the regions for the development of social and economic infrastructure

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
The Republic of Karelia	5	3	9	9	10	8	5	8	5	4	8
The Komi Republic	5	4	4	4	4	2	2	2	2	2	2
The Arkhangelsk Oblast	2	8	4	10	5	4	8	5	5	8	6
Nenets Autonomous Area	11	10	11	11	11	11	11	11	11	10	11
The Vologda Oblast	8	5	2	3	1	5	3	6	7	4	5
The Kaliningrad Oblast	9	5	7	6	7	7	5	6	9	4	7
The Leningrad Oblast	7	9	10	8	9	10	8	10	10	8	10
The Murmansk Oblast	3	5	2	4	3	2	4	4	4	7	4
The Novgorod Oblast	4	1	6	2	5	6	5	2	3	3	3
The Pskov Oblast	10	10	7	6	8	9	10	8	7	10	9
St. Petersburg	1	1	1	1	1	1	1	1	1	1	1

Table 6. The specific weight of fixed capital investment in GRP, %

	2000	2005	2006	2007	2008	2009	Average
The RF	20,3	20,0	21,0	24,0	25,5	24,7	21,8
The Republic of Karelia	22,7	19,8	21,5	18,3	19,4	17,6	21,3
The Komi Republic	28,8	29,4	34,0	26,1	27,8	36,0	28,5
The Arkhangelsk Oblast	16,9	28,7	40,9	48,6	44,1	20,4	30,1
including Nenets Autonomous Area	32,1	50,2	74,5	93,2	82,9	26,4	61,4
The Vologda Oblast	12,4	31,3	32,7	32,6	24,2	26,1	23,6
The Kaliningrad Oblast	19,6	36,6	31,6	32,1	36,9	31,5	28,4
The Leningrad Oblast	34,4	40,3	48,0	40,9	42,0	45,5	40,6
The Murmansk Oblast	13,0	15,1	15,5	14,1	21,1	20,5	16,1
The Novgorod Oblast	22,7	21,9	25,3	27,6	28,3	31,5	24,4
The Pskov Oblast	15,1	13,7	14,8	22,2	22,3	17,3	16,8
St. Petersburg	19,1	23,5	23,5	27,1	25,8	22,0	23,4

Source: It was calculated by the author on the basis of [4].

In the Vologda Oblast the GRP investment share is being reduced, and this causes, as we have already noted, the deterioration of the socio-economic situation of the region in recent years.

Then the Pskov Oblast and the Republic of Karelia rank the next places. The low provision with the investment resources justifies their inclusion in the group of weak regions.

For the provision with the investment resources St. Petersburg has the average indicator – 23.4%, while it belongs to the strongest region, first of all, due to its special status – the “northern capital”.

In most regions of the NWFD the predominant sources of investment activity are loans of other organizations and means of superior organizations (*tab. 7*). In some regions they considerably exceed in the aggregate not only alternative external sources of funding, but also their own resources.

A striking example of this fact is the regions leading for attracting foreign investment funds – the Arkhangelsk Oblast and Nenets Autonomous Area. The fact that the funds redistributed within the non-financial sector (loans of other enterprises (organizations) and the means of superior organizations) are prevalent as a main

source of capital funds explains the unevenness of development of social and economic spheres in these regions (external investors strictly aim at economic interests, social processes are ignored). The close dependence of the activity of the investment processes on the funds of superior organizations is typical of almost all northern regions (the exception is the Republic of Karelia).

In the regions of NWFD the market sources are not developed enough not only at the initial period of market reforming, but also in the study period. This is especially true for the issues of shares and bonds. The passivity of the NWFD regions in the process of fund raising through the issuance of securities (except for St. Petersburg) probably can be explained by the lack of proper awareness about the possibilities of the stock market both for issuers (companies) and for potential investors, as well as by the underdeveloped infrastructure of the stock market in the regions. An indirect confirmation of the latter assumption is a leadership in raising the resources through issuance of St. Petersburg and the Leningrad Oblast adjacent to it.

Therefore, among the market sources the main share is loans. At the same time the increase in the share of lending, characteristic

Table 7. The specific weight of other* sources in the structure of financing the fixed capital, % (calculated by the author on the basis of [4])

	2000**	2005	2006	2007	2008	2009
<i>The Russian Federation</i>	7,2	16,5	18,5	18,4	20	26,1
<i>The NWFD</i>	9,5	27,9	36,6	31,7	30,3	33,6
The Republic of Karelia	2,7	18,6	36,1	16,6	16,5	29
The Komi Republic	6,7	54,7	47,1	24,7	28,1	48,2
The Arkhangelsk Oblast	18,0	55,6	70,8	71,1	62,5	45,2
including Nenets Autonomous Area	56,7	58	76,8	82,8	73,8	59
The Vologda Oblast	4,0	43,6	49,7	44,1	30,9	35,7
The Kaliningrad Oblast	2,1	13,2	25,6	23,5	26,9	51,9
The Leningrad Oblast	19,6	29,5	44,8	43,6	46,1	53,4
The Murmansk Oblast	4,2	6,1	27,2	11,3	29,9	21,8
The Novgorod Oblast	0,6	27,6	24,4	25,1	29	34
The Pskov Oblast	3,1	9,6	8,7	8,1	8	11,1
St. Petersburg	4,9	7,5	8,4	10,5	11,0	12,3

* Other sources include loans of other organizations and means of superior organizations

** There is no information on the means of superior organizations for 2000.

of Russia, has a slow rate in the NWF. The Republic of Karelia, the Kaliningrad Oblast and St. Petersburg attract credit resources in the investment sphere the most actively. The Pskov Oblast becomes more active in recent years. The last three of them have a special status: Saint-Petersburg is a “northern capital”, the Kaliningrad Oblast is a special economic zone, the Pskov Oblast is a depressive region [2].

In general the federal district is characterized by strengthening the role of budget financing. St. Petersburg (the northern capital) and the Pskov Oblast (depressive area) have the highest proportion of this source. Moreover, in Karelia the budget funds of the Federation subject is almost half of the budgetary resources. The presence of a significant amount of budget funds in the replenishment of investment of the Pskov Oblast also determines rather good level of development of the social sector (*tab. 8*).

The budget resources and the market mechanisms actively manifest themselves in the Kaliningrad Oblast which belongs to the unevenly developing regions and is characterized by a well-developed social sphere. The Novgorod Oblast belonging to the group of irregularly growing regions has a little share of funds raised, and this fact is reflected in the tenth position by the economy.

Assessing in general the resource structure established in the regions and invested in social production, we can say that the companies are funded primarily from their own funds and the funds of related companies. This is above all, true of the northern regions (for example, the Republic of Komi, the Murmansk Oblast and the Vologda Oblast) where the bulk of revenue (90%) is formed by large town-forming enterprises that are a part of holding, their management companies are often registered outside the region. The latter, in turn, are not interested in investing in the regional development. Accordingly, the main financial resources, earned in the region leave it. This fact explains the belonging of the Murmansk Oblast and the Vologda Oblast to the medium regions with the deteriorating socio-economic development and the uneven development of social and economic spheres in the Komi Republic.

Thus, the study of trends in socio-economic development of the NWF and the specific allocation of the investment subsystem indicate that the strong economy does not always provide a proper social development, and vice versa, the developed social sphere does not always imply a high level of economic development. In other words, the specificity and the level of socio-economic development of the region are determined by the peculiarities and the intensity of current investment processes.

Table 8. The specific weight of budget financing in the structure of financing investment in fixed capital, % [3]

	2000	2005	2006	2007	2008	2009
The Russian Federation	22,0	20,7	20,2	21,5	20,9	21,8
The North-West FD	15,5	15,0	15,7	20,9	21,3	23,8
The Republic of Karelia	17,0	14,7	18,1	18,2	20,8	24
The Komi Republic	6,8	5,9	5,5	7,3	6,7	4,6
The Arkhangelsk Oblast	12,7	6,8	4,3	6,3	6,9	16,1
including Nenets Autonomous Area	3,4	3,7	1,8	2,1	2,5	7,2
The Vologda Oblast	20	6,3	5	6,3	11,5	10,1
The Kaliningrad Oblast	13,9	18,3	21,4	15,3	21,2	29,9
The Leningrad Oblast	12,5	7,3	12,9	7,2	12,4	17,1
The Murmansk Oblast	11,6	16,8	15,1	19,7	18,2	19,2
The Novgorod Oblast	7,6	10,6	6,3	7,9	12,2	21
The Pskov Oblast	39,6	21,1	19,2	26	21	28,8
St. Petersburg	22	28,5	32,1	43	39	39,8

The solution of existing problem consists in general in settlement of relations between public authorities and business-structures. To attract big business to solving the problems of the region where they work is really possible only if the appropriate legislation acts are adopted (the law on “holding companies”, legitimizing social responsibility, etc.). This is, of course, the level of the Federation.

To solve the regional economic and social problems the local authorities should focus first of all on the internal reserves for increasing the investment resources of the region. Such internal reserves are population's savings. In the near-term outlook this is the savings that can become a fundamental base for meeting the needs for increase in the investment resources, and as a consequence, for solving the major social and economic problems of the region.

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