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The Characteristics of the Innovative Development in the Regions of Russia

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Abstract: Today when innovations became the most significant advantage of transactors, much attention is devoted to innovative development at every hierarchical level of economy. Taking into consideration the large territory of Russia, we can say that only the right concept of the development of territories will play an important role in the well-being of the people. It is possible to identify strong and weak points of the innovative development of territories with the help of the indicator of competitiveness of a region. Besides, the indicator of competitiveness of a region and the comparative analysis of territories make it possible to reveal how efficiently the innovative potential of a region is used and find definite measures that will increase the innovative activity of transactors. Moreover, this indicator can be used to analyze the integrity and systemacy of definite regional innovative systems, to identify less developed elements and find out what elements are the most important for the development of a territory and the improvement of the well-being of the people.

Key words: The innovative competitiveness of a region · The innovative development of a region · Factors of innovative development · The innovative potential of a region · A regional innovative system

INTRODUCTION

At the present stage of the development of economy the use of innovations is the main factor of the competitiveness of transactors. The concept connected with innovations became the trade of first priority. The formation of the innovative strategy of the country and regions is the main goal for government bodies at every hierarchical level of economy.

The effectiveness of innovative activity is at its maximum only when there is a right management of innovations (the use of different ways of control action), that can influence the course of the innovative process and increase the life-cycle of innovations.

Besides, regions with high innovative performance can compete with each other for advanced enterprises and international investors more successfully because of their attractive investment means, favorable innovative climate and functional innovative infrastructure.

So, innovative climate includes innovative activity and innovative potential. Innovative climate is a condition of external environment of a transactor that can promote or resist reaching an innovative goal. Also, innovative climate can be defined as a combination of external conditions that influence the ability of transactors to reach its innovative goals [1-2]. The aims of regional authorities include the formation of innovative climate (the creation of such factors as elements of regional innovative infrastructure, investment appeal, human capital, human intelligence and many others in order to improve socio-economic conditions for population and economic increase of enterprises and territories [3].

Innovative potential of a region characterizes resources aimed at the achievement of its innovative goals and organizational mechanism [4]. Innovative potential of a region is an ability of a region to realize an effective activity [5]. Taking into account the large territory of Russia, we can use the definition given by famous foreign researchers, according to this definition the innovative potential of the country is an opportunity for creation, development, adoption and distribution of useful innovations (new knowledge, concepts, technologies, goods, service, ways of management, socio-cultural standards and so on [6-8].

It is possible to estimate the effectiveness of innovative activity through the indicator of the innovative competitiveness of a region that characterizes potentialities of a region to take up good competitive positions aimed at the improvement of life quality and the provision of sustained economic development. What's

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more, the indicator enables us to identify strengths and weaknesses of the innovative sphere and suggest measures aimed at the correction of the strategy of the innovative development of a region.

MATERIALS AND METHODS

All the categories: innovative climate, innovative potential and innovative competitiveness can be defined through an appropriate system of characteristics. There are the following indicators of innovative climate [9-10]:

- The fraction of organizations of innovative infrastructure in general number of organizations and enterprises,
- The expense of technological innovations from different resources except for the federal budget,
- The fraction of organizations that had cooperative connections while developing technological, marketing and organizational innovations in general number of innovative enterprises,
- The fraction of organizations in sectors, researches and development in general number of organizations.

There are indicators to define the innovative potential of a region:

- Share of population with higher education, interested in the economy of a region,
- Share of workers in National Service, upgrading their skills by 1000 workers who are interested in the economy of a region,
- Costs of scientific researches and development from means of organizations of enterprising sectors,
- Costs of technological innovations from means of the organization.

The integral indicator of the innovative competitiveness of a region reflects special features of the formation and realization of innovative politics by regions of the federation, the indicator is calculated with the help of 12 characteristics:

- Share of workers with higher education in general number of a region;
- Share of enterprises providing the staff with training and teaching connected with innovations in general number of operating enterprises in a definite region;
- The correlation of costs of researches and development and extra costs created in a region;
- Share of enterprises provided with government subsidy for innovative development in general number of operating enterprises in a definite region;
- Share of enterprises using innovations in general number of enterprises;
- Share of small and big enterprises in a region cooperating with others studying problems of scientific and technical development in general number of operating small and big enterprises in a definite region;
- The correlation of costs of innovations and a turnover in a region;
- Share of goods that underwent significant technological changes in the volume of sales in a region;
- Share of goods that underwent improvements in the volume of sales in a region;
- Share of goods that patent their inventions in general number of operating enterprises in a definite region;
- Share of goods that use new trade names in general number of operating enterprises in a definite region;
- Share of enterprises using registration of parts of a project in general number of operating enterprises in a definite region.

The Main Part: There are nine subjects of the federation chosen as a basis of research, eight of them are considered to be the most developed and competitive in the innovative and socio-economic sphere. Perm Krai is chosen as the ninth region because it is of particular interest to the author. Below you can see the rating that was made according to the method of maximum-minimum indicator as shown in Table 1 [11].

The rating shows different levels of innovative climate in the regions under study as shown in Table 2.

Table 1: Innovative Climate Rates for each Region

		Index			
№	Region	1	2	3	4
1	Moscow	0,98	0,28	0,00	0,50
2	St. Petersburg	1,00	0,34	0,19	0,21
3	Nyzhniy Novgorod Oblast	0,91	1,00	1,00	0,51
4	Novosibirsk Oblast	0,20	0,04	0,10	0,00
5	Perm Krai	0,60	0,46	0,77	0,44
6	Samara Oblast	0,32	0,40	0,44	0,53
7	Saratov Oblast	0,00	0,14	0,90	0,63
8	Sverdlov Oblast	0,60	0,53	0,46	0,35
9	Tyumen Oblast	0,32	0,00	0,43	1,00

Table 2: The Average Index of Innovative Climate for Each Region

№	Region	Average index	Rank
1	Moscow	0,44	4
2	St. Petersburg	0,435	6
3	Nyzhniy Novgorod Oblast	0,855	1
4	Novosibirsk Oblast	0,085	9
5	Perm Krai	0,5675	2
6	Samara Oblast	0,4225	7
7	Saratov Oblast	0,4175	8
8	Sverdlov Oblast	0,485	3
9.	Tyumen Oblast	0,4375	5

Table 3: Innovative Potential Rates for each Region

		Index			
№	Region	1	2	3	4
1	Moscow	1,00	0,00	0,14	0,18
2	St. Petersburg	0,87	0,89	0,80	0,09
3	Nyzhniy Novgorod Oblast	0,14	0,42	1,00	1,00
4	Novosibirsk Oblast	0,27	0,89	0,26	0,01
5	Perm Krai	0,00	0,12	0,32	0,54
6	Samara Oblast	0,48	0,36	0,07	0,47
7	Saratov Oblast	0,16	0,00	0,93	0,37
8	Sverdlov Oblast	0,06	0,82	0,00	0,56
9	Tyumen Oblast	0,22	1,00	0,07	0,00

Table 4: The Average Index of Innovative Potential for Each Region

№	Region	Average index	Rank
1	Moscow	0,33	7
2	St. Petersburg	0,66	1
3	Nyzhniy Novgorod Oblast	0,64	2
4	Novosibirsk Oblast	0,36	5-4
5	Perm Krai	0,25	9
6	Samara Oblast	0,35	6
7	Saratov Oblast	0,37	3
8	Sverdlov Oblast	0,36	5-4
9.	Tyumen Oblast	0,32	8

Innovative potential shows the presence of definite resources for the realization of innovative activity. There is a table of average index of innovative potential shown in Table 4. Index was calculated on the basis of statistical data as shown in Table 3.

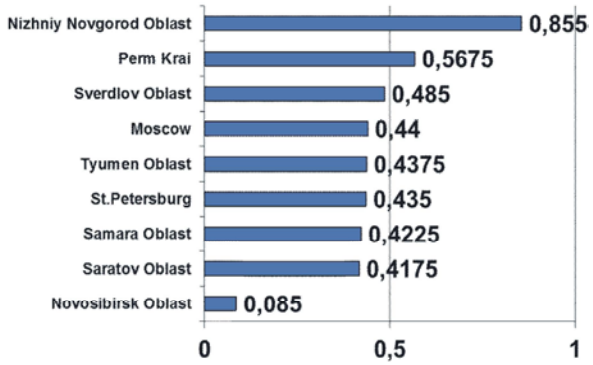

Fig. 1: The Average Index of Innovative Climate for Each Region

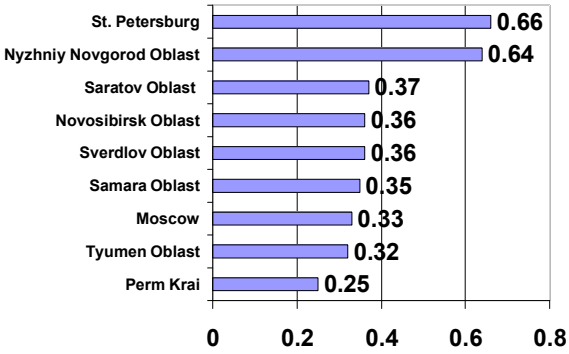

Fig. 2: The Average Index of Innovative Potential for Each Region

The indicator of competitiveness shows how efficiently regions use its potentialities for innovative development and what problems they have. Eight indicators from the factors of regional innovative competitiveness are necessary for the calculation shown in Table 5.

If we take into account the information about innovative climate of regions we can see that Moscow, St. Petersburg and Nyzhniy Novgorod Oblast have the best positions according to the first indicator «a fraction of organizations of innovative infrastructure in general

Table 5: Innovative Competitiveness Rates for each Region

		Index							
№	Region	1	2	5	8	9	10	11	12
1	Moscow	1,00	0,62	0,00	0,59	0,10	1,00	0,70	0,12
2	St. Petersburg	0,87	0,88	0,00	0,48	0,22	0,57	0,32	0,99
3	Nyzhniy Novgorod Oblast	0,14	0,17	1,00	0,43	1,00	0,61	1,00	1,00
4	Novosibirsk Oblast	0,27	0,72	0,01	0,00	0,63	0,24	0,00	0,56
5	Perm Krai	0,00	0,58	0,35	1,00	0,56	0,65	0,72	0,54
6	Samara Oblast	0,48	0,69	0,42	0,35	0,04	0,74	0,18	0,38
7	Saratov Oblast	0,16	0,00	0,57	0,04	0,00	0,90	0,07	0,53
8	Sverdlov Oblast	0,06	0,80	0,30	0,58	0,50	0,20	0,60	0,81
9	Tyumen Oblast	0,22	1,00	0,43	0,27	0,35	0,00	0,47	0,00

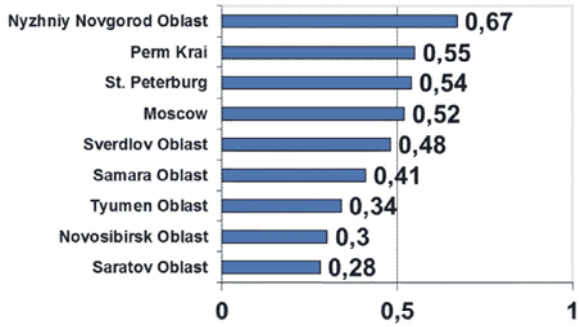

Fig. 3: The Average Index of Innovative Competitiveness for Each Region

Table 6: The Average Index of Innovative Competitiveness for Each Region

№	Регион	Average index	Rank
1	Moscow	0,52	4
2	St. Petersburg	0,54	3
3	Nyzhniy Novgorod Oblast	0,67	1
4	Novosibirsk Oblast	0,30	8
5	Perm Krai	0,55	2
6	Samara Oblast	0,41	6
7	Saratov Oblast	0,28	9
8	Sverdlovsk Oblast	0,48	5
9.	Tyumen Oblast	0,34	7

number of organizations and enterprises» when Saratov Oblast has fewer organizations than the other regions. According to the second indicator «expense of technological innovations from different resources except for the federal budget» Nyzhniy Novgorod Oblast takes first place, while Novosibirsk Oblast and Saratov Oblast have the worst results. According to the forth indicator «a fraction of organizations in sectors, researches and development in general number of organizations» Tyumen Oblast hits the highest point, all the other regions except for Novosibirsk Oblast have equal positions. What about Perm Krai, it has average results according to each indicator.

Nyzhniy Novgorod Oblast, Perm Krai and Sverdlov Oblast have the best results according to the average index of innovative climate for each region, while Novosibirsk Oblast has the worst climate as shown in Fig. 1.

There are the main factors of the formation of innovative climate in a region:

- The intensity of measures within the framework of regional innovative politics;
- The presence of innovative infrastructure;
- The presence of organization maintaining infrastructure.

In comparison with the average index of innovative climate, the average index of innovative potential is equal for every region as shown in Fig. 2. However, it is worth mentioning that St. Petersburg takes the first place and Perm Krai is at the end of the list.

According to the average index of innovative competitiveness, we can notice that Nyzhniy Novgorod Oblast, Perm Krai and St. Petersburg are leaders, while Saratov Oblast, Novosibirsk Oblast and Tyumen Oblast have the worst results.

Taking everything into account, it is important to say that among the regions under study Nyzhniy Novgorod Oblast has the best conditions for innovative activity that is dependent on innovative climate. However, all the regions under study have equal results in the average index of innovative climate except for Novosibirsk Oblast that hits the lowest level. It is necessary to pay attention to the expense of technological innovations and the fraction of organizations in sectors, researches and development in order to improve the level of innovative climate in Novosibirsk Oblast.

Speaking about the resources for realization of innovative activity, it important to say that all the regions have equal potentialities. In spite of this fact, Perm Krai has low performance according to this indicator. It is connected with the specificity of the region and the share of population with higher education.

CONCLUSION

In conclusion, we should say that Saratov Oblast has the lowest results according to the index of innovative competitiveness. This happened because the region was not able to use its innovative potential. This fact shows that the correction of the programme of innovative development is necessary to improve the situation. Nyzhniy Novgorod Oblast takes the first place, it has the best innovative climate and potential. Having the worst innovative potential, Perm Krai takes the second place according to the level of innovative activity. This fact shows that Perm Krai has the right innovative politics.

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