

necessary to be determined the amounts of the investments in the fixed assets, in the context of the considered regions.

The statistical method for the linear correlation coefficient (e.g. or the Pearson's correlation coefficient) is being used for the factors influence determination on the amounts of the investments.

The correlation is called the relationship between the two variables. So, this index may be accepted the number range from  $-1$  to  $+1$ . Then, the negative correlation – is the correlation, in which the further increase in one variable is associated with the further decrease in the other one. The positive correlation – is the relationship, in which the further increase in one variable is quite associated with the further increase in the other variable. If the correlation coefficient is equal to  $0$ , the two variables are completely independent of each other. So, the correlation is being considered the strong one, if its ratio is above  $0,60$ ; if it is exceeded  $0,90$ , than the correlation is being considered the very strong one. So, the private potentials research of the several separately taken individual regions and the relationship definition between them and the volumes of the investments, by means of correlation coefficient calculation will be helped to be drawn the certain conclusions. If there is the positive correlation between a high enough level, then it will be quite possible to be spoken on the fact, that such factors, as the volume of the mineral mining operations, the number of the economically active population, or the amount of the R & D expenditures are affected upon the region's investment potential, and, therefore, upon the amount of the investments involvement, which is the significant tool in the accelerating rates of the economic growth of the regions and the country, as a whole.

In the course of the carried out research, we have already revealed the various authors' views on the investment potential concept, the impact of the Russia's accession to the World Trade Organization (WTO) on the country's investment potential, and the factors, having affected it. Also, we have already proposed our approach for the potential determination, by means of the impact calculation through the correlation coefficient.

So, the importance and the significance of the investment potential definition of the region and the country, as a whole, are explained to the fact, that the investors, immediately before their money investing, carefully evaluate the potential investment objects.

The approach, having proposed by us, to the factors impact assessing on the investment potential will be enable to be made more versatile analysis of each individually separately taken region, and also to be identified the macroeconomic and the regional risks.

So, the examples of the existing technology parks in Russia (e.g. for example, «Skolkovo», or «The Titanium Valley») are clearly shown the volumes increase of the investments in the innovation.

In their turn, the innovation introduction into the regions' and the country's economy, as a whole, will be permitted to be reached quite the new level of the further social and economic development.

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#### INDICATORS OF DEVELOPMENT INNOVATIVE REGIONAL CLUSTERS IN MODERN ECONOMY

Stepanova E.V.

*Siberian Federal University, Krasnoyarsk,  
e-mail: evstepanova@inbox.ru*

The clusters approach has emerged as an important analytical tool for governments and economic development agencies seeking policy prescriptions to make their economies and firms more competitive. While the cluster approach has traditionally been used for examining national economies it can also be a useful tool in analyzing the dynamics of sub-national or regional economies. However, it is absolutely vital that cluster programs and actions are properly tailored to the individual needs and requirements of any given cluster and the specific characteristics of any given region.

Previously the Russian Federation showed little interest in cluster-based policies at the national level. However, considerable interest is now being shown in the cluster approach at the regional level of the country. There are cluster strategies, conceptions of cluster policies accepted by some regional government in Russia. The main accents in these documents are made on regional innovations. The factors encouraging cluster development and innovations diffusion are presented in Table 1.

Table 1

## Factors Encouraging Cluster Development

Groups of factors	Factors encouraging cluster development
Strong science base	Leading research organizations: University departments, hospitals/medical schools and charities, critical mass of researchers, world leading scientist(s)
Entrepreneurial culture	Commercial awareness and entrepreneurship in universities and research institutes, role models and recognition of entrepreneurs, second generation entrepreneurs
Growing company base	Thriving spin-out and start up companies, more mature 'role model' companies
Ability to attract key staff	Critical mass of employment opportunities, image/reputation as biotechnology cluster, attractive place to live
Premises and infrastructure	Incubators available close to research organizations, premises with wet labs and flexible leasing arrangements, space to expand, good transport links: motorways, rail, international airport
Availability of finance	Venture Capitalists, business angels

Table 1

## Factors Encouraging Cluster Development

Groups of factors	Factors encouraging cluster development
Business support services and large companies	Specialist business, legal, patent, recruitment, property advisors, large companies in related sectors (healthcare, chemical, agro food)
Skilled workforce	Skilled workforce, training courses at all levels
Effective networking	Shared aspiration to be a cluster. Regional trade associations. shared equipment and infrastructure, frequent collaborations
Supportive policy environment	National and sector innovation support policies, proportionate fiscal and regulatory framework, support from RDAs and other economic development

Recognizing different cluster governance structures and coordinating mechanisms can help to guide cluster policy towards the most efficient use of factors encouraging the cluster initiatives. Application of the cluster approach is the most actual at a regional level due to the necessity of close contact between participants of the cluster, that high the regional competitiveness.

Although numerous methods are used to analyze and measure the size and importance of regional clusters, there is no universally accepted method of cluster assessment and measurement.

The purpose of Table 2 to consider the indicators of innovation clusters in regions and in the country.

Practitioners generally favor the use of both quantitative and qualitative analysis towards cluster identification and analysis. This is the approach is

taking to its current research which is attempting to map industrial clusters across the Russian regions. This approach will make use of various official data sources such as the Inter-Departmental Business register (IDBR) as well as close liaison and interviews with local business leaders, RDAs etc. Clearly some clusters are more difficult to define than others.

Knowledge of governance structures and coordinating mechanisms can also guide policy towards the most efficient use of scarce resources, especially as clusters, even in the same location, might have very different characteristics. Finally, the participants of the cluster should try and help localize, deepen, broaden, activity enrich and/or improve the innovative capacity of clusters.

Under this approach clusters are primarily viewed as an analytical device to improve the effectiveness of narrower types of policy tools.

Table 2

## Main types of innovation indicators

Main types	Innovation indicator
Human re-courses	<ul style="list-style-type: none"> <li>– new doctorate graduates per 1000 population aged 25–24;</li> <li>– percentage population aged 30–34 completed tertiary education;</li> <li>– percentage youth aged 20–24 having attained at least upper secondary education</li> </ul>
Open, excellent and attractive research system	<ul style="list-style-type: none"> <li>– international scientific co-publication per million population;</li> <li>– scientific publication among top 10% most cited publications worldwide as % of total scientific publication of the country</li> </ul>
Finance and support	<ul style="list-style-type: none"> <li>– public R&amp;D expenditures as % of GDP;</li> <li>– venture capital (early stage expansion and replacement) as % of GDP</li> </ul>
Firms investment activities	<ul style="list-style-type: none"> <li>– business R&amp;D expenditures as % of GDP;</li> <li>– non-R&amp;D innovation expenditures as % of turnover</li> </ul>
Innovative entrepreneurship	<ul style="list-style-type: none"> <li>– SMEs innovating in-house as % of SMEs;</li> <li>– innovative SMEs collaborating with others as % of SMEs;</li> <li>– public-private co-publications per million population</li> </ul>
Intellectual assets	<ul style="list-style-type: none"> <li>– PCT patents application per billion GDP;</li> <li>– PCT patent applications in social challenges per billion of GDP (climate changes, health)</li> </ul>
Innovators	<ul style="list-style-type: none"> <li>– SMEs introducing product or process innovations as % of SMEs;</li> <li>– SMEs introducing marketing or organizational innovations as % of SMEs;</li> <li>– high-growth innovative firms</li> </ul>

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