Regional conditions, economic performance and quality of management as factors of innovative cluster support in Russia

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The Programme of Russian Pilot Innovative Clusters Support Started 4 Years Ago

Process of pilot innovative clusters selection in 2012

- **94** The total number of cluster applications before April 20, 2012
- **37** Applications that received high expert estimations
- **25** Pilot innovative clusters, selected according to the results of their project presentations to the working group
- **27** The quantity on pilot innovative clusters at the end of 2015

Map of pilot innovative clusters

**Notation conventions:**
- First group (1) of the pilot clusters that first of all are planned to get a special subsidy besides all other forms of government support.
- Second group of the pilot clusters that won’t get the subsidy on the first stage of the cluster program but will be supported through all other instruments.

**Specializations of clusters:**
- Nuclear and radiation technologies
- Aerospace, aviation, shipbuilding
- Pharmaceuticals, biotechnology and medical devices
- New materials
- Chemistry and petrochemistry
- Information technologies and electronics
Volume and Support Areas of Pilot Innovative Clusters programme

Federal subsidy allocation in 2013-2015 by clusters

Federal subsidy allocation in 2013-2015 by costs

- Design and implementation of Cluster development projects
- Market entry services, STI cooperation
- HR training, development, internships
- Exhibition activities (in Russia and abroad)
- Innovative and educational infrastructure development
- Engineering and social infrastructure development
Hypotheses: what affects the subsidy volume apart from the cluster programme characteristics?

1) The total level of regional innovation development and innovation policy quality. The cluster policy aims at picking winners (regions not companies).

2) The cluster size (number of cluster members, total revenues, number of cluster members` employees, investments, R&D expenditures, etc.). Pilot innovative clusters are nationally significant growth points.

3) The quality of cluster management. An indicator which can be influenced in a short-term period.

4) The quality of cluster governance. Satisfaction and growth, private funding and sustainability.

5) Federal authorities` trust in a cluster team (cluster management organization).
Result 1. Regional conditions matter

There is positive correlation between regional innovation level and cluster selection probability (most pilot innovative clusters are located in leading regions in terms of innovation development)

Long-term factors (socio-economic conditions, STI capacity, innovation activity of companies) that are strongly affected by the federal policy and not by current regional government activities, turned out to be most important
Result 2. Engagement is more important than size

There is no positive correlation between cluster size (number of cluster members and employment therein) as well as economic performance indicators (cluster revenues, R&D expenditures, investments) and the subsidy volumes.

Cluster management / governance indicators show ambiguous influence on the scope of public support:

- On the one hand, there is correlation between the subsidy volumes and evaluation / monitoring procedures of the cluster management organization performance as well as satisfaction surveys of the cluster management organization performance. Plus there is positive correlation between the subsidy volumes and the number of cluster management organization employees.

- On the other hand, there is negative correlation with the share of private funding in a cluster management organization budget (the case of Saint Petersburg IT cluster: the higher private funding is, the less subsidy volume is).
Result 3. Reputation matter

There are trust indicators that affect the subsidy volumes: integration with technoparks previously supported by the state, and cluster members` participation in technological platforms. They confirm cluster teams` reputation in terms of fulfilling the requirements of public support programmes.

Positive circle: subsidy – stronger team – better projects – good reputation – more subsidy (path dependency?)

Meanwhile there are some trust indicators of less importance: top universities and SOEs among cluster members, the volume of subsidies allocated from the federal budget to support regional innovation infrastructure. Possible reasons: these entities are less innovation active, their role in cluster development is less estimable, and their budgets are less subsidy sensitive.