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CLUSTER STRATEGIES IN RUSSIA AND FRANCE: COMMON OBJECTIVES, SPECIFIC PATHS

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Abstract. Clusters and cluster strategies are considered as pivotal elements of our global knowledge-based economies. The paper focuses on the Russian and French cases. The two countries have a lot of similarities, important resources in research and development, in technology, a top-down tradition on public policy. They face the same challenges; the necessity to deepen knowledge-based processes to foster innovation, to improve the relations between research and industries, between research institutions, large firms and SMEs. The paper analyses the cluster strategies implemented in the two countries, which display common objectives but specific paths.

Key words: Cluster, cluster strategy, industrial policy, pilot cluster, competitiveness cluster, Russia, France

Introduction

Clusters are considered as pivotal elements of our global knowledge-based economies. They simultaneously conceptualize and concretize the places where economic activity is implemented, where the competitiveness of nations is built (Porter, 1989), the level where public policy has to be implemented. Cluster strategies subsume regional policies, industrial policies or science and technology policies, and appear as the preferred modalities to favor the competitiveness, attractiveness, economic and technological performance of the territories, and therefore of the Nations. In short, the product 'Globalisation = Permanent Innovation * Increased Competition' sums up the context (Longhi, 2005) that has induced an increased territorialisation of activities. Paradoxically, the more the "global, interdependent approach to markets and global management of activities characterized by multiple territorial differentiation" (Veltz, 1996) has increased, the more the local has gained in importance. The emergence of new generic technologies has opened the frontier of the firms and led to the significant development of relationships between firms in all sectors of activity, to the growing importance of their embeddedness in clusters.

Clusters are part of an analytical framework build in Porter's *The Competitive Advantage of Nations*. They have been adopted by the academics as well as the public institutions as 'the' solution to a wide range of problems. According to Porter's (1998) definitions, a cluster "... represents a kind of new spatial organizational form in between arm's-length markets on the one hand and hierarchies, or vertical integration, on the other...". It is a "geographic concentration of interconnected companies, specialized suppliers, service

providers, firms in related industries and associated institutions (for example, universities, standard agencies and trade associations) in particular fields that compete but also co-operate. (It is) a form of network that occurs within a geographic location, in which the proximity of firms and institutions ensures certain forms of commonality and increases the frequency and impact of interactions" (Porter, 1998). The role of clusters to create and sustain competitive advantage has been largely acknowledged in the literature (Porter, 1989, 1998; Malmberg and Maskell, 2002; Martin and Sunley, 2003; Menzel and Fornah, 2009; Parrilli, Fitjar, Rodriguez-Pose, 2016; Longhi, 2016). Clustered firms have been shown to grow and innovate faster than non-clustered ones (Audretsch and Feldman, 1996). But these processes are neither straightforward nor automatic.

Many studies have shown that the creation of knowledge is less and less an isolated process internal to individual firms but a collaborative process involving networking of heterogeneous organizations (Caloffi *et al.*, 2012) often embedded in specific areas. The increase of the R&D content of products and the enlargement of the diversity of required knowledge have led firms to substitute multipolar structures or even integrated networks of R&D to the traditional central laboratories of research, i.e. to locate facilities close to competences required by the innovation process, at the world level (Gassmann, von Zedtwitz, 1999). Innovation is an intrinsically territorial, localized phenomenon, highly dependent on resources which are location specific. It is basically a problem-solving activity, which calls for multiple skills and for confrontations of non-formalized knowledge which continuously reshape the solutions. Proximity appears pivotal because of the non-formalized nature of the activity. But geographical proximity does not imply interactions. Incentives have often to be drawn to favor their emergence. Knowledge is far from 'being in the air' in existing clusters (Cassi, Plunket, 2013), it cannot be assumed beforehand that all firms in a cluster are involved in local networks of collective learning (Breschi, Lissoni, 2001; Bell, Giuliani, 2005; ter Wal, 2013). Some firms can be excluded from the processes of collective learning because of competition, some others can simply lack of the absorptive capacity (Cohen, Levinthal, 1990; Lazaric *et al.*, 2008) necessary to enter in these processes. Many dimensions of proximity have to be considered to access knowledge, geographical but also organizational or cognitive (Nooteboom *et al.*, 2005; Boschma, 2005) which can account even more than co-location. Clusters can only contribute to economic or innovative efficiency if there are other shared dimensions (cognitive, technological, etc.).

The cluster strategy is a local modality to address these challenges and open and adapt the economy to globalization. The implementation of cluster policies as relevant for firms to cope with the challenges of the knowledge-based economy as well as the growing complexity of technology management has been promoted worldwide. Cluster policies, cluster strategies, cluster development programs... have been actively developed (Uyarra, Ramlogan, 2012; Giuliani, Pietrobelli, 2011) "to promote economic development by forming and strengthening inter-organizational networks". They often consist on "increasing top-down pressures on regions or local areas to position themselves" (Kiese, 2006), i.e. to build projects of development based on their technological capabilities or knowledge bases, the definition and governance of the projects being entrusted to firms and research institutes, the heterogeneous actors involved in the processes of creation of knowledge and innovation. The emergence of such policy instruments calls for the development of appropriate tools for their evaluation.

The paper will focus on cluster policies implemented in Russia and France. The two countries have a lot of similarities, important resources in research and development, in technology, a top-down tradition on public policy. They face the same challenges; the necessity to deepen knowledge-based processes to foster innovation, to improve the relations between research and industries, between research institutions, large firms and SMEs. SMEs particularly are often excluded from the networks underlying the innovative processes. The second and third sections will present the strategies implemented in the two countries, which display common objectives but specific paths. The last section concludes. The cluster policies have subsumed industrial, regional, technological policies to address the challenges facing modern economies, competitiveness and attractiveness in a global economy. This policy has produced interesting results, still it is shown that it must be combined with vertical designs towards coherent and integrated industrial policies, Russia as well as France are beginning to develop these renewed industrial policies.

Pilot Clusters in Russia

The challenges addressed by the cluster policies are of particular relevance for Russia. Indeed, the history of its industrial and technological development has been driven by "territorial production complexes, networks of industrial organizations" (Zemstov *et al.*, 2016). The country has important economic resources spread over the territory, important technological capabilities in different industries, an efficient educational system focused on science and technology, important basic research assets (OECD, 2011). Still barriers seem to constrain the interactions necessary to feed a knowledge-based economy. As summarized in Gupta *et al.* (2013), "The country has a well-developed education system, particularly in science, technology, engineering, and mathematics fields, and proportionally graduates more scientists and engineers than most Organisation for Economic Co-operation and Development (OECD) countries (on par with Sweden and Finland). Russia also spends more on research and development (R&D) than most emerging economies. However, innovation indicators show a large imbalance between the input to knowledge creation processes (public resources) and the output of innovation" (Gupta *et al.,* 2013, iii). Russia has thus engaged since decades now in the transition from a resource-based economy to a knowledge-based economy, as far as it is the acknowledged foundation of future wealth and social and economic progress. Different policy measures and laws have been implemented in the last decades. Still obstacles towards innovation, weak linkages between sectors and regions and within the science and technology community (Gokhberg & Roud, 2012) had to be dealt with. Accordingly clusters and cluster strategies have been acknowledged as the basic objects to enhance innovation and a knowledge-based economy.

The development of clusters has been determined as one of the priorities of the Strategy of Innovative Development of the Russian Federation for the period to 2020 which was confirmed end 2010. The Ministry of Economic Development has initiated the creation of Centers for Cluster Development since 2010. Such Centers are institutions initiated by regional executive bodies in order to encourage efficient cooperation between SMEs, educational and research institutions, non-profit and non-government organizations, public authorities, local self-government bodies and investors so that to implement joint regional cluster programs (Tyuleneva, 2013). In the framework of the Strategy of Innovative

Development of the Russian Federation the first national cluster program was launched by the Ministry of Economic Development of the Russian Federation at 19 March 2012 (Kutsenko and Meissner, 2013).

In total, ninety-four applications have been received by the cluster program, and thirty-seven received high expert estimations. Nevertheless, the Russian Government approved only a list of twenty-five pilot innovative regional clusters which won support from the federal budget for infrastructure development (Kutsenko and Meissner, 2013) due to their potential and the quality of the application. But based on the proposals' level of development and potential, the approved clusters were divided into two groups:

Group 1: fourteen clusters with well-developed proposals and high potential, which received RUB 1.3 billion by 2013.

Group 2: eleven clusters with development programs that need further work, financed from 2014 onward.

Two additional pilot clusters have been added in a second round.

Innovation clusters are located generally in regions with the high level of innovative development (Kutsenko, 2015; Zemtsov *et al.*, 2015) according to the rating of the Association of Innovative Regions of Russia (Zemtsov *et al.*, 2016). They are largely located in areas with a high concentration of scientific and manufacturing activity: the Central, Siberian and Volga Federal Districts, as shown in the following map (Fig. 1).

The definition of the contest as an instrument to reveal innovative clusters and local capabilities has been very similar to the processes implemented in the E.U., and particularly to the "Competitiveness Clusters" strategy implemented in France and detailed *infra*.

The issues at stake were also very similar to identify the innovative clusters, but also to implement cluster strategies to solve different brakes constraining efficiency of the national innovative system: the relations between research and industry, and the involvement of the SMEs in the innovative processes.

The process of selection has followed a "top–down–top" approach in the two cases, a combination of *exogenous* and *endogenous* processes. As described in Kutsenko (2014), federal authorities launch a call, local actors build common strategies and collaboration projects, regional governments approve the relevant projects, and finally the federal government select the best cluster projects; when the share of rejected applications has been of 73% in Russia, it has been of 32% in France for instance. Nevertheless in France the effective selection has been implemented according different methods through the modes of financing. A "Competitiveness Clusters" is not a financed "Competitiveness Clusters".

According the analysis of the clusters (Kutsenko, 2015; Kutsenko *et al.*, 2017; Zemtsov *et al.*, 2015, 2016), the pilot projects have mostly benefited to existing large companies, the SMEs are supported by regional clusters development centers and benefits from different services. But the SMEs very often participate in the clusters formally, in paper, but are not involved in cluster R&D projects and innovative processes, and are often excluded from higher level of cluster governance. The same is true in France regarding governance, as the firms have to allocate human resources to the governance body of the clusters, large firms can afford, but SMEs cannot on the same scale. Nevertheless, as underlined *infra*, they are involved in the different local commissions dedicated to share information and knowledge, and in the different knowledge platforms usually implemented by the clusters. Above all, the R&D projects HAVE TO include SMEs and universities

or research institutes to pretend to subsidies. This explains that 80% of the program participants are SMEs, which received half of the budgets. This involvement has not been spontaneous, the incentive process and the constraints on the design of the R&D projects have clearly induced it.

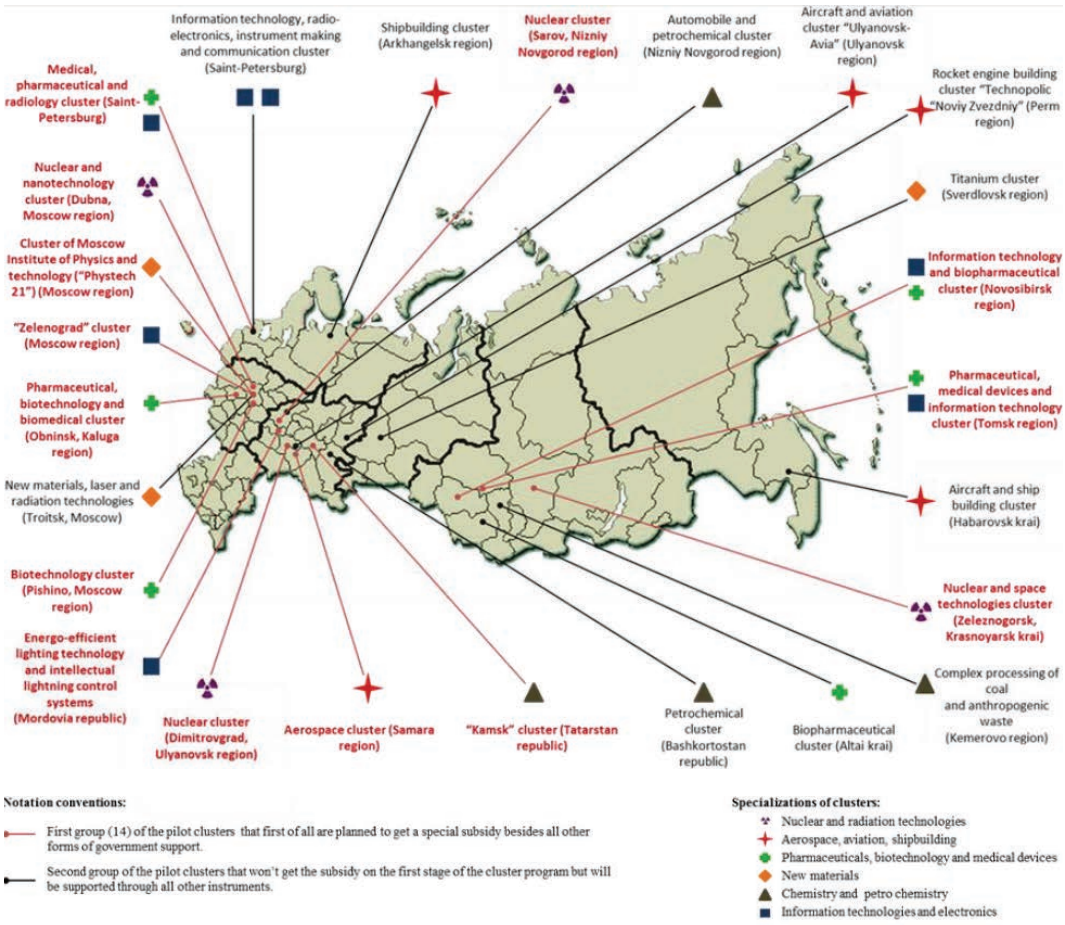

Fig. 1. Russian Pilot Clusters

Source: Abashkin et al., 2012.

As reported in Kutsenko (2015), a survey of 17 of the 25 pilot clusters in Russia carried out at the end of 2013 revealed the most pressing activities of specialist organizations, joint scientific, research, design and experimental projects, joint innovation projects, contacts between employees in different organizations and identification of potential areas for collaboration. Nevertheless, Kutsenko (2015) considers that "Russian clusters have not yet reached a critical mass of core participating companies" and highlights the important diversity of the pilot clusters.

The pilot clusters approved list includes clusters in the following broad areas of technology: Nuclear and radiation technologies (5 pilot clusters), Production of aircraft and spacecraft and ship building (5), Pharmaceuticals, biotechnologies and the medical

industry (6), New materials (3), Chemical industry (4), Information and communication technologies and electronics (6).

The sectorial orientation of the pilot clusters in Russia operates in high-tech industries, but the existing opportunities to benefit from the existing cluster potential are larger, and should be exploited in the new arrangements. It will be necessary to go beyond a "one size fits all" dimension of the public intervention, as implemented through the activity of the Centres for Cluster Development (HSE Russian cluster observatory 2016) or after the Law on Industrial Policy (Federal Law No. 488-FZ) of 31 December 2014.

The French policy of Competitiveness Clusters in France

The French equivalent of the Pilot Clusters has been the Competitiveness Clusters implemented from 2004. As already underlined, the number of applications has been comparable in the two programs, but the selection has been very severe in Russia compared to France, 27 against 71 selected projects. Nevertheless, in Russia selected clusters could spend federal subsidies mainly on improving innovative infrastructure development in territories of their location (Abashkin *et al.*, 2012; Zemtsov *et al.*, 2016; Kutsenko *et al.*, 2017), when in France, the real selection has been made through R&D projects to be implemented in the Clusters. The label "Competitiveness Cluster" did not open any significant subsidies; subsidies came through a second step, the selection of collaborative R&D projects submitted by the different Clusters on dedicated calls. This process of selection has been severe; it has implemented a process of self-selection of the innovative clusters through their capacity to build effective collaborative projects.

How then the new policy aiming at the emergence of competitiveness clusters has been implemented? At its meeting of 14 September 2004, the National Spatial Planning and Development Council (CIACT)[1] decided to issue a call for projects for the purpose of selecting competitive clusters. The call embodies the new French industrial policy, merging regional, industrial, R&D and science and technology policies to face the challenges of the globalisation and the knowledge-based economies. It has not been drawn on a specific and limited focus, to leave a maximum of initiatives to the potential respondents and let the economic agents to build dedicated projects depending on their own characteristics.

A Competitiveness Cluster is defined as the combination on a given geographic space of firms, training institutions and public or private research centers engaged to generate synergies in the execution of shared **innovative projects**. **The partnerships can be organized towards a market or a scientific and technological domain.**

To receive the label, a project is required to meet a list of specifications defined in November 2004 by the French government. There are four key criteria detailed in the call for projects:

— **a development strategy** that remains consistent with the economic development of the cluster; the area related to the Competitiveness Cluster is endogenously defined by the project, and not given *a priori* according whatever administrative definition; a critical mass is implicitly necessary;

[1] The National Spatial Planning and Development Council (CIACT), chaired by the Prime Minister, sets the government's guidelines for spatial planning and development.

— a sufficient **international visibility**, in terms of industry and/or technology;

— a **partnership between the different actors of the project** and a structured, operational mode of governance;

— the capacity to generate **synergies in R&D**, resulting in the creation of new wealth with high added value.

At the meeting of 12 July 2005, the Council attributed the Competitiveness Cluster label to 66 local areas out of a total of 105 applications. This number has then increased to 71 after new creations in further calls, merging of existing Clusters, and deletion of others after different evaluation processes of the policy. The last phase has been launched for the period 2013—2018, with a new ambition fixed by the government, to be more focused on economic market outcomes and employment. They are expected to become "factories of products for the future", to transform the collaborative R&D projects into innovative products, processes or services to address the markets.

R&D projects are the Competitiveness Cluster's core activity and constitute the main factor of their so-called competitiveness. They are the pivotal issue regarding financing.

Indeed, the French cluster policy mixes two selection processes, a first type of call addressing the selection of the Competitiveness Clusters, and a second type of call addressing the selection of R&D projects implemented by the selected Clusters. Subsidies are attached to the second type of call.

The Cluster selection process has resulted in the following map (Fig. 2).

The process of selection has been very loose; nevertheless different categories have been defined by the CIACT: the g**lobal competitiveness clusters (only 7), the competitiveness clusters with global vocation (14), and n**ational oriented **competitiveness clusters.** The three categories underlie important differences. They have not the same economic potential, and moreover the same capacities of R&D. Actors are not the same nature in terms of innovative capacities, in terms of involvement in (global) innovative networks.

As emphasized, the territory, the frontiers related to the competitiveness clusters are endogenous, they embrace the project of development designed in the Cluster project, and the place-based resources involved in the project. The Competitiveness Cluster is discontinuous, the frontier does not follow a region, an administrative area, it follows the location of the stakeholders that have built and are involved in the project of Cluster. For instance, in the next figure 3 of four Competitiveness Clusters of the region PACA (out of 10 existing ones), new definitions of the territory emerge. The territory is discontinuous and is also some kind of "millefeuilles", made of more or less overlapping layers (Fig. 3).

R&D projects are thus the cluster's core activity and constitute the main factor of their so-called competitiveness. They should involve all the potential actors of the cluster in a process of growing innovative capabilities and competitiveness of the firms, especially the SMEs which face traditionally in France problems of access to the R&D resources. The project should also boost the research institutes. Indeed the projects have to include at least two firms (on which one SME) and a research institute in order to pretend to a label from the Competitiveness Cluster. These projects are the engine of the working of the Clusters and thus the pre-conditions of the success of this policy. The subsidies to the Clusters are not pre-determined, they flow from the R&D projects that have gained subsidies in the calls addressed. Consequently, some Clusters can fail to raise any subsidies if their projects are not selected in the calls.

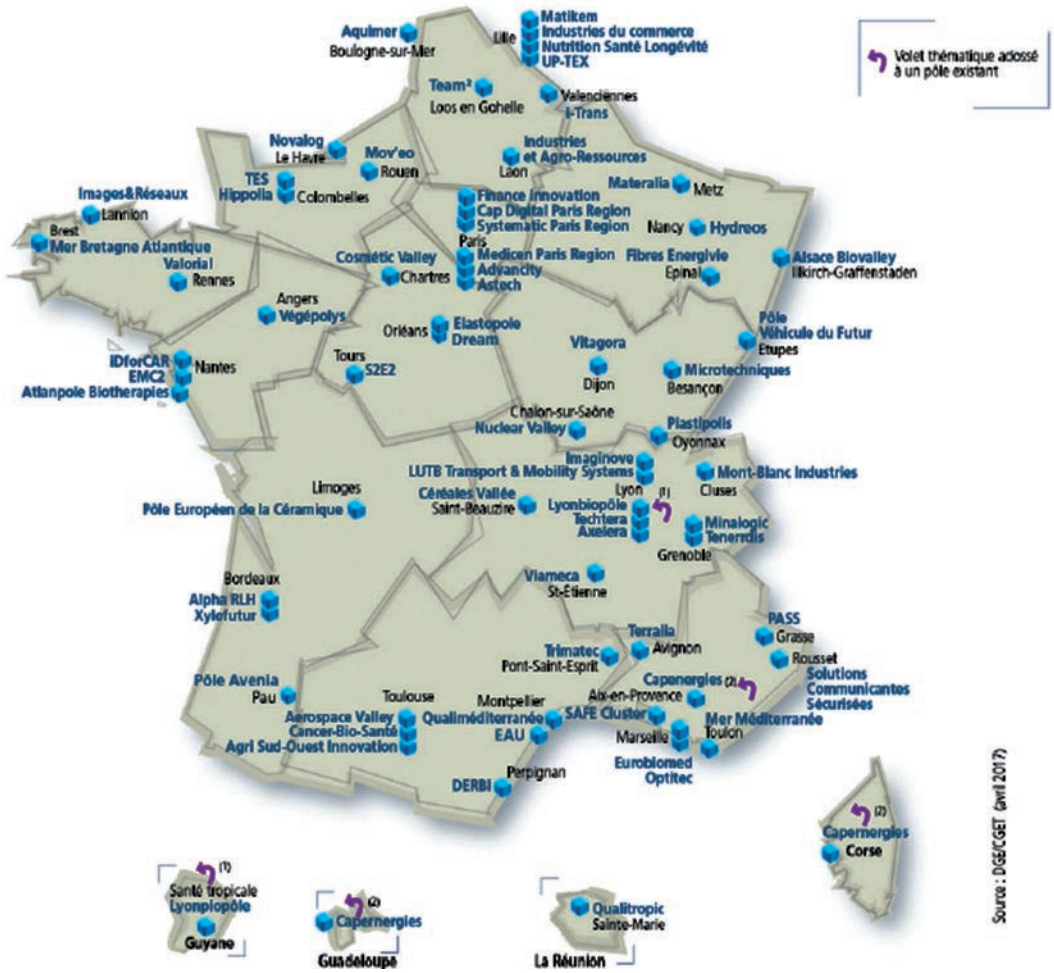

Fig. 2. Map of the poles April 2017

Source: competitivite.gouv.fr/

The governing entities of the Clusters are usually organized in Association (non-profit organizations), their own legal entities, partly financed by the State or the local governments, partly by the activities they create.

The main missions of the Association are to define and implement the overall project of development of the Competitiveness Cluster, and to **foster, evaluate and select ("label") R&D projects** submitted for public financing dedicated to the competitiveness cluster policy. In addition, this governance body will have to organize their relation with other national or international clusters. The organization of this governance has been an important effort asked to the firms, as they had to invent the whole processes and rules governing the Clusters. The criteria to evaluate and select projects had to be drawn and important resources invested in the working of the poles; this important implication has prevented SMEs to be totally involved in the governance of the Clusters, they often ignore the mechanisms and opportunities offered. In contrast with the "Grands Programmes" or the Defense budget, usually large firms oriented, all the actors are theoretically eligible

to the R&D budgets, and specific actions should be defined to associate small firms, but this aspect of the policy is certainly the more difficult to implement.

The results summarizing the different calls have two faces: a positive, as a significant number of projects has been implemented, and a negative, 6 Competitiveness Cluster for instance had no project at all during the first period, that is they do not have any reality and can be considered as vacant spaces regarding R&D. And one can expect, the distribution of the R&D projects among the Clusters is heavy tailed, some have a lot of successful projects, most have few or no projects at all. As emphasized, there is an important discrepancy between the number of projects financed and the number of Clusters concerned; the 7 global Competitiveness Clusters — out of 71 — gathers more than the half of the financed project. Often, two or three Clusters outperform overly the other ones in a call; the results in terms of budget would certainly increase these discrepancies.

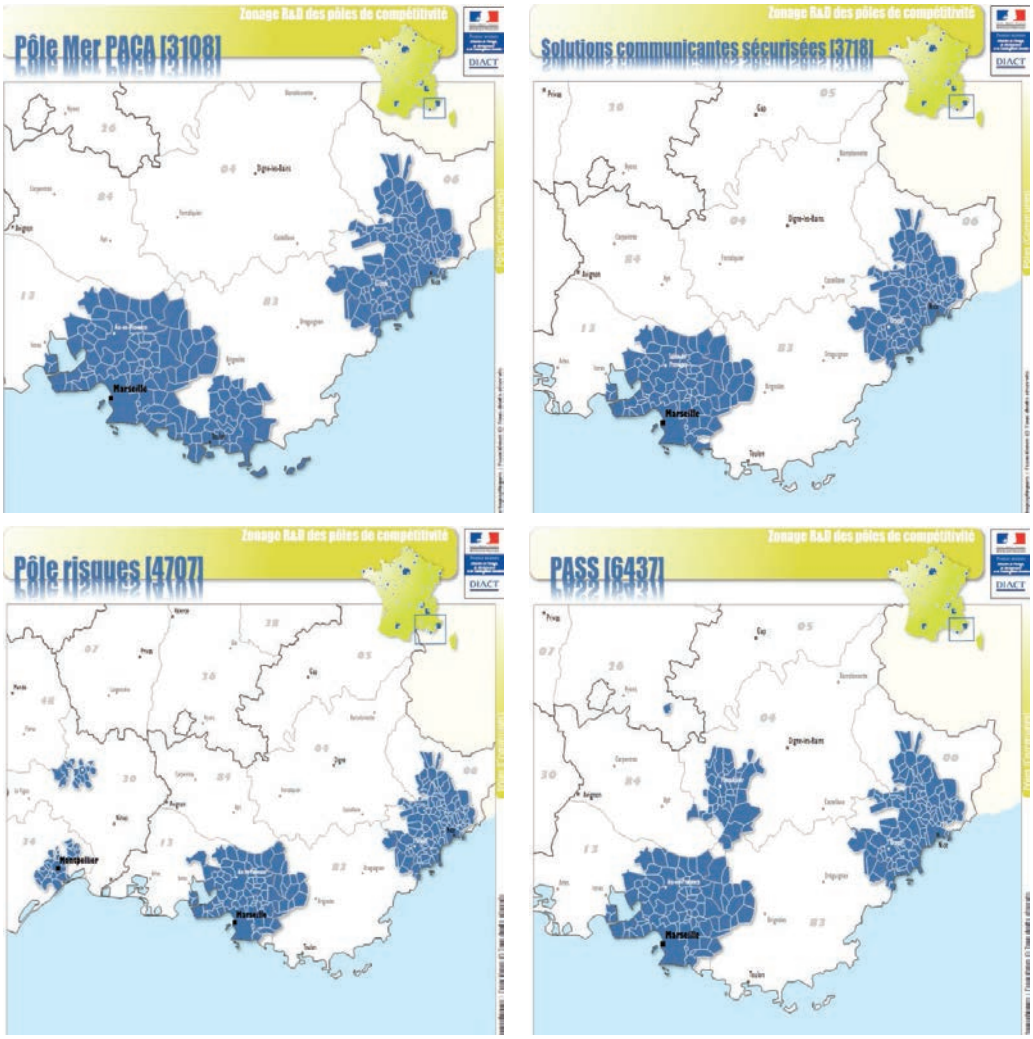

Fig. 3. Competitive Clusters of the Region PACA

Source: competitivite.gouv.fr/

The government has thus not been very restrictive in the selection of Competitiveness Clusters, but the selection has been made 'endogenously' through the R&D projects the Clusters have been able to build locally and to defend at the level of the CIACT. The governance structure implicit to carry out this task is in fact very heavy; different commissions must be built to give rise to projects, to gather potential partners, to reinforce the projects, to select them locally and present them to the calls of the government. Given that these governance bodies are fed by the firms and are very demanding, some firms, the large ones generally, have in some sense appropriated these structures and govern the Clusters they belong to.

The following figure 4 results from an analysis of the first calls and is particularly illustrative of the outcomes of the policy. Fourteen calls had been launched by the Fund and 1659 participations of the different Clusters in the selected R&D projects can be noticed. The result summarizing the different calls has two faces. A positive, as a significant number of projects has been implemented. A negative, most of the Clusters have been able to gain financing for only few or even no projects at all, that is to say, they do not have any economic reality and so they can be considered as vacant spaces regarding R&D. The distribution of the R&D projects among the poles is heavy tailed, some Clusters concentrate most of the FUI projects and the subsidies allocated to the policy.

The 71 Competitiveness Clusters gather most of the sectors of activity across the whole French territory. Nevertheless the selection of R&D projects has restricted the selection to high tech industries largely equivalent to the ones found in Pilot Clusters (Aeronautics-Space-Defense, Sea / Biotechnology, Health / Energy / ICT, Image, Networks / Chemical / Microtechnics / Risk / Finance) and located in the main metropolitan areas (Fig. 4).

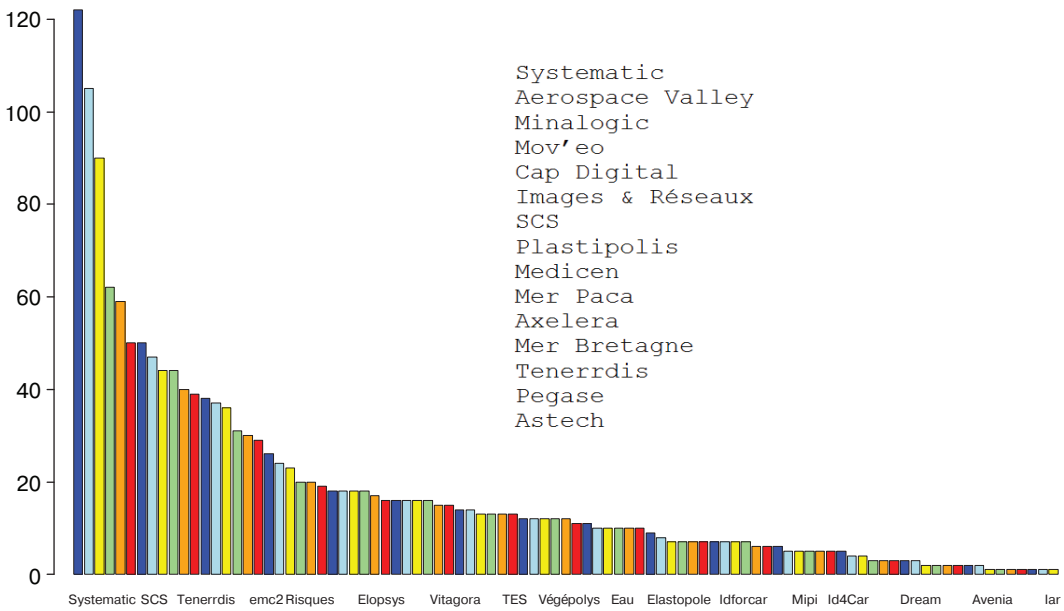

Fig. 4. Distribution of the Competitiveness Clusters participation in the R&D projects

Source: Author calculation from http://competitivite.gouv.fr/

The processes underlying the cluster strategies have been very different in Russia and France, still the effective outcomes after the selection processes appear very close regarding the technologies and the locations, high tech activities located in restricted metropolitan areas. The main differences rest in the destination of the subsidies, from infrastructures to R&D projects.

Conclusion

Pilot Clusters and Competitiveness Clusters have been implemented in Russia and France to foster the emergence of a knowledge-based economy and enhance increased innovation and wealth creation. The countries are endowed with important science and research resources, industrial potential, but have to improve the relations of the heterogeneous actors involved in the contemporaneous innovation processes, i.e. research institutions, large firms, SMEs... The incentives and the implementation of the policies, the selection processes, have been somewhat different in the two countries, but have equally resulted in positive effects in some clusters regarding their governance, the implementation of collaborative projects. They have also faced inconsistencies in different cases, as the "one size fits all" argument apply, particularly in the French case.

The Clusters have been selected according a self-identification process, but the policies do not cover the diversity of existing clusters in the two countries. In Russia, analytical identification (Zemtsov *et al.*, 2015, 2016) and the works of the Russian cluster observatory (HSE, 2016) have evidenced a lot of initiatives. In France the DATAR[1], the region, many institutions have also identified many other cases. Thus many other programs have been developed in existing clusters, and innovation policy has gone hand in hand with the creation of science parks, innovative centers, technoparks, technopoles, business incubators with the hope of creating local spillovers. Nevertheless, these programs and initiatives can raise inconsistencies. And cluster strategies consist mainly of *horizontal* measures and *neutral* policy aimed at improving general framework conditions and capabilities (good universities, human capital, intellectual property rights, research and ICT infrastructure, competition and openness, and so on). These policies have been important to foster local innovative processes, but new policies have emerged which retains this emphasis on horizontal measures but adds a more *vertical* and *non-neutral* logic of intervention; that is to say a process of identification and selection of desirable areas for intervention, implying choices of technologies, fields, sub-systems that could be favored within the framework of the regional policy. This *horizontal* and *vertical* mix underlies the integrated industrial policies developed

In Russia the cluster strategy change arose after the Law on Industrial Policy (Federal Law No. 488-FZ) of 31 December 2014 and the various resolutions promulgated thereafter, which defines a set of legal, economic and organizational measures aimed at developing the industrial potential of the Federation and ensuring the production of competitive products. It lists the various aids and supports in the fields of research, technology and

[1] DATAR: Délégation interministérielle à l'Aménagement du Territoire et à l'Attractivité Régionale. The DATAR has been very important in the implementaon of local development in France. It had been removed with the decline of public policies in the eighties, and re-created recently; its missions are since April 2014 under "Commissariat général à l'égalité des territoires". (CGET)

innovation, industry, foreign trade, and the various financing modalities at the federal, regional and local levels. The Law is complemented by the S&T Foresight 2030, a fully-fledged study targeted at the identification of the most promising areas of S&T development in Russia towards 2030 to ensure the realization of the nation's competitive advantage (Sokolov and Chulok, 2014). As highlighted by Sokolov and Chulok (2016), in the last decade, the Russian STI policies have undergone significant changes primarily related to the coverage of actors concerned and the spectrum of the instruments used: support to the national research centers and research universities, cooperation of academic institutions with industrial enterprises and companies, recruitment of leading foreign scholars to Russian universities, development of the innovation infrastructure at the academic institutions, forming programs of innovation development for large state-owned companies, technological platforms, innovation territorial clusters creating a set of development institutions.

The cluster strategies implemented by the regions have to be in line with the Law on Industrial Policy of 2014. Indeed, on 31 July and 4 August 2015, the Government adopted Resolution No. 779 on industrial clusters and Resolution No. 794 on industrial parks to support and promote the development of a competitive industry. Incentives, including financial support, are also created for clusters, industrial parks and their governance structures for projects in line with the expectations of industrial policy. This conformity is established by the competent authorities appointed by the Government and projects can be renewed every three years. The cluster strategy is therefore now directly embedded in industrial policy, in line with the different dimensions of innovation and knowledge creation processes.

In France the cluster strategy is also evolving in the same vein, but the relevant dimensions regarding integrated industrial policy is no more France but Europe and the regions. Inedd, recently, the European Commission has re-organized its whole policy framework to cope with "smart, sustainable and inclusive growth". It has defined a "Europe 2020 strategy" which covers all the programs developed by the Commission under the same goals and is thus about delivering growth that is: smart, through more effective investments in education, research and innovation; sustainable, thanks to a decisive move towards a low-carbon economy; and inclusive, with a strong emphasis on job creation and poverty reduction (European Commission, ec.europa.eu/europe2020).

Horizon 2020, dedicated to Research and Technology, gives the general framework to be adopted and developed in Europe, and set five objectives — on employment, innovation, education, social inclusion and climate/energy — to be reached by 2020. It focuses for instance on "Industrial Leadership", investing on key enabling technologies to strengthen EU competitiveness, stimulate economic growht of EU companies, in particular SMEs; Member States or regions have to adopt their own national targets in each of these areas. Concrete actions at EU, national and regional levels underpin the strategy. National and regional governments should, accordingly, develop Smart Specialisation Strategies to maximize the impact of Regional Policy in combination with other Union policies (Foray, 2014). Regional policy or cluster policy are no more independent of others, they have to be linked to Horizon 2020 and others European policies. Even more, the definition of a Smart Specialisation Strategy is a conditionality clause for European structural fund attribution. The regions have *ex ante* to build their

strategies within the thematic objectives selected by Europe 2020, whatever their relative gdp, their location as cores or peripheries of the European landscape. Smart specialisation involves a *self-discovery* or *entrepreneurial discovery process* that reveals what a country or region does/will do best in terms of R&D and innovation. Rather than being a strategy imposed from above, smart specialisation involves businesses, research centres and universities working together to identify a region's most promising areas of specialisation, but also the weaknesses that hamper innovation. It takes account of the differing capacities of regional economies to innovate. While leading regions can invest in advancing a generic technology or service innovation, for others, investing in its application to a particular sector or related sectors is often more fruitful.

Pilot and Competitiveness Clusters were clearly close policies dedicated to the emergence of knowledge-based and innovative dynamics in Russia and France. New strategies are emerging focusing on the same targets, combining horizontal and vertical strategies. Again close policies have been defined in Russia, through the Law on Industrial Policy and the S&T Foresight 2030, and Europe, and thus France, through Europe 2020 and the Smart Specialisation Strategy. A future field of research to complement the first step implemented in this paper will be to address the similarities and specificities, as well as the results of these integrated industrial policies.

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СТРАТЕГИИ КЛАСТЕРОВ В РОССИИ И ФРАНЦИИ: ОБЩИЕ ЦЕЛИ, ОСОБЕННЫЕ ПУТИ

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Кластеры и стратегии их развития рассматриваются как ключевые элементы нашей глобальной экономики, основанной на знаниях. В статье основное внимание уделяется российским и французским кластерам. У двух стран есть много общего, важные ресурсы в области исследований и разработок, технологии, нисходящая традиция государственной политики. Они сталкиваются с теми же проблемами; необходимость углубления процессов, основанных на знаниях, для стимулирования инноваций, улучшения отношений между научными исследованиями и отраслями промышленности, между исследовательскими институтами, крупными фирмами. В статье анализируются стратегии развития кластеров, реализованные в двух странах, которые показывают общие цели, но особенные пути.

Ключевые слова: кластер, стратегия развития кластеров, промышленная политика, экспериментальный кластер, кластер конкурентоспособности, Россия, Франция

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