

Competitive Regional Clusters: National Policy Approaches

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Introduction

Nations and regions are struggling to remain competitive and adapt in the context of globalisation. The regional specialisations built up over decades are transforming rapidly. Many regions that were historically production centres are losing out to lower-cost locations and are reorienting their activities to higher value-added non-manufacturing industries or R&D-intensive manufacturing niches. Yet, given that even some of these upstream activities have begun to be off-shored to lower-cost OECD and non-OECD countries, the question for policy is how durable are the competitive strengths on which regional economies are based.

The public sector response has been an increased attention to the importance of linking firms, people and knowledge at a regional level as a way of making regions more innovative and competitive. This new approach is visible across a number of different policy fields. Evolutions in regional policy, science and technology policy and industrial/enterprise policy are converging on the objective of supporting these linkages at the regional level. One of the vehicles commonly used to achieve these goals is to support “clusters” (concentrations of firms and supporting actors) in a particular region. Examples of such programmes include the *Pôles de Compétitivité* in France, the Centres of Expertise in Finland or Japan’s Industrial Clusters.

While national governments are seeking to support competitive regional clusters, they are faced with a series of important choices. Should the public sector support specific clusters or simply focus on framework conditions and the innovation environment more generally? Should resources be spread across a large number of clusters or be concentrated on only a few of the nation’s leading regions? Is the ultimate goal to preserve employment in industries that are delocalising or to cultivate sectors of strategic importance in terms of technology? ■

What are clusters and why do policies seek to support them?

Economists have long noted that specific places specialise in particular activities and that firms engaged in the same or related activities tend to cluster together increasing productivity. While some definitions of clusters lack a spatial dimension, most definitions support the idea that a cluster includes firms and other knowledge-producing agents in a geographically concentrated area with inter-linkages among them. A number of other terms are used by academics and policy makers to describe related phenomena, such as industrial districts, networking, systems of production or, for the broader environment, a regional innovation system.

While the definition of a cluster remains subject to debate, national programmes based generally on a cluster model continue to be prominent and are adapted to an increasingly wide variety of contexts. As a result, there is renewed policy interest in supporting clusters. These programmes use a range of cluster-type definitions and approaches. Nevertheless, they start from common assumptions about the value of the agglomeration of firms and the importance of connecting resources in a given place.

A number of basic motivations lie behind public support for clusters. There is quantitative evidence that many industries remain relatively concentrated in specific regions and that firms and research generators in proximity can out-perform their counterparts located in less rich environments. Countries are seeking to strengthen or replicate the success factors that have encouraged the concentration of innovative firms associated with the new economy, as exemplified by Silicon Valley. They are also looking for instruments that can help maintain employment and promote restructuring and adaptation in other sectors.

Furthermore, clusters are a convenient and pragmatic organising principle by which to focus resources and build partnerships. A clear rationale for the public sector to support clusters concerns the transaction costs and co-ordination costs in bringing the appropriate actors together.

Nevertheless, there are risks related to the use of a cluster approach generally, as well as more specific risks relating to the design of these programmes. Insufficient economic diversification, lock-in (being tied by long-term investment strategies to supporting specific sectors and being unable subsequently to change track) or over-reliance on key firms are among the dangers associated with the cluster approach. Other concerns relate to how effective the public sector can be in identifying instruments that can help firms to react to very rapid changes in global markets and production systems. ■

What are cluster programmes trying to achieve?

National and EU level programmes to support clusters and regional specialisation originate from one of three main policy families: regional policy, science and technology (S&T) policy or industrial/enterprise policy. All three policy areas have undergone changes in policy orientation away from a top-down and single-sector approach towards policies that favour co-operative, multi-actor and often place-based approaches (see Table 1). These trends have supported increased policy interest in programmes to

develop or strengthen regional specialisation and cluster development with an ultimate goal of improving competitiveness and innovation capacity.

Cluster policies linked to regional policy often focus on “lagging” regions, including regions undergoing industrial restructuring and geographically peripheral regions. In addition, several initiatives originating in other policy families have incorporated a clear regional dimension, reflecting the recent emphasis in science and technology and enterprise policy on the importance of regions.

Several of the more recent cluster/regional specialisation programmes were born from science and technology (S&T) policy. They promote collaborative research and development (R&D) to support growth of the most promising technology sectors in regions where these sectors are concentrated. Albeit in theory spatially neutral, in practice such policies often focus on specific geographic areas where key institutions, researchers and firms are clustered.

Industrial policies with cluster programmes tend to focus either on the drivers of national and regional growth or focus on the needs of small and medium enterprises (SMEs). The cluster approach provides a more transparent, inclusive and potentially less trade-distorting framework for efforts to strengthen strategic sectors than the prior policies of supporting large and often state-owned firms. Programmes to support clusters of SMEs started as early as the 1980s and tend to focus on building critical mass for export, access to information and technology absorption. Programmes that focus on disadvantaged regions also tend to be closely linked with SME policy.

Most national programmes in OECD countries link more than one policy stream, either explicitly or implicitly. A notable trend is the emergence of innovation as an objective in policies other than those directly related to S&T policy. A few programmes integrate all three policy streams – regional,

Table 1.
POLICY TRENDS
SUPPORTING CLUSTERS
AND REGIONAL
INNOVATION SYSTEMS

Policy stream	Old approach	New approach	Cluster programme focus
Regional policy	Redistribution from leading to lagging regions.	Building competitive regions by bringing local actors and assets together.	<ul style="list-style-type: none"> • Target or often include lagging regions. • Focus on smaller firms as opposed to larger firms, if not explicitly then <i>de facto</i>. • Broad approach to sector and innovation targets. • Emphasis on engagement of actors.
Science and technology policy	Financing of individual, single-sector projects in basic research.	Financing of collaborative research involving networks with industry and links with commercialisation.	<ul style="list-style-type: none"> • Usually high-technology focus. • Both take advantage of and reinforce the spatial impacts of R&D investment. • Promote collaborative R&D instruments to support commercialisation. • Include both large and small firms (often spin-off and start-up firms).
Industrial and enterprise policy	Subsidies to firms; national champions.	Supporting common needs of firm groups and technology absorption (especially SMEs).	<p>Programmes often adopt one of the following approaches:</p> <ul style="list-style-type: none"> • Target the drivers of national growth. • Support industries undergoing transition and thus shedding jobs. • Help small firms overcome obstacles to technology absorption and growth. • Create competitive advantages to attract inward investment and brand for exports.

S&T and industry/enterprise – and some involve considerable resources and register high on the country’s public policy agenda. A key question is whether one programme can address all those objectives simultaneously. Over time, these policies have generally transitioned from a focus on SMEs only to a broader competitiveness clusters approach and increasingly emphasise technology and innovation. ■

How do programmes pick participants?

The economic rationale for government intervention serves to define the different choices regarding programme targets. Those targets may be *places* (leading regions, lagging regions, hub areas), *sectors* (dynamic, exposed, strategic, social significance) or *specific actors* or groups of actors (universities, SMEs, multinationals, etc.). They could also be a combination of these different target categories (see Figure 1). The targets then need to be clearly identified to ensure that the resources available for the programme are adequate and that the goals are achievable. There are clear tradeoffs to be made when selecting these different targets.

These choices are not always evident. Focusing on leading regions that drive national growth is arguably an efficient means to boost national economic performance. However, lagging regions detract from social cohesion and can be a drag on national growth. Supporting dynamic sectors may give them a competitive edge with important technological spillovers for the wider economy. Refocusing exposed sectors to new opportunities can preserve employment and promote restructuring of regional economies. Improving opportunities for certain priority sectors helps to target resources but often involves predicting the evolution of fast-moving product markets. On the other hand, providing a blanket cluster programme for all sectors or regions can dilute available resources and focus.

Identification of clusters can be *top-down*, *bottom-up* or a *combination of the two*. Countries identify potential programme recipients using two very different approaches: either 1) a statistical method, such as a mapping study, or 2) a process of self-selection, such as a call for proposals. The former is particularly used when the goal is to support national economic drivers. In

Figure 1.
TYPES OF POLICY TARGETS



some instances, national programmes provide only a general framework and rely on regions to identify target clusters within their jurisdictions.

The selection mechanisms used include both *competitive* and *non-competitive procedures*. Competitive selection has the benefit of identifying programmes with the best potential impact given the level of public investment and sends a “label” signal to the market. Another benefit to this selection mechanism is that groups that come together in a competitive process may build useful relationships even if not selected.

Among the top-down selection procedures, there is a trade-off between statistical versus negotiated approaches. Policy makers can use statistical mapping or other quantitative measures as strict selection criteria. However, because of methodological issues and definitional problems, these often give results that are contestable politically. There are also more flexible, even negotiated approaches which take into account a wider range of selection factors but such processes are then subject to other political influences. Several programmes have used a hybrid approach. ■

What instruments do they use?

In general, the instruments used in these programmes are of three distinct types: 1) engagement of actors, 2) collective services and 3) larger-scale collaborative R&D. In terms of engaging actors, key issues include: the role of facilitators and cluster initiatives, the level and nature of interaction desired, and the spatial considerations of the cluster. For the programmes that emphasise collective services, like business advice, skill development or joint marketing, a key consideration is how to target services in a way that does not substitute for private provision. Finally, collaborative R&D projects through cluster programmes tend to involve more than one research institution or university in co-operation with several firms and often tap into external R&D funding sources and programmes.

In general, the funding patterns of these programmes can be broken down into three basic categories. The first category of programmes for instruments to engage actors tend to spend less than 100 000 EUR per cluster per year for three years or less. A second category of spending includes programmes that emphasise service delivery and support for collaborative projects, including “light” R&D, with spending from between 100 000 to approximately 1 million EUR per cluster annually over several years. A third category for “heavy” R&D projects includes projects that spend approximately 1 million EUR or more per cluster annually for periods up to ten years. However, overall it does appear that the level of funding for the majority of these programmes is relatively limited, especially relative to their goals. ■

Which level of government should do what?

Governance frameworks and the spatial nature of the benefits of clusters also play a role in the development and implementation of policies to effectively promote regional specialisation and clusters. For such programmes, there are economic rationales for all levels of government (local, regional, national and in some cases supra-national) to support them. These different rationales are based on different perspectives on the value of clusters, for example, as

the basis for EU competitiveness policy or a national growth programme at a macro level versus as an employment hub within a region on a more local level.

With the blurring of distinctions among objectives across different policy streams, especially with an increasing focus on innovation, central level co-ordination is becoming increasingly important. Strategies at the central level to ensure co-ordination include inter-ministerial or inter-agency committees that conceptualise, design or even implement programmes jointly. Overarching national plans that include these programmes also serve to co-ordinate efforts at the central level, as do different groups promoting public/private dialogue such as competitiveness councils.

The articulation of national and regional roles in these policies is clearly dependent on the institutional frameworks. The programmes reviewed are embedded in a variety of constitutional frameworks that range from a federal structure with very strong sub-national units to unitary countries in regionalised, decentralised or centralised forms. Unitary countries may simply develop the programme at the national level. Federal countries and certain unitary countries have to rely on financial incentives to engage their more autonomous sub-national regions. Strategies to develop policy coherence across levels of government for cluster policies include several common approaches to vertical governmental relations. ■

Where do we go from here?

One of the major challenges to clearly identifying what we have learned about cluster policy is that we lack robust tools to measure whether or not such policies are successful. Evaluations are not available for many programmes, although several use some sort of evaluation or monitoring component for on-going funding decisions. Possible evaluation methods concern 1) the performance of a cluster or cluster initiative and 2) evaluations of the impact of a particular policy intervention. Both merit stronger analytic frameworks. Despite these challenges, policy learning, even if not through a formal evaluation, has provided some very useful input on programme design and cluster processes. There are also many lessons to be learned in programme design, based on the practices across many OECD countries, that could help at least improve the likelihood that the programmes will be successful in their ultimate goals.

A first set of lessons learned concerns the degree to which these programmes are appropriate, realistic and flexible enough to achieve their goals. There needs to be a compelling reason why a cluster policy, as opposed to another policy that may be open to all firms, is the most appropriate to achieve the stated goals. Often the goals of these cluster-type programmes are broad or vague, seeking generally to enhance competitiveness or innovation capacity. This lack of clarity in turn makes it difficult to select the right targets and establish programme funding levels and duration that are adequate to meet those goals. Given that supported clusters may be in different lifecycle stages, region types or sectors, programmes are more likely to be successful when there is a certain degree of flexibility.

A second set of lessons learned relates to policy coherence within and across levels of government. Because these policies emanate from at least three policy streams, it becomes even more important for policy makers to have a clear understanding of what other policies exist and how they can work together or in a complementary fashion. Given the importance of clusters to a particular region's economic health, as well as their importance for national competitiveness goals, the policies are developed at different levels of government. The interests of each level, as well as their respective resources and capacity, are important considerations in the articulation of national and regional level roles in these programmes.

A third set of lessons learned is about the risks involved in such policies, which are often related to insufficient private sector engagement. The long-term effectiveness of such policies depends on the private sector continuing to act after a programme ends. Even during a programme period, it is the private sector that is best equipped to react in a timely manner to market changes. Several programme evaluations have noted the excessive public sector role and an unsuccessful public sector exit strategy, if any. There are also general risks for supporting clusters. One common problem is the ability of the public sector to "pick winners". Other risks include locking in existing clusters and technologies, making it more difficult for other clusters or technologies to develop. Careful policy design can help mitigate these risks if they are explicitly addressed. ■

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For further reading

OECD (2007), **Competitive Cities in the Global Economy**, ISBN 978-92-64-02708-4, 446 p., € 37.

OECD (2007), **Regions at a Glance 2007**, ISBN 978-92-64-00987-5, 210 p., € 50.

OECD (2005), **Building Competitive Regions**, ISBN 978-92-64-00946-2, 142 p., € 30.

OECD (2005), **Business Clusters: Promoting Enterprise in Central and Eastern Europe**, ISBN 978-92-64-00710-9, 242 p., € 55.

OECD (2001), **Innovative Clusters: Drivers of National Innovation Systems**, ISBN 978-92-64-18706-1, 420 p., € 90.

OECD (1999), **Boosting Innovation: The Cluster Approach**, ISBN 978-92-64-17080-3, 428 p., € 94.

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