Cluster policies

Policies to support clusters, generally understood to be geographic concentrations of inter-connected firms and related actors (specialised service providers, universities, etc.)

Target and purpose

- A number of **definitions** and other terms are used by academics and policy makers to describe cluster-related phenomena and the territorial dimension of these linkages. Other terms include: industrial districts, new industrial spaces, flexible specialisation, networking, local systems of production or, for the broader environment, a regional innovation system or reduced-scale national innovation system. There is a critical debate about the definition, dimensions and value added of the cluster concept.

- Economic theory implies that there are different **possible benefits** to the clustering phenomena that have been documented in some cases to be greater firm productivity and innovation. Such benefits are thought to be derived in part from thick labour markets, specialised suppliers and knowledge spillovers.

- With the changing nature of innovation and firm boundaries, clusters serve to support dynamics of market and knowledge exchanges among firms and other actors in the region and in international value chain networks, serving as the **local nodes in global networks**.

- The **purpose** of cluster policies is broadly to strengthen a particular regional economy, and thus the national economy. However the purpose of the different policy instruments will vary depending on the type of cluster and regional needs.

- **Rationales for public intervention** for innovation generally address market failures, but increasingly they also do so for the systemic failures that cluster policies address.

- The cluster policy **approach** may take multiple forms: a "light" form through an intermediation/facilitation role to link regional and local actors to support clustering, re-orientation of several policies towards prioritised clusters, supporting clusters through dedicated projects or addressing framework conditions most important to the prioritised clusters.

- The cluster approach **facilitates** analysis of innovation needs to improve innovation policy and can serve as a useful framework for co-ordinating policies.

- Over time, **policy trends** have shown a general movement from SME networking support to national competitiveness goals for regional clusters to innovation clusters, but all policy approaches continue to co-exist.

- **Examples of clusters** exist in both manufacturing and service sectors. Silicon Valley (California) and Bangalore (India) are well known computer software clusters. And Wall Street (New York), The City (London) and Zurich are all strong financial services clusters. Many of these clusters started without an explicit cluster policy, albeit public sector actions have nevertheless played an important role in aspects of their development.

- **Examples of cluster policies** at national level include the *Pôles de Compétitivité* in France, the Centres of Expertise in Finland or Japan's Industrial Clusters and Knowledge Clusters programmes. Many regions and cities have programmes to support their clusters. Frequently such policies require collaboration between firms and knowledge generation institutions.

Practice

- Cluster policies and related phenomena (networks and platforms) are promoted by different **levels of government**: supra-national (like the European Union) national, regional and local. Which level should implement what policy is determined by several factors, such as the footprint of the expected positive spillovers of the clusters to be supported, the resources and instruments available, and the capacity to design and implement such policy.

- Cluster policies are also promoted by different **policy streams**, which impacts the targets and instruments used. Policy streams commonly promoting cluster-type policies include: regional economic development policy, science/ technology/innovation policy, industrial/enterprise policy, and even higher education policy. A cluster policy may be at the intersection of more than one policy stream given their increasingly shared goals.

- A distinction should be made between: a cluster (as defined above); a **cluster initiative** (organised efforts to support the development of the cluster, with a person, organisation or consortium leading the actions); and a **cluster organisation** – one form of a cluster initiative – (an organisation with an office, cluster facilitator, etc.).

- Cluster policy explicitly or implicitly will **focus** on: places (leading, lagging or hub regions), sectors (dynamic, exposed, strategic importance, social importance), and actors (SMEs, large firms, spinoffs and start-ups, foreign firms and investments, universities and research centres, combinations of the above, and cluster organisations). Clusters can be at different stages of development, use different knowledge and technologies, etc.

- Beyond policies to address framework conditions in terms of the regional environment, regulation and finance, commonly used **instruments** in cluster policies tend to support: engagement of actors; collective services and business linkages; and collaborative R&D/ commercialisation.

Common instruments used in clusters

Goal	Instruments
Engage actors	
Identify clusters	· Conduct mapping studies of clusters (quantitative and qualitative) · Use facilitators and other brokers to identify firms that could work together
Support networks/clusters	· Host awareness raising events (conferences, cluster education) · Offer financial incentives for firm networking organisations · Sponsor firm networking activities · Benchmark performance · Map cluster relationships
Collective services and business linkages	
Improve capacity, scale and skills of suppliers (mainly SMEs)	· SME business development support · Brokering services and platforms between suppliers and purchasers · Compile general market intelligence · Co-ordinate purchasing · Establish technical standards
Increase external linkages (FDI and exports)	· Labels and marketing of clusters and regions · Assistance to inward investors in the cluster · Market information for international purposes · Partner searches · Supply chain linkage support · Export networks
Skilled labour force in strategic industries	· Collect and disseminate labour market information · Specialised vocational and university training · Support partnerships between groups of firms and educational institutions · Education opportunities to attract promising students to region
Collaborative R&D and commercialisation	
Increase links between research and firm needs	· Support joint projects among firms, universities and research institutions · Co-locate different actors to facilitate interaction (*i.e.*, science parks, incubators) · University outreach programmes · Technical observatories
Commercialisation of research	· Ensure appropriate intellectual property framework laws · Overcome barriers to public sector incentives in commercialisation · Technology transfer support services
Access to finance for spinoffs	· Advisory services for non-ordinary financial operations · Public guarantee programmes and venture capital · Framework conditions supporting private venture capital

Appropriateness and feasibility

Cluster policies need to be adapted to the particular region and cluster context. Support for an old automotive cluster is very different than that for a new media cluster, even in the same region.

- The cluster policy should ensure **flexibility** with the instruments used so as to account for this diversity.

- It is not uncommon for policy makers to be **vague and unrealistic** about a cluster policy with expectations far exceeding resources and potential. It is also important that the public sector begins its policy with an exit strategy in mind.

- A **two-phased** approach to a policy or two separate policies is common in OECD countries. The first stage or policy is to provide or fund an intermediation role to assist cluster actors in identifying each other and perhaps developing a strategy. The second stage is then for cluster actors to participate in common projects.

- The **identification** of clusters can be top-down, bottom-up or a combination of the two. A statistical method, such as a mapping study based on a high concentration of employment, may be used and complemented by qualitative analyses. Other options include a cluster self-selection process, such as through a call for proposals.

- Public actors may use **selection mechanisms** that are both competitive and non-competitive. Competitive selection is most appropriate for policies with significant resources and has the benefit of identifying programmes with the best potential impact, with a "label" signal that serves to attract and re-focus public resources. Non-competitive procedures are best used for light support to cluster organisations in their initial stages.

Success factors

The most important success factors for a cluster's growth can be beyond the scope of a cluster policy per se, such as global sectoral trends and regulation. And there must be a compelling reason for a cluster policy that targets specific firms and other actors as opposed to broader policy for all firms. Some success factors include:

- Building on **pre-existing assets** in terms of prior public spending as well as the firm, skill and research base, albeit there are examples in non-OECD countries of massive public intervention to create clusters that are now internationally recognised.

- Beyond support for triggering effective cluster linkages, leadership is important (both public and private) to ensure that the cluster actors can **innovate** so that the cluster evolves with market changes.

- Effective **leveraging** of private sector investment towards cluster development when there is a strong cluster reputation and trust.

- **Cluster initiatives** with strong industry leadership that provide needed services, notably for collective projects, and facilitate networking.

- **Cluster characteristics** such as competition, co-operation, research commercialisation, critical mass of human capital, skills enhancement, quality of life and social capital are also important.

Risk factors

Carefully designed policies can help address and mitigate some of the risk factors associated with clusters and the policies to support them.

- **"Wishful thinking" clusters** that require massive investments and may become a "field of dreams" with excellent physical infrastructure but no players.

- Basing a strategy on short-term competitive advantages using **mobile FDI investment** that does not result in effective linkages with regional firms and actors and subsequently leaves for lower-cost locations.

- **Lock-in** of existing clusters and technologies, making it more difficult for new clusters or technologies to develop and potentially limiting competition. Leaving the opportunity for new clusters to apply to programmes at a future stage helps mitigate this risk.

- **Excessive specialisation** in certain sectors, or dependency on one firm, leading to greater vulnerability to economic shocks.

- The cluster policy is more a **sectoral** policy, possibly serving as a barrier to the cross-sectoral collaboration increasingly important to the innovation process.

- **Insufficient differentiation** of the cluster relative to others in the same sector, as many regions want to be leaders in the same sectors — which is not possible — and do not understand nor promote the uniqueness of their cluster relative to others.

- Administrative boundaries cause the cluster policy support to be too fragmented and implying a **closed approach** to the cluster, as often the functional area of the cluster spans such boundaries.

- **Additional barriers** to cluster development include: insufficient supply of different forms of innovation finance, a weak entrepreneurial culture, difficulty in integrating small firms (particularly low-technology firms), mismatches in labour qualification, congestion, and poor policy co-ordination.

Evaluation

Evaluations of cluster policies are rare and often not very robust. This is due in part to complications of identifying the cluster and isolating the impact of the policy intervention, limiting comparisons across studies. Evaluations thus far tend to focus mainly on cluster performance or cluster initiative actions.

- **Cluster performance** and changes over time (sales, productivity, exports, R&D spending, patents, etc.). This type of evaluation should preferably be carried out in a comparative mode, so as to disentangle performance that can be linked to the cluster effects, from general business development trends in the cluster area of activity.

- **Cluster initiative/organisation actions** as measured through cluster performance or process indicators and their changes over time (satisfaction of members with cluster services, joint projects among members, etc.)

- **Impact of policy** intervention as measured by an output or short-term outcome directly related to the policy. Some evaluations may seek to look at longer-term outcomes for the regional or national economy but there are notable time-lag and attribution problems.

Further resources

OECD (1999), *Boosting Innovation: The Cluster Approach*, OECD Publishing,
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   http://dx.doi.org/10.1787/9789264174399-en

National Governors Association and the US Council on Competitiveness (2007),
   Cluster -based Strategies for Growing State Economies,
   www.compete.org/images/uploads/File/PDF%20Files/NGA_Govs_Guide_Clusters_2007.pdf

The Cluster Initiative Green Book published by Bromma tryck AB (2003):
   www.cluster-research.org/greenbook.htm

OECD (2009), *Clusters, Innovation and Entrepreneurship*, OECD Publishing,
   www.oecd.org/document/54/0,3343,en_2649_33956792_43874678_1_1_1_1,00.html and
   http://dx.doi.org/10.1787/9789264044326-en

The Cluster Policies Whitebook, published by the International Organisation for
   Knowledge Economy and Enterprise Development, Sweden (2004),
   www.innovating-regions.org/download/The_Cluster_Policies_Whitebook_-_IKED.pdf

OECD (2007)*, Competitive Regional Clusters: National Policy Approaches*, OECD
   publishing, *www.oecd.org/document/2/0,3343,en_2649_33735_38174082_1_1_1_1,00.html*

European Cluster Observatory: *www.clusterobservatory.eu/*

TCI Network: *www.competitiveness.org/*

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