

Policy Lessons of Regional Research and Cluster Studies

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Questions Addressed

- **How to identify clusters?**
- **How to differentiate clusters?**
- **How to support cluster development?**

Context

Clusters are one of the major tools of regional economic development in the tool box of:

- Canada Innovation Strategy**
- Québec Department of Industry and Commerce, and many other prov. dept.**
- Strategic plans of a large number of regional economic development organizations**
- And many others...**

Practical Implications

As a consequence, policy makers at the federal, provincial and regional levels have to:

- Pick up winning clusters**
- Prepare action plans to support cluster development**

Knowledge Deficit in Matter of Picking up the Clusters to be Supported by Public Policies

- **How to identify quantitatively and qualitatively clusters?**
- **How to differentiate winning from non winning clusters?**

Knowledge Deficit in Matter of Policies Supporting Cluster Development

- In what ways policy interventions supporting cluster development differ from traditional policy interventions supporting regional economic development?**
- How do Canada compare to other countries in matter of policy interventions supporting cluster development?**

A Short Version of the Intervention Theory of Cluster Development

- 1. Innovation depends on internal capabilities of firms**
- 2. In addition, innovation depends more and more on interactions and exchanges of ideas and information with clients, suppliers, universities, etc.**

A Short Version of the Intervention Theory of Cluster Development (Continued)

- 3. The exchanges are facilitated and increased through sector and geographic proximity**
- 4. The exchanges are facilitated and increased through the support of an appropriate regional infrastructure related to training, research, services, support, capital, etc.**

Policy Implications

- Traditional policy measures supporting innovation are still necessary but not sufficient.
- They must be complemented by policy measures supporting interactions (networking) and exchange of knowledge
- The development of evidence-based policies requires data on interactions and linkages at the level of sectors and regions

Picking up Winning Clusters

- **Policy makers need measures of sectoral and spatial concentration to pick up winning clusters**
- **Researchers in economic geography measure such concentration by using the location quotient**
- **Usual applications: n. of firms, n. of employees, and patents**
- **Limits: such applications do not capture interactions and exchanges between firms thus leaving aside a crucial aspect of clusters**

Measures of Interactions and Exchanges Are Also Needed:

- **% of sales to local clients**
- **% of local suppliers**
- **Importance of local sources of information to develop and improve products and processes**
- **Importance of local collaborative research between public research inst. and firms**
- **Etc.**

Measures of Interactions and Exchanges

- **A paper recently prepared by Nabil Amara indicated that there is no statistical significant difference between most clusters regarding many indicators of interactions and exchanges**
- **... it complicates selection of clusters by policy makers**

Qualitative Data Are Also Needed

- **Not sufficient to have quantitative data**
- **Also necessary to identify additional conditions of success that refer to qualitative aspects of clusters**

The Voyer-Proulx Conditions of Successful Clusters

- 1. Recognition of an opportunity by local leaders**
- 2. Mobilization of local assets (research, local markets, qualified manpower,...)**
- 3. Influence of champions**
- 4. Entrepreneurial drive**
- 5. Various sources of financing**
- 6. Diversified information networks**
- 7. Strong research and training institutions**
- 8. Staying in power during many years**
- 9. Where clusters fit internationally**
- 10. Intercluster linkages**

How to Collect Data on Qualitative Aspects of Clusters

- **Interviews**
- **Focus groups**

Policy Monitoring of Clusters?

- **A study prepared for the GATIQ-Technoregion (Québec-Chaudière-Appalaches) suggests:**
 - **Benchmarking as a tool to compare evolution of clusters**
 - **Regular evaluation of clusters**
 - **Updating regularly strategic vision of clusters**

Policy Implementation of Clusters

The same study suggests that a mix of tools are used to develop clusters elsewhere:

- A significant grant from at least one government agency**
- Strong implication of a local champion**
- Provision of many services and activities because some with take more time to succeed**
- Organizing the clusters around groups of local leaders from the private sector**
- Implementation of clusters by intermediary organizations controlled by private sector**

How Do Clusters Policies Compare to Other Policies?

- **In « SME policy and the regional dimension of innovation : Towards a new for innovation policy? » Claire Nauwelaers et René Wintjes, develop a typology of policy interventions useful to distinguish policies aiming at developing clusters (cell D) from other categories of policies**

Table 1 : Classification of policy instruments studied in SMEPOL along two policy paradigm dimensions

Form and focus of innovation support		
	<i>input resources</i> <i>(reactive tools allocating inputs for innovation)</i>	<i>behavioural additionality</i> <i>(proactive tools focusing on learning to innovate)</i>
<p>Target level of support</p> <p><i>firm-oriented</i></p>	<ul style="list-style-type: none"> • Subsidy for hiring technicians in SMEs • Traditional firms' R&D subsidies & loans • Innovation grants • Risk capital • Training subsidies • Incubators with "hard" support • Research centres • Traditional "reactive" Technology centres • Transfer units in universities • Technology transfer schemes 	<ul style="list-style-type: none"> • Subsidy for hiring innovation managers in SMEs • Loans for competence development • Management advice • Risk capital with sparring partner function • Incubators with "soft" support • Business Innovation Centres, Innovation centres • "Pro-active" Technology centres • Audits, monitoring needs • Innovation Coach • Innovation management training • Techno-economic intelligence schemes • SMART scheme
	A	B
<p><i>(regional) system-oriented</i></p>	<ul style="list-style-type: none"> • Mobility schemes research-industry • Co-operative schemes HEI-industry • Subsidy for co-operative R&D projects • Subsidy to promote use of business services • Collective, User-oriented Technology or Innovation centres 	<ul style="list-style-type: none"> • Pro-active Brokers, match-makers • Cluster policies • Support for firms networking • Umbrella schemes • Local strategic plans • Schemes acting on the culture of innovation • RTP and RIS/RITTS kind of programmes (fostering strategic capabilities of policy makers)
	C	D

How Does Canada Compare to other Countries?

The study prepared for the GATIQ-Technorégion suggests that Canadian clusters are characterized by :

- Smaller start up grants from government agencies**
- weaker implication of local champions**
- Implementation of clusters by government agencies instead of intermediary organizations controlled by private sector**

Preliminary Conclusion

- **There is more and more evidence on the significance of cluster to foster innovation**
- **The research knowledge available on clusters is still about general principles**
- **The needs of policy makers are about how to do things, how to support cluster development**
- **How to fill this knowledge gap? By forging stronger linkages of collaboration between researchers and policy-makers**

Thank you for your attention