

Face-to-Facebook

proximity and innovation in the Greater Moncton economy

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Update

- Moncton case officially added in January 2009 (ethics approval, student funding, etc)
- Thanks to David Wolfe and Deborah Huntley, as well as Robert MacKinnon and Tracey Chiasson
- Since January 2009, I have completed 15 interviews under theme 1 (innovation) and 16 interviews under theme 2 (talent)

1. Questions

- **How do firms in Moncton innovate?**
 - ◆ *From which sources do they generate or capture knowledge?*

- **Where are these sources of knowledge located?**
 - ◆ *How dense are local networks? What formal and informal mechanisms help capture locally-generated knowledge?*
 - ◆ *How do firms connect to flows outside the region? Knowledge intermediaries or direct buy? Flow mechanisms: knowledge distance decay, 'transportation costs,' gatekeepers?*

- **What implications arise for future research?
...and for economic growth strategies?**

- From interview guide...
- **question 6**: importance and geography of sources of knowledge (univ + labs, clients, suppliers, competitors, consultants, consortia, trade shows, techno acquisition)
- **Question 8**: where most important competitors, clients, suppliers are located
- **Question 10**: local industry or business associations to exchange knowledge
- **Question 11**: agglomeration (MAR v. Jacobsian externalities)
- **Questions 16 and 17**: Recruiting talent
- **Questions 18 and 19**: knowledge flows

2. Six things about Moncton your mother never told you (regional context)

1. Monck...t...on?
2. Attended CMA class for the first time in 2006. Its 2001-2006 growth rate of 6.5% is lower than Toronto's (9.2%), but at par with Vancouver (6.5%) and Montreal (5.5%), while higher than other regional centres such as St. John's (4.7%), Halifax (3.8%) and Saint John (-0.2%).
3. Delayed urbanization... Population growth in large part from migration within province: 12.1% of its population moved to Moncton from other parts of the province in last 5 years, 6.0% from outside province, 1.1% from outside country. (Toronto: 11.2%, 1.3% and 8.6% respectively)

4. Bilingual (36% Francophone), but multicultural?
3.4% of population born outside Canada, compared to Toronto (45.7%), Montreal (20.6%), Halifax (7.4%), Saint John (4.2%), Québec (3.7%) and Trois-Rivières (2.2%)
5. At the cross-roads... of the Maritime's transportation system ('Hub City'). Sail then rail then roads (and rail again? – inland port).
1.4 million catchment area
→ Transportation logistics, wholesale, retail.
6. 'Resurgo'... Overcame 1980s economic setbacks (closure of CN shops, CFB Moncton...) with growth of service sector, but innovative sectors or branch plant economy?

3. Linking proximity and innovation

Independent variables	Dependent variables	Reference
Size of firm	All innovations Process innovations	<u>Cooke</u> , <u>Boekholt</u> , <u>Tödttling</u> (2000) <u>Pavitt</u> (1987); <u>Scherer</u> (1991)
Proximity to suppliers Material Equipment Component	All innovations	<u>Lundvall</u> (1988); <u>Cornish</u> (1997); <u>McKelvey</u> (1997) Henderson and Clark 1996
Proximity to clients Wholesaler Retailer End-user (custom)	Product innovations	<u>Utterback</u> and <u>Abernathy</u> (1990); <u>McKelvey</u> (1997), <u>Cornish</u> (1997)
Proximity to competitors	Product, process innovations	<u>Saxenian</u> (1994); <u>Sabel</u> (1996)
Proximity to business consultants	Organizational innovations	<u>Edquist</u> (2001)
Frequency of collaborations	All innovations	<u>Kitson</u> and <u>Mitchie</u> (1998)
Presence in clustered sector	All innovations	<u>Baptista</u> and <u>Swann</u> (1998); <u>Beaudry</u> and <u>Breschi</u> 2003

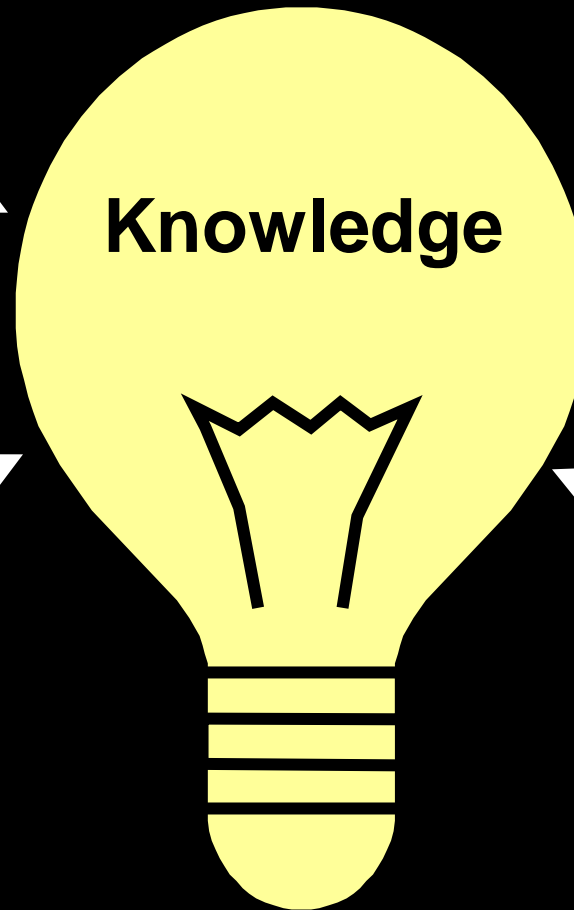
Sources of knowledge

Individuals

...via experience and skills acquired through training and practice

Businesses

...via routines and best practices established to facilitate knowledge flows within organization



Knowledge

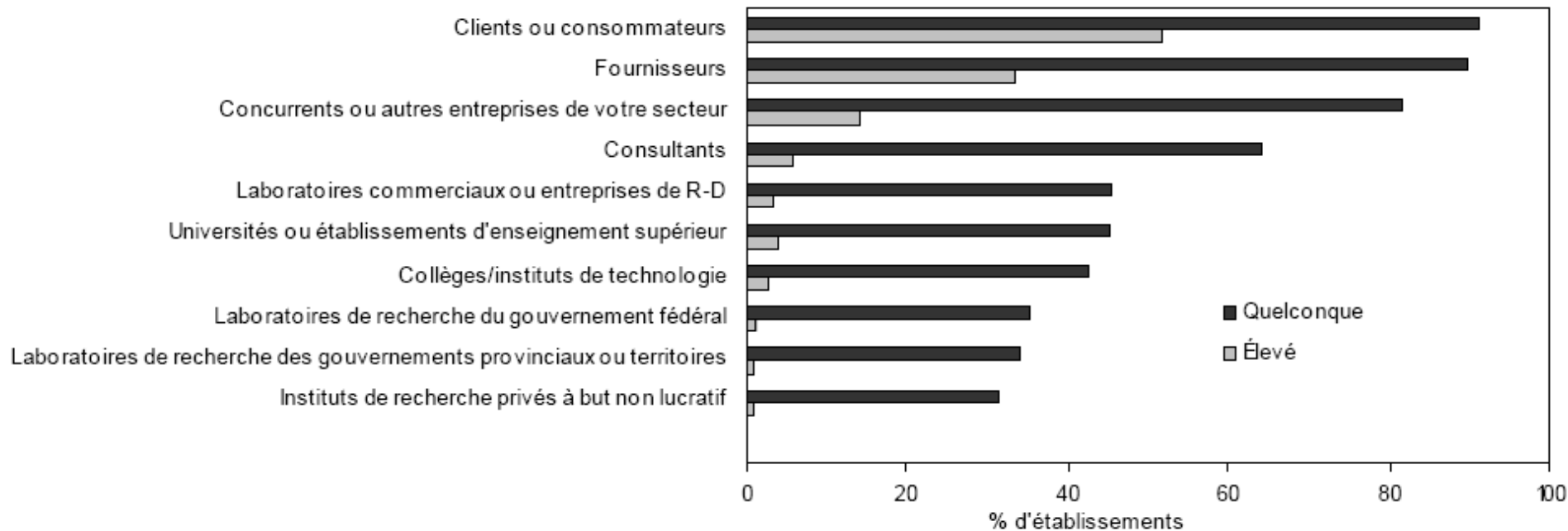
Technology

...via know-how and techniques embedded in machinery, equipment, software, etc

Regions

...via knowledge flows and externalities between businesses, governments, institutions, etc.

- Interactions with other economic stakeholders are businesses' most important sources of innovations (clients, suppliers, competitors, consultants)
- Universities, colleges, government labs and research institutes play a secondary role
- R&D plays a pivotal role in some subsectors. Two thirds of all R&D investments are made by 5 subsectors: IT, professional, scientific and technical services; Pharmaceuticals; Information and cultural industries; Aerospace.



4. Trends and innovations in selected subsectors

- Trois-Rivières case study provided the inspiration to break down 25 interviews into 5 subsectors, based on traditional industrial strengths and targeted sectors by economic development strategies
- 1. Strategic communication services
- 2. FIRE
- 3. Transportation and Logistics
- 4. ICT
- 5. Biotech and VA food production

Industry profiles

	Furniture Mfg	Communications	ICT
Importance	VA local resource High-end = creative	Creative industry Econ. weathervane	Specailized skills Explicit strategy
Challenges	SE Asia competition	HQ centralization (Mtl, T.O.), grass greener	Critical mass: brain drain + buy outs
Product inno	incremental	Social marketing tools (now 30% revenues)	ERP, collaborative and wireless apps
Process inno	Organizational (JIT)	Organizational (team oriented solutions)	Organizational (team oriented solutions)

Proximities

	Furniture Mfg	Communications	ICT
Workers	Relatively unskilled local labour pool	"competition for talent fiercer than for clients"	local: brain drain, call centers & comm coll
Clients	local and exports to NE & Central Can	90% local, 10% Central Can (Ottawa)	client-driven, global except for custom
Suppliers	Global, key for both prod & proc innov	Low. Glob market intel local graph design	Low importance. Global
Competitors	Global in general; regional for custom	AC but ++ national as HQs centralize acnts; Urban hierarch collab	Global for OTS None for custom ("lower-lying fruit")
Consultants	Low importance	Low importance	Low importance
Financing	Local, moderate difficulty	Local, difficult to leverage work-in-prog	Mostly outside angels and VCs
Uni/Gov labs	Low importance	Low importance	"Surprisingly little."
Trade fairs	Key. North America	For some. "Field trip"	"Less than expected"
Local networks	local catfights & let- sleeping-dogs-lie exp	Prospecting for clients "but not for ideas"	Social but little K exchanges
Urbanity	low importance	Small = QOL, but "diversity → creativity"	"My workers walk, bike, live downtown" ¹³

F2F vs Facebook

In all sectors, F2F exchanges remained the most critical medium for knowledge exchanges

- Furniture manufacturers rely on trade fairs and supplier interactions for K on products and processes.
- While ICT seemed to lend itself best to telework, employers privileged F2F team-oriented client solutions. Same for communications.
- Both communications and ICT (custom) rely on F2F to forge relationships ...disadvantaged by travel time.

Electronic and web media important...

- as a means to overcome relative isolation for furniture mfgs (telephone not web)
- for market intelligence in communications
- web for technical reference (O'Reilly media) & open source programming, although reliability of some K from forums contingent on local ("college buddies")

5. Implications for growth strategies

"Cluster-" based growth contingent on 3 dimensions

1. Spatial proximity (geog concentration)
2. Cultural proximity (quality interactions)
3. Industry and market structures (dominant vs several producers or buyers)

Importance of K connectivity to outside via 'pipelines' will vary according to sector. Furniture mfgs need it and rely on e-communications as second-best option to F2F. For ICT and communications, market intelligence more easily gleaned online, TV, etc (K important but not scarce). For communications and (custom) ICT firms, scarce (valuable, competitive) K is knowledge of local market

Cluster?

	Furniture Mfg	Communications	ICT
Spatial concentration	Some critical mass	Some critical mass, 3 rd tier	Difficulty sustaining critical mass: patents and talent get sold
Connectivity	Weak	Moderate ("small world")	Weak. "Personalities run strong. (...) You find it everywhere, but here we don't have the critical mass to afford it."
Structure	Several mid-sized producers; Market plurality	Several mid-sized producers; Market oligopsony	Few mid-sized, many small producers. Market plurality (OTS)
	Potential if interactions improve to meet address common issues	Potential for 2nd tier if <ul style="list-style-type: none"> - local growth sustained - creative functions come - HQs vs. branch plants - grass seen as green 	Potential if enabling technologies, niches targeted according to local strengths (logistics, health)

6. Future research questions

- Importance of drilling down categories: customers and especially suppliers (materials, components, technology) – as the geography of K flows varies
- Innovativeness as frequency of innovations not always better than a smaller number of product innovations (more releases = more bugs = more time fixing them)
- Interregional comparisons crucial as the scant mention of consultants and universities by Moncton interviewees begs the question whether those knowledge brokers don't matter generally, expertise is lacking locally, or linkages are ineffective.