Venture capital in Canada

GOVERNMENT, SYSTEM AND MARKET FAILURES, AND HOW THEY ARE DEALT WITH

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Definitions

- ***Venture capital:*** In Canada at least, ***VC*** is capital invested usually in technology companies not guaranteed by the assets of the investee. Most VC companies are limited partnerships with a general partner and several limited partners. VC firms contribute funds, expertise, reputation and networks to emerging firms
- ***Angels*** are individuals that invest their own funds in new companies, without the legal and technical expertise of venture capitalists. They tend to remain passive investors. But they increasingly follow VC patterns.
- The ***private equity market*** is the one of equity securities in operating, usually mature (generating cash flow) companies not publicly traded in the stock exchanges.

Theories: failures and beyond

- The VC industry is prone to multiple failures
- ***Market failures***: established financial institutions often stay at distance form this industry because they do not have the appropriate resources (personnel, routines) needed to select, monitor and coach high tech projects of potential investees
- ***Information asymmetries***: Entrepreneurs and VC investors are suffering from them: VC investorscould reveal to third parties the entrepreneur's technology or business model. And entrepreneurs may overstate the value of their technology to potential investors without investors noticing it
- In order to reduce these information asymmetries, VC firms stage their investment in different rounds of increasing funding (seed, 1st and 2nd expansion, etc.). And inventors reveal VC managers only part of their novelty.

Failures (continued)

- ***System and institutional failures that impede its development*** include public regulations (conservative or otherwise) governing pension funds and commercial banks investment rules.
- ***Government failures*** include the tendency to support with public VC those businesses that the private sector has not funded: public officers sometimes obey to their elected superiors and the motivation of these is to be re-elected, not to obtain high returns for public monies.
- Also, government funds tend to be passive investors (managing high-tech firms is difficult, and in public bureaucracy it is better to err by omission than by commission).
- Conversely, private funds carefully monitor their investees and push them towards more innovativeness and a better performance (Lerner, 2009). Israel Yozma program (1993-6) inspired on US SBICs (1958-) emerged as best practice in government support.

Failures and the state

- Governments have played a major role in the creation and development of all industries where externalities and failures abound (Arrow, Nelson). The VC industry is not different from high-tech manufacturing and service industries
- Governments have nurtured the VC industry through different mechanisms

- Public support for advanced research in universities and public labs has brought *demand* for VC

  - Government incentives for the provision of private VC funds (i.e. pension funds allowed to invest in the VC industry)

  - Government VC and non reimbursable subsidies to SME R&D (I.e. SBIR program in the US)

  - Government funds of funds (SBIC, Yozma, etc)

Canadian VC and LSVCCs

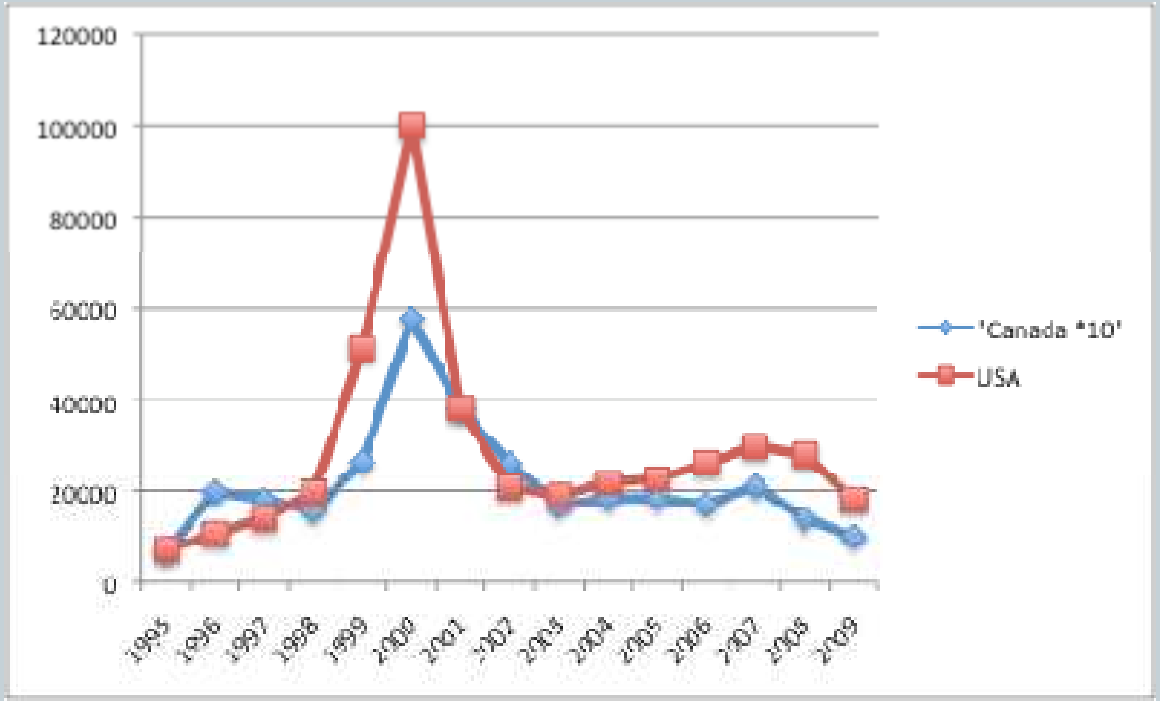
- The Bank Law of 1871 created a system of large federal banks with a clear orientation towards commercial banking. Investment banking and insurance remained separate. The Canadian system became more solid, but also more conservative, than the US financial system.
- Investment banks appeared in the early 20th century, followed by investment holding companies after WWII and Labour sponsored venture capital corporations (LSVCC) in the mid 1980s, backed by federal and provincial tax relief for individuals. LSVCCs came to represent up to 40% of Canadian venture capital funds

Canadian VC (2)

- Foreign venture capital and Canadian private limited partnerships appeared in the mid 1970s. Also, some banks and insurance companies created subsidiaries and joint ventures specialised in venture capital
- Canada, like the US experienced a fast increase of VC investment since the mid-1990s up to year 2000, and a prolonged decline after that year, due to the combined effect of the dot.com, September 11, and the present financial crises (see figure 1)
- There are signs of a recent revival in 2010

Origins of Canadian VC (3)

US and Canada VC investment (billions of current $)



Demand for VC funds

- Thus there is a strong demand for VC funds coming from the academic sector and the private sector spin-offs both in the US and Canada.
- Canada, like the US and several European countries hasa very productive university systems either in terms of publication, patenting or spin-off foundation.
- Government support for academic research is one of the highest in the world: by 2007, Canada's HERD represented 0.68% of GDP against 0.43% in Japan, 0.41% in Germany, 0.40% in France, 0.36% in the USA (OECD, 2009). Only the Nordic countries have a higher % of HERD on GDP
- Also, over 600 foreign companies have R&D labs in Canada out of over 20000 to 30000 firms conducting R&D in the country every year. There is a strong demand of VC from private sector spin-offs

Demand for Canadian VC

- Over 1200 academic ***identified*** spin-offs were created up to December 2008, mostly in Montreal, Toronto and Vancouver
- Spin-offs from large private R&D intensive companies are numerous; they include those of companies such Bell Canada, Bombardier, CAE, HQ and Ericsson Canada in Montreal, IBM Canada and Magna in Toronto, Cognos and Nortel in Ottawa, or RIM in Waterloo (ON), hosting thousands of researchers each.
- There are 668 biotechnology companies in Canada of which over 100 publicly quoted (mostly academic spin-offs) and over 6000 software companies of which some 100 quoted (mostly private sector spin-offs)
- 44 Canadian companies are quoted in NASDAQ, but just 1 from Brazil, 1 French, 2 German, 3 Indian, 1 Italian, 1 from Sweden, and 5 British companies. Only Israel with 58 companies is ahead of Canada for the number of companies quoted in NASDAQ.

Demand for VC funds

- **The VC industry follows basic laws of supply and demand: where demand is resilient and strong, supply MAY pop up.**
- **But demand does not create its supply (Canada, US) or the other way around: supply does not push demand (Chile in Latin America): both abundant demand and supply are needed**
- In Canada, demand is strong in the three most populous provinces, where most of the largest research universities are located: Ontario, Quebec and BC
- The Prairie provinces and the Atlantic region provinces suffer from both a lack of demand and an investment gap: few VC firms are located there and few foreign funds support the scarce local high-tech firms launched there.
- This fact confirms the demand and supply approach to VC: a country (or region) can only grow a VC industry if it has a vibrant higher education set of institutions conducting research and demanding VC for its technologies, and such an environment tends to attract VC

Canada: Regional distribution of VC 2009

Region	Investment (C$ 000 and %)	Companies financed
Québec	431,247 (43%)	159
Ontario	287,660 (29%)	87
British Columbia	140,712 (14%)	39
Prairies	81,995 (8%)	29
Atlantic Provinces	67,905 (7%)	17
Total	1,009,519 (100%)	331

Source: CVCA

Canada: Sector distribution of VC 2009

Sector	Investment (C$000, and %)	Companies financed
Life sciences	215,214 (20%)	57
ICT	489,028 (49%)	129
Other hightechnologies	115,354 (12%)	29
Traditional	189,923 (19%)	116
Total	1,009,519	331

Source: CVCA

Canada: New and follow-on VC 2009

New versus follow-on investment	Investment (C$ 000 and %)	Companies financed
New investment	346,220	146
Follow-on	663,299	191
Total	1,009,519	331

Source: CVCA

The international context

- Rise of VC in China and India, as well as Western Europe
- Relative decline of North American VC after year 2000 dot.com burst, the September 11, 2001 event, and the current financial crisis.
- Five major ***sourcecountries*** emerge in global VC markets: US, UK, Germany, Canada and France
- The major ***recipientcountries*** are Britain, China, Canada, India, France and Sweden
- VC has become more selective, reserving investment for existing portfolio investments & faster-returns cases

Changes in market trends: from seed to follow on

- Before 2001, over 60% of Canadian VC was in seed money and 40% in follow-on investments. After the crisis, the proportions reversed and follow-on investments now represent up to 75% of VC invested every year. VC firms try to develop their previous investees towards profitable exits.
- Also, after 2001, the number of IPOs has declined and most exits are mergers and acquisitions.
- Canadian VC firms invest increasingly abroad and US firms invest increasingly in Canada (again, in follow-on rounds)

Governments are learning

- Before the last crisis (2008-10) Canadian governments invested directly public VC funds in new firms. However, several evaluations of the performance of government VC funds showed that public VC not only got inferior returns, but also their investees were less performing compared to private sector VC investees, their IPOs were less productive, and the life of investee firms was shorter.
- Since 2007, governments invest almost exclusively in "funds of funds", in a manner that recalls the US SBIC program, the Israeli Yozma (Giorgino, 2006): now Canadian governments are putting public funds in the hands of experienced private VC investors.

New Canadian funds of funds

Name of fund	Year established	Amount of fund
Alberta Enterprise Corp.	April 2008	C$ 200 million
Ontario VC Fund	November 2007	C$ 90 million
BC Renaissance Capital Fund	April 2008	C$ 80 million
Teralys Fund (Quebec)	April 2009	C$ 700 million
Business Development Bank of Canada (BDC)	November 2009	C$90 + C$ 75 million
Ontario Emerging Technology Fund*	October 2009	C$250 million
Total	2007-2009	C$1,485 billion

* A special type of matching fund invested directly in new technology firms

Changes in the regional balance

- Historically Ontario was the main destination of Canadian VC. Ontario hosts two ICT clusters (in Toronto and Ottawa) as well as major biotechnology cluster (Toronto)
- Since 2009 however, Quebec has attracted more VC investment than Ontario. Quebec hosts two biotechnology clusters (Montreal and Quebec City) and one ICT cluster in Montreal.
- This regional change may be related to the strong presence of Teralys, but time will say whether this is a permanent trend or just a short term blip.

Conclusion

- ***Internationalisation***: Under the new context of increasing demand from China and India, some Canadian funds have started to internationalise
- ***Follow-on capital increases:*** Both Canadian and US VC firms investing in Canada are turning towards follow-on rounds in order to increase the chances that their portfolios become profitable
- ***Governments learning***: they have curtailed their VC direct investment in new technology-based firms and instead launched VC "funds of funds" programs, similar to the SBIC and Yozmaprograms, whicharewidely considered as best practices. A major difference with both SBIC and Yozma is that these funds aimed at creating a brand-new VC industry, while the Canadian government aim is to revive an ailing VC industry. The new course shows at the same time a capacity to learn from Canadian policymakers, and support to the complex dynamic systems approach to economics: agents learn and adjust their behaviour to changing conditions .

Conclusion

- ***A revival of the VC market in North America***
- There are preliminary indications that the VC capital market is reviving in North America due to the spectacular rise of the stock markets in 2010, and continuous efforts by governments to revamp the VC industry
- In 2010,new IPOs are now appearing and many others are being prepared.
- Canadian stock exchanges are attracting foreign VC firms to float their new technology-based firms in the Toronto Stock Exchange and the TSX Venture Exchange

Conclusion

- In more general terms one can conclude that to grow and sustain a VC industry, governments must
- Invest in HERD substantial funds to create demand for VC, but have a look at the institutional design of higher education institutions
- Review their regulations for the financial sector, to be sure that some savings are channelled to new high-tech firms
- Periodically evaluate whether their policies are producing results, in order to fine-tune them if needed

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