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Institutional Research and
Planning

Universities and the Economy

The Knowledge Economy



- To be highly productive, at the forefront of the techniques of their own field, many sectors of the economy require a workforce whose knowledge is to be acquired in a university.
 - Agronomy
 - Engineering
 - Health sciences
 - Law
 - Social Sciences
 - Etc.

The Broadest View



- Taking the broadest view of societal advancement, all the fields of knowledge, encompassing arts and humanities as well, require university level education to maximize how citizens understand the world and become more productive.
 - Philosophy
 - History
 - Literature
 - Communication
 - Etc.



Knowledge Advancement

- It is not sufficient to transmit knowledge to our workforce, we also need to push away the frontiers of knowledge through research and development.
- Universities are key producers of research.



Research in Canada

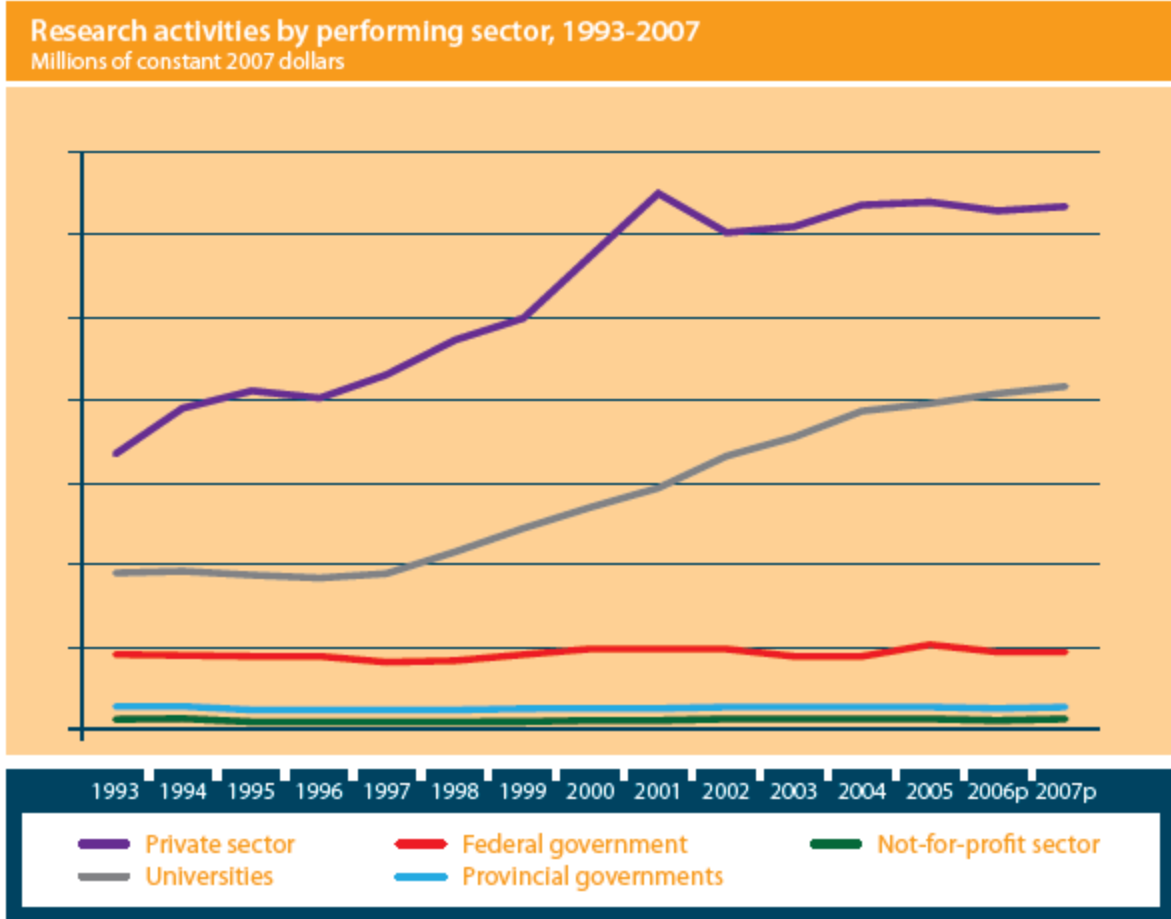
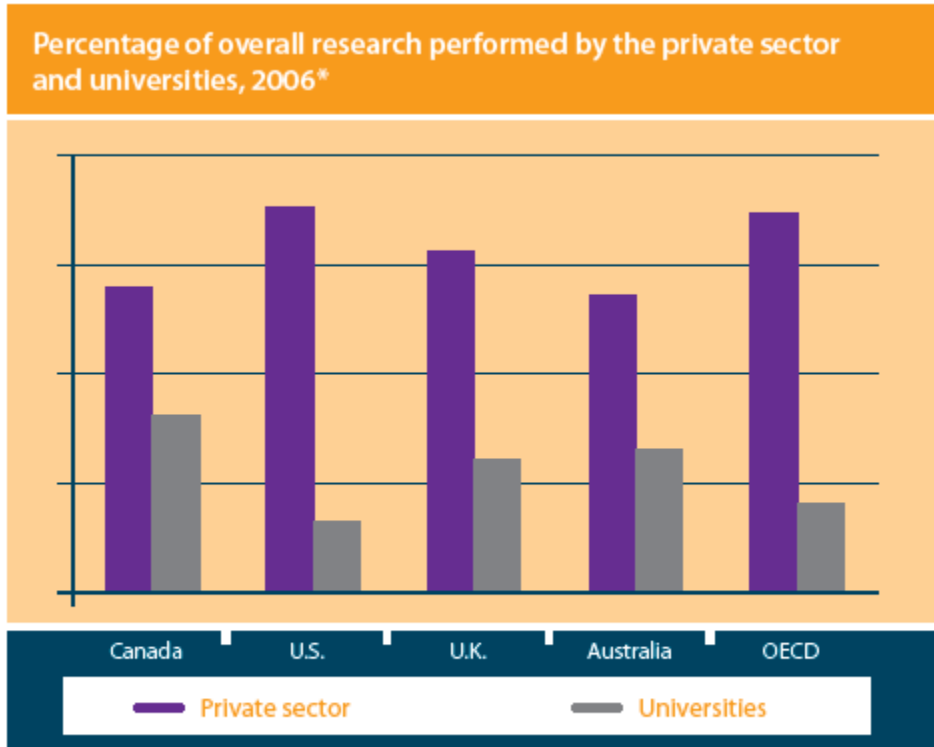


Figure 1.3:
Over the last 15 years, research activities in the private sector and universities contributed most significantly to the increase in Canada's overall research performance

Source: Statistics Canada



Universities Shares of Research in Canada



*2004 for Australia

Source: Statistics Canada; OECD, Main Science and Technology Indicators, 2008/1

Figure 1.5:
Compared to many countries, universities in Canada perform more of the country's R&D





Regional Economic Impacts

- The day to day operations of a university with its professors/researchers, employees and students create a circulation of money growing the regional economy.

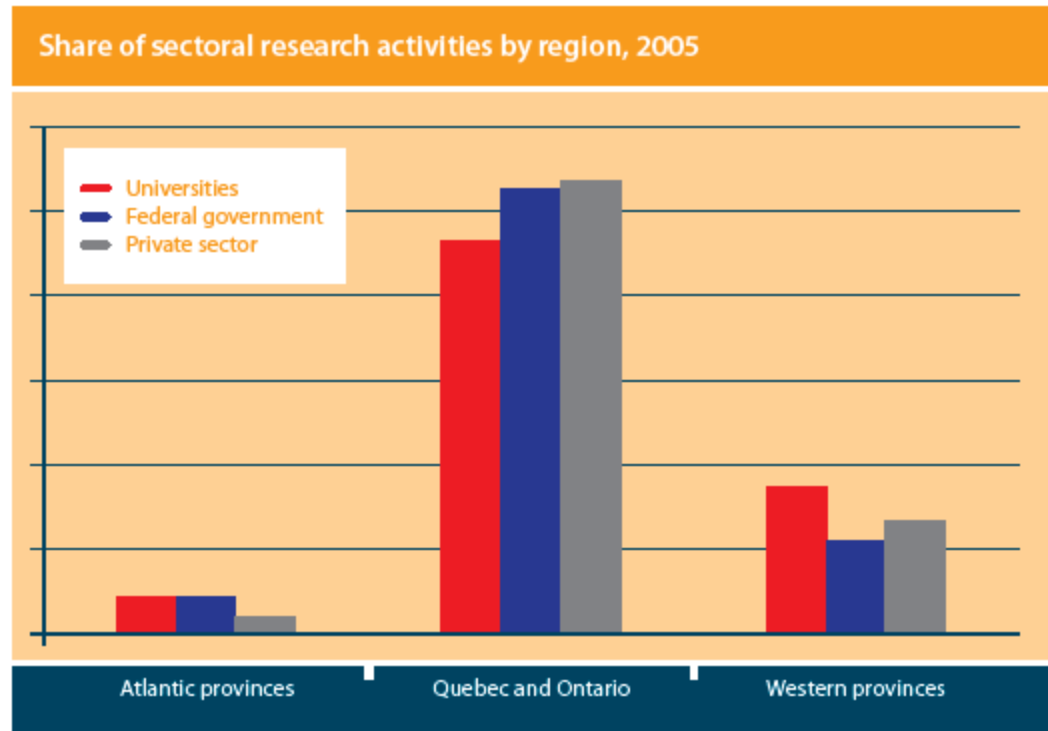
Distribution of universities in Canada



Dispersion of University Research in Canada

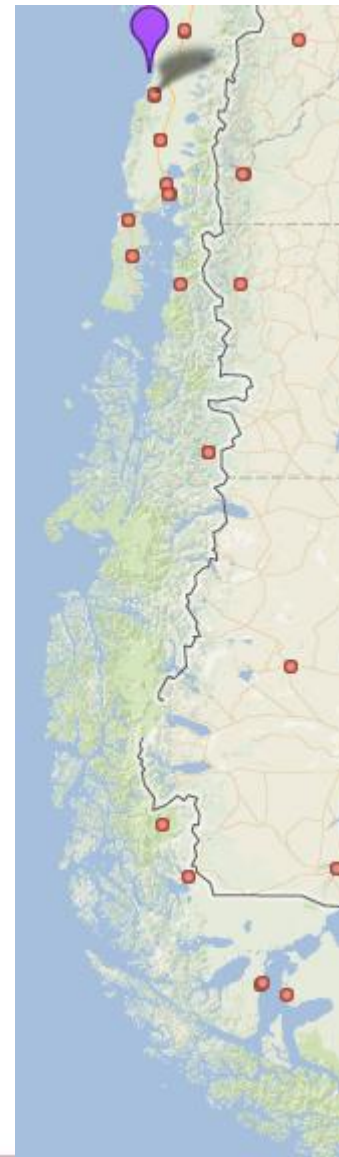


Figure 1.4:
Research performed by universities is more geographically dispersed than research performed by the federal government and the private sector



Source: Statistics Canada

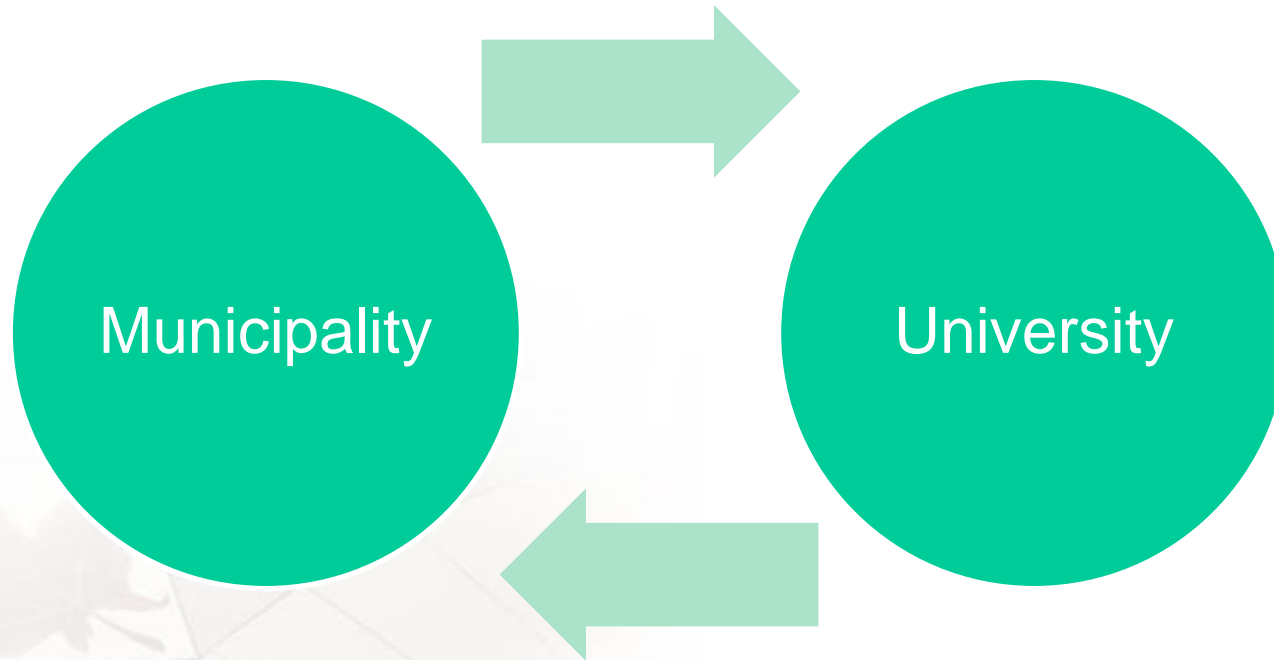
Distribution of universities in Chile



Distribution of economic activities in Chile



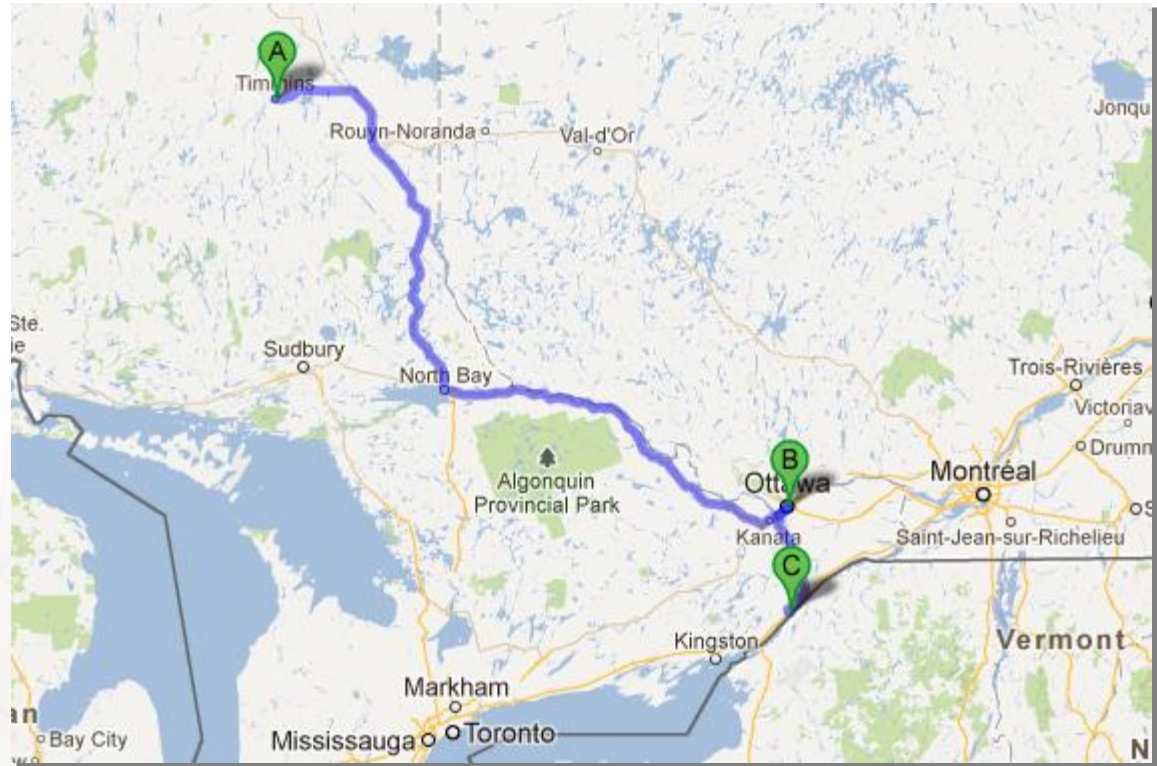
Regional Economic Synergy



Municipal Economic Interest



- The City of Timmins (719 kms)
- And the City of Brockville (100 kms)
- asked uOttawa to open satellite campuses because of the potential economic impact.



The University of Waterloo



- The University of Waterloo Stratford Campus focuses on commercialization and community outreach.
- This new collaborative education style will accelerate knowledge and innovation by bringing together students, leading researchers, businesses and entrepreneurs to advance digital media.



The City of Ottawa



- uOttawa's President is talking to the Mayor to further enhance the synergy with the city.
- The City could:
 - Facilitate construction permits
 - Co-invest in research centers
 - Co-invest in cultural centers

Quantifying Impact



- It is important to go beyond the argument and to actually quantify the economic impact.



uOttawa as a Large Organization

ENROLLMENT

<i>By program and gender</i>	Female	Male	Total
Undergraduate	20,828	13,880	34,708
Master's	2,362	1,659	4,021
Doctorate	872	810	1,682
Other graduate	201	100	301

ACADEMIC STAFF

Regular professors	
Full professors	421
Associate professors	474
Assistant professors	317
Other professors*	56
Total	1,268

SUPPORT STAFF

Regular staff	1,633
<i>Women</i>	1,012
<i>Men</i>	621
Term staff	718
Total	2,351



The Economic Impact of a Large Organization

- Economic activity linked to the University's presence in the Ottawa-Gatineau region: \$1.17 billion a year.
- This figure includes:
 - Local spending by the University, its staff and its students,
 - Spending generated by people who visit the region because of the University's presence,
 - The indirect impact of these expenditures: each dollar spent generates more transactions in the regional economy.



The Economic Impact of Higher Education

- University graduates earn more than high school graduates.
- Salary differentials of uOttawa alumni living in the region, we estimate that this education premium increases to \$1.68 billion annually.

The Economic Impact of uOttawa Research



- The University of Ottawa ranks 9 in sponsored research income in Canada.
- As a major research engine and source of innovation, uOttawa's contribution to productivity has an annual cumulative value of \$1.27 billion.



Who does Economic Impact Studies?

- In Canada, not every university has done an economic impact study.
- The ones who did tend to be large or research intensive. For example:
 - UBC
 - Simon Fraser
 - Western
 - Waterloo
 - Toronto
 - Queen's
 - Ottawa
 - McGill



Why do Economic Impact Studies?

- To obtain entrepreneurial type partnerships
- To demonstrate to government that higher education generates much return on investment
- To inform the general public on the full advantages of promoting education and using tax dollars for that purpose.

A Worldwide Interest



SRHE *Society for Research into Higher Education*
Advancing knowledge, Informing policy, Enhancing practice

Annual Research Conference 12-14 December 2012
Newer Researchers Conference 11 December 2012
Celtic Manor Resort, Newport, Wales, UK

- Higher education as a tool for regional development: emerging multi-university campuses in Sweden, Finland and England.
- Nik Heerens, University of Exeter, Cornwall Campus, UK



Excerpt from Heerens' Abstract

- The premise that knowledge is a key condition for socio-economic development and that universities play a central role as direct institutional partners in the local, regional and national economy has motivated governments throughout the world to stimulate knowledge-based development through the commitment of public funds, targeted policies and other measures (cf. Arbo & Benneworth, 2007; Etzkowitz, 2002; Goddard, 2005).



Epilogue



- Economic impact studies reveal an aspect of higher education which has tended to be ignored before.
- In Canada, Government has not been calling for such studies but it has been beneficial for institutions to take the initiative.
- In other presentations, we discuss the methodological aspects of such studies and show actual calculations for three areas of impact.