

CANADA SHOULD ADOPT A SCIENCE STRATEGY THAT

- Strengthens the national talent pool, including professors and students, to whom science, society, and the Canadian economy may appeal.
- Maintains Canada's potential for research and innovation over the long term.
- Allows all communities, both urban and rural, to help develop the knowledge economy.
- Addresses Canada's obligation, like any advanced society, to produce and update knowledge on its populations and its physical and human environments.

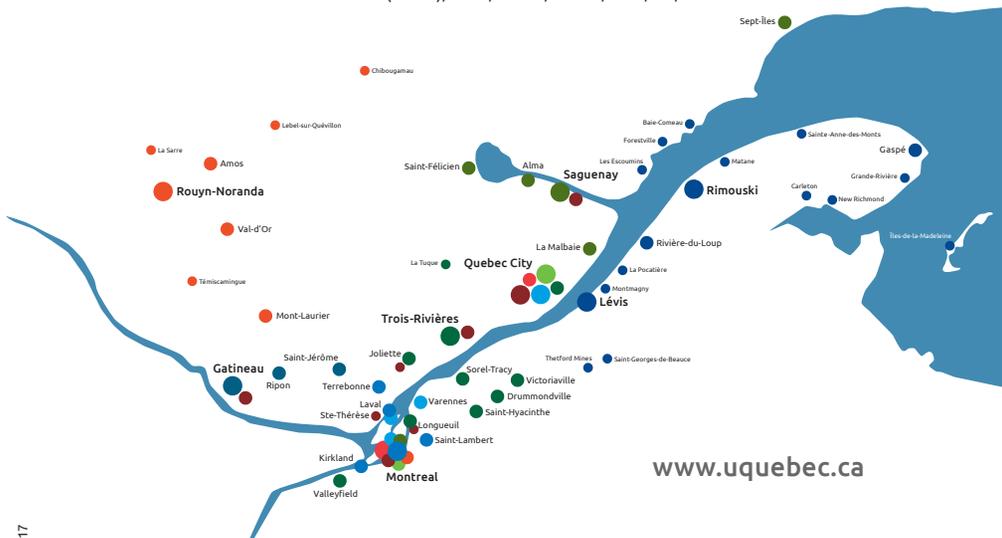
In a knowledge-based economy, leveraging each Canadian university is fundamental for training, **through research** and at every level, another generation capable of **generating, applying, and using** the knowledge and innovation needed for the advancement of our society.

Today in Canada, only one-third of 25- to 34-year-olds hold a university degree. This is below the Organisation for Economic Co-operation and Development (OECD) average and lags far behind the leaders, where 46% of young people have a university diploma.

There is a shortage of human resources needed to keep Canada competitive.

The current research investment strategy accentuates this shortage.

² Canada First Research Excellence Fund (CFREF), CERC, SSHRC, NSERC, CIHR, CFI, CRC



UNIVERSITÉ DU QUÉBEC NETWORK

UQAM UQTR UQAC UQAR UQO UQAT INRS ENAP ÉTS TÉLUQ

CANADA
NEEDS
A BALANCED,
DIVERSE
RESEARCH
ECOSYSTEM

CANADA NEEDS A FAIRER, MORE DIVERSE RESEARCH ECOSYSTEM

This is confirmed by the report from the Advisory Panel on Federal Support for Fundamental Science (Naylor Report) submitted to the Canadian government in 2017.

The document contains **two major findings**:

- there is insufficient investment in research to ensure Canada's competitiveness;
- the governance method for the research ecosystem is exacerbating this situation.

This situation is the result of the last ten years of Canadian scientific policy, which is based on **two myths**:

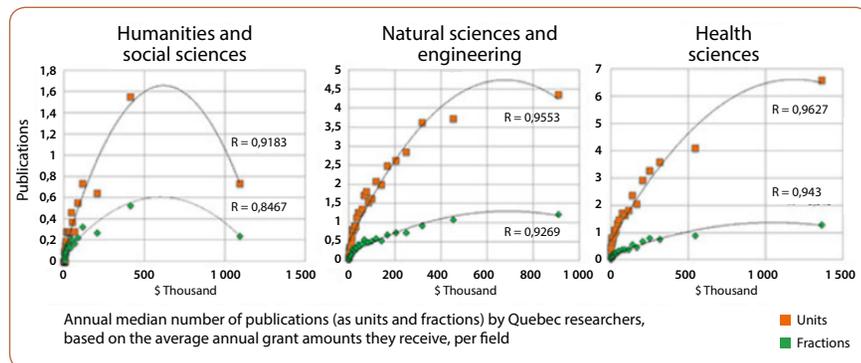
MYTH NO.

1

INCREASED FUNDING = BIG DISCOVERIES

REALITY

Beyond a certain investment threshold, each additional dollar invested yields less than the previous one and eventually produces a negative return.



"The empirical data shows that policies based on concentrating resources in the hands of the elite are ill-advised and do not improve collective performance in the least ¹."

¹ Larivière, Vincent (Université de Montréal professor) (2013) *La Concentration des Fonds de recherche et ses effets* ACFAS, Découvrir, 2 septembre 2013.

MYTH NO.
2

CONCENTRATION = INNOVATION

REALITY

"Equity and diversity in research [is] a very wise human resource strategy to maximize research excellence in a country like Canada with a small population."

Naylor Report

THE CONCENTRATION OF RESEARCH FUNDING GENERATES INEQUITIES FOR:

women: Women hold only 3% of excellence research chairs;

early-career researchers: The 2015 program overhaul at Canadian Institutes of Health Research (CIHR) cut awards for new researchers from 18% to 5%.*

indigenous researchers: They hold half as many research chairs as their non-indigenous colleagues, if we take into account that Indigenous people are under-represented in the Canadian university professoriate;

small, medium, or regional universities: Funding is increasingly accompanied by substantial financial matching requirements, a very high capacity to host students and interns, and the need to demonstrate the existence of sustained critical mass—requirements that only the biggest universities can meet.

IMBALANCES

Depending on the field, 10% of researchers receive:

- between 50% and 80% of research investments.

In turn, 56% of undergraduate and graduate students are educated by professors who share:

- 26% of the annual funding from the three research councils, Canada Foundation for Innovation (CFI), and the Canada Research Chairs program (CRC);
- 10% of the \$260 millions granted to Canada Excellence Research Chairs (CERCs);
- 14% of the \$1.3 billion attributed to the Canada First Fund.

To offset the effects of these two significant findings, the **Naylor Report recommends**:

- a review of the research ecosystem governance so that all Canadian researchers can contribute;
- a \$485 million reinvestment by the Canadian government in basic research.

* <http://www.sciencepresse.qc.ca/blogue/2016/03/08/lettre-ouverte-chercheurs-debut-carriere-oeuvrant-recherche-biomedicale-sante>