

Study on the Distribution of Federal Government Funding among Canada's Post- Secondary Institutions

**Submission to the House of Commons
Standing Committee on Science and
Research**

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The Canadian Association of University Teachers (CAUT) represents seventy-two thousand researchers, teachers, librarians, and professional staff at universities, colleges, and polytechnics across the country. We thank the Committee for studying the distribution of federal government funding among Canada's post-secondary institutions.

Federal support for research is essential to growing our collective knowledge needed to address current and future challenges. Over time, we have seen changes to what the federal government funds, who it funds, and on what basis.¹ From these changes, we have learned lessons about how best to distribute federal research funds so that science thrives, benefitting all Canadians, namely:

- Investigator-led research must be adequately funded;
- Programs must be inclusive of all disciplines and researchers; and,
- The integrity and independence of research and funding decisions must be respected.²

Our recommendations stem from these principles.

Grow investments in investigator-led research

Fundamental science or basic research is the foundation of knowledge and innovation. It may not have specific applications built into its design, but history shows that most important discoveries are grounded in basic research driven by a quest for knowledge. Fundamental research has led to such unanticipated innovations as X-rays, nylon, Teflon, GPS technology, informatics, superconductivity, medical imaging and the mRNA vaccine. In short, applied and mission-driven research cannot thrive if fundamental research is struggling.

The Advisory Panel on Federal Support for Fundamental Science suggested, at minimum, a 3:1 distribution of investments in research between basic and applied. Some experts suggest the ratio should be closer to 4:1 to reap the best rewards for society.

As the recent Advisory Panel on the Federal Research Support System stated: "Fundamental, investigator-initiated research is the cornerstone of the research endeavour and must be supported at internationally competitive levels." The panel called for, as a first step, an increase of at least ten percent annually for five years to the granting councils' total base budgets for core grant programming.

The federal budget 2024 made significant investments in investigator-led research, committing \$1.8 billion over 5 years. This is a welcome investment. With rising costs of research, fair wages needed to recruit and retain graduate students, and Canada's relative underperformance in investments in science compared to other countries, the federal government must continue to grow its fundamental science efforts.

Both the value and the number of grants awarded for investigator-led research must continue to increase. Most researchers in Canada work in the social sciences and humanities. Since 2013, for SSHRC Insight grants, the success rate has averaged 38.2%. CIHR's Project Grant program funded less than 20% of applications this past year. NSERC Discovery Grant program had a 58% success rate in 2023, down from 67%, in 2019.³ The New Frontiers in Research Fund Exploration program for interdisciplinary science has had an average success rate of 23% since its inception in 2018.

We know from members that many grant applications are approved on merit but do not go ahead due to insufficient funding. Unfunded research means good ideas are left unexplored, ideas that would contribute to our collective knowledge and know-how.

Recommendation 1: Continue to increase federal support for investigator-led research to ensure high success rates

Improve inclusivity

In addition to adequate funding levels, system fairness would be enhanced by several measures aimed at removing barriers and improving access. As noted, most Canadian researchers work in the social sciences and humanities, yet SSHRC receives only about a fifth of federal research funding. Allowing institutions more flexibility over the allocation of their Canada Research Chairs (CRCs) would also assist in the rebalancing across disciplines.

Recommendation 2a: Increase funding for SSHRC through a re-balancing of Tri-Agency funding and permit flexibility for CRCs.

Renewing funds for the Dimensions program, launched by the Tri-Council in 2018 and overseen by NSERC, would also help bring fairness. This program supported participating institutions in breaking down barriers faced by equity-deserving researchers. Its end in 2023 has disproportionately affected smaller institutions which have fewer resources to advance equity, diversity, and inclusion (EDI).

The CRCs program has also assisted in driving EDI efforts. Increasing the number of CRCs in the special allocation category for institutions that have received 1% or less of the total funding paid out by the three federal granting agencies over the three years prior to at least 200 would also improve inclusivity.

Administrative barriers remain and should be addressed. Some of the known barriers include “inconsistent information requested by agencies, a complex and user-unfriendly web interface, an unstable/unreliable IT infrastructure that frequently crashes around application deadlines, and a rigid architecture that precludes freeform entries that can accommodate atypical forms of scholarship and relevant creative professional activity.”⁴ Budget 2024’s funding for a new granting system is a step in the right direction as is the harmonization of the scholarships and fellowships programs.

These efforts will most benefit small and medium sized institutions with less internal support for researchers.

Recommendation 2b: Renew the Dimensions program, increase the number of CRCs in the special allocation category and remove administrative barriers.

CAUT also supports recommendations made in this Committee’s report, “Revitalizing Research and Scientific Publication in French in Canada,” specifically those to improve access to resources that help make research and scientific knowledge available in French.

Recommendation 2c: Continue funding for the Service to Assist Research in French project launched by Acfas and increase financial support for scientific publication in French and for French-language and bilingual scholarly journals.

Protect and improve peer review

Protecting the integrity of federally supported science and research is critical to our success. Federal government budgets have at times announced targeted research funding that bypasses the peer-review process. Rather than allow the scientific community to determine what research merits funding, targeted initiatives required the granting agencies to direct funds toward industrial collaborations, specific disciplines, or topics. However, as John Polanyi, Canada’s most prominent Nobel laureate warned: when governments or industry try to direct scientific inquiry, bypassing the rigorous peer-review system through which the scientific community protects its integrity, our scientific horizons shrink, and our future is diminished.⁵

Attempts to forecast what research will be relevant have a dismal history and only lead to the inequitable channelling of funding into politically or commercially desired forms of applied research. Certainly, applied research is important, but projects should be assessed on their merits alongside basic or theoretical research through the established processes of peer review.

Peer review has gone through a continual process to guard against bias, through ensuring diversity of panel members, training, and guidelines. For example, NSERC, SSHRC, CIHR, and CFI collectively endorsed the San Francisco Declaration on Research Assessment (DORA) in November 2019. This global initiative promotes best practices in the assessment of scholarly research by encouraging use of a broader range of metrics to capture the value and impact of all research outputs.

Recommendation 3: Protect and improve peer review through enhancing diversity of reviewers, training, and guidelines.

Federal funding for post-secondary education (PSE)

Whereas the focus of this study has been on federal research funding, the federal government also supports PSE through other means.⁶ For example, the federal government spends more on PSE, notionally, through the Canada Social Transfer (CST), than it does through federal research funding.

The CST is a block transfer payment from the federal government in support of early childhood education, childcare, social services, social assistance, and PSE. There is no process to track the CST once it enters provincial accounts nor the proportion of the CST spent on the various sectors it is meant to support. The percentage allocation of the CST to PSE is therefore notional.

In the 2007 federal budget, the government announced that it would increase the CST by \$800 million with the objective of strengthening PSE, increasing the notional share of the CST for PSE from 25% of the transfer to 30.7%. Under these assumptions, the federal transfer through the CST to PSE totaled just over \$5 billion in 2023-2024. University and college expenditures in 2023 were over \$50 billion.

Since the notional federal top-up to PSE through the CST in 2008, provincial funding for operating grants has decreased by 1.8% between 2009-10 and 2020-21 (in constant dollars). This decline is occurring even though the CST increases by 3% a year.

To better track federal funding for public post-secondary education in Canada, more transparency is needed along with accountability for the federal funding to be used to improve affordability, accessibility, and quality of PSE.

Recommendation 4: Provide a transparent and predictable level of federal cash funding to the provinces and territories to improve public PSE.

¹ Advisory Panel on Fundamental Science. (2017). Investing in Canada's Future: Strengthening the Foundations of Canadian Research. Chapter 1.

² Advisory Panel on the Federal Research Support System. (2023). Report pps. 19-20; and Ibid, pps.11-12.

³ SSHRC, CIHR, NSERC and New Frontiers in Research Fund competition dashboards.

⁴ Ibid 1, pg. 92.

⁵ John Polanyi. [Why our scientific discoveries need to surprise us](#), *The Globe and Mail*, 2011.

⁶ Parliamentary Budget Office. (2016) Federal Spending on Post-secondary Education.