

Brief Submitted to the House of Commons Standing Committee on Science and Research for the Study on the Government of Canada's Graduate Scholarship and Post-Doctoral Fellowship Programs



Submitted by: Toronto Science Policy Network

The Toronto Science Policy Network (TSPN) is a student-run organization based at the University of Toronto. It provides a platform for graduate students and postdoctoral fellows to learn more about and to engage at the science policy interface. TSPN also works to promote and support graduate students in Canada and the use of evidence-informed decision making.

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Introduction

Graduate students and postdoctoral fellows (PDFs) drive much of Canadian innovation, entrepreneurship and business development. Their work results in discoveries which find cures for diseases, create new green technologies, prevent future pandemics and develop evidence-informed solutions to make Canada a more just society. It is in Canada's best interest for these individuals to succeed, yet they are under-supported and the financial barriers to participating in research are often far too high.

The average stipend is just \$19,000 for master's students and \$23,700 for PhD (Ottawa Science Policy Network, 2023). This is below the poverty line in many cities, including Toronto, where TSPN is based (Daily Bread Food Bank, 2022). As a result, it is unsurprising that a recent survey of 1300 Canadian graduate students by the Ottawa Science Policy Network revealed that 86% of students experience stress and anxiety about finances and 43% of students report their finances as tight or as struggling to make ends meet (Ottawa Science Policy Network, 2023). This lack of funding forces graduate students to take on additional employment on top of their 40–60-hour weeks, causing research productivity to suffer, or relies on privilege such as parent-funded housing. Lack of funding also disproportionately impacts marginalized and underrepresented groups (URGs) from accessing graduate educations, which reduces the diversity of Canadian research for years to come.

Without adequate financial support, Canada risks losing its highly qualified personnel at every stage of education. The compensation for Canadian graduate students falls short globally, leading to a brain drain to peer countries like the United States. For those studying in Canada, the repercussions are evident: 31% of graduate students have contemplated abandoning their studies due to overwhelming financial pressures (Ottawa Science Policy Network, 2023). It's time for Canada to take bold action and invest in its future by providing the necessary support to nurture and retain top talent. By doing so, we can fortify Canada's position as a leader in innovation and secure a brighter future.

TSPN's Recommendations for the SRSR

Recommendation #1: Increase the value of Tri-Agency scholarships and postdoctoral fellowships by 50% and index the value to inflation.

The value of graduate Tri-Agency awards provides a benchmark for all graduate stipends yet, they have not increased since 2003. Many of the awards, considered to be among Canada's most prestigious and encourage our best and brightest to remain in Canada to support their studies, currently amount to less than the poverty line. We, therefore, recommend increasing the value of awards to account for the 53% inflation that has occurred over the past 20 years (Bank of Canada, n.d.). We also recommend **standardizing award values** between the three tri-agencies.

Recommendation #2: Increase the number of Tri-Agency graduate student scholarships by 50% and postdoctoral fellowships by 100%.

Graduate students awarded federal scholarships are provided with more financial security, independence and greater control of their research direction. Those awarded are also more likely to win a future award and obtain a tenure-track position (Baskaran et al., 2021). Yet, there are now more than twice as many graduate students in 2023 compared to 2003, but the number of graduate and postdoctoral awards has not kept pace (Statistics Canada, 2022). We recommend **increasing the number of Tri-Agency scholarships** by 50% and postdoctoral fellowships by 100% to match the increasing demand and ensure awards remain accessible.

Recommendation #3: Increase the Tri-Agency research grant budget provided to faculty by at least 10% per year for the next five years.

Most graduate students and PDFs aren't paid through scholarships but from their supervisors' research grants. Therefore, a key step in ensuring all graduate students and PDFs are **paid a living wage** is to increase the funding researchers receive through federal granting councils. The recent Report of the Advisory Panel on the Federal Research Support System recommends at least a 10% increase per year for the next 5 years in funding for the Tri-Agency with money specifically allocated to support graduate student and postdoctoral pay (Bouchard et al., 2023).

Recommendation #4: Harmonize eligibility duration for doctoral awards.

One of the primary criteria used to apply for awards is the duration of enrollment in the applicant's graduate program. Yet, there are inconsistencies between the three Tri-Agencies regarding eligibility. For example, students applying for NSERC PGS-D and CIHR CGS-D awards are only eligible for 24 months following enrollment if they entered their PhD program following the completion of a master's degree. We recommend **harmonizing award eligibility** to the model currently offered by the SSHRC-DF award which would allow all doctoral students the opportunity to apply up to 48 months from enrollment. Extending the eligibility period would benefit students by allowing them more time to prepare a competitive application and would avoid reliance on pre-doctoral academic accomplishments, which can be greatly influenced by systemic barriers faced by undergraduate students from historically underrepresented groups. However, this recommendation should be accompanied by the proportionate allocation of awards to students in each year of their degree, to prevent only senior graduate students from succeeding.

Recommendation #5: Reevaluate awards criteria.

Currently, graduate awards are granted based on the criteria of "excellence," but the tri-agency's definition of this descriptor lacks clarity and transparency. The system heavily favours students with notable academic and research achievements during their undergraduate years. Unfortunately, this approach often benefits those who have had the opportunity to work in research labs, even if it means doing unpaid work, during their undergraduate degrees to secure authorship on publications. Consequently, this creates a disadvantage for students who have financial constraints and need to take on paid work or have additional responsibilities while pursuing their studies (Baskaran et al., 2021). The **definition of excellence should therefore be broadened** to value non-academic experiences like work, community volunteerism and professional development. We also recommend that the criteria become similar to that of the Vanier Doctoral award where there

is equal weighting to the selection criteria of 1) academic excellence; 2) research ability and potential; and 3) personal characteristics, interpersonal skills and leadership. This may encourage diversity and inclusivity by encouraging applicants with non-academic commitments, particularly from URGs, to apply.

Conclusion

Graduate students and postdoctoral fellows drive Canadian innovation, entrepreneurship, and business development. Canada's progress hinges on their success, and without their support, we risk falling behind our peers. It is critical that Canada increases the value and number of Tri-Agency awards, as well as funding for students paid through supervisor grants. Furthermore, we urge the government to broaden the eligibility duration and selection criteria of doctoral awards to reduce barriers to education. Together, these recommendations will ensure Canada creates a prosperous, diverse and healthy research ecosystem.

References

- Bank of Canada. (n.d.). *Inflation Calculator*. Bank of Canada. Retrieved July 26, 2023, from <https://www.bankofcanada.ca/rates/related/inflation-calculator/#About-this-calculator>
- Baskaran, S., Maddiboina, D., Kum, J. Y., Reuben, R., Kharas, K., Bukuroshi, E., Lim, I., & Narayanan, B. K. (2021). *Improving the Accessibility of Federal Graduate Research Awards in Canada* (Issue 4). https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/baskaran_etal_jspg_18-4.pdf
- Bouchard, F., Patry, G., Schafer, L., Singh, B., Chan, Y., Rossant, J., & Timmons, V. (2023). *Report of the Advisory Panel on the Federal Research Support System*. <https://ised-isde.canada.ca/site/panel-federal-research-support/sites/default/files/attachments/2023/Advisory-Panel-Research-2023.pdf>
- Daily Bread Food Bank. (2022). *Research Bulletin: A Decade of Deep Poverty*. https://www.dailybread.ca/wp-content/uploads/2022/10/DB-ResearchBulletin_Report-2022.pdf
- Ottawa Science Policy Network. (2023, February 3). *Financial Challenges Faced by Graduate Students in Canada*. https://www.ottawasciencepolicynetwork.ca/_files/ugd/fbeadc_c9aacd9267bf476f90b8a2d44a0e6536.pdf
- Statistics Canada. (2022). *Table 37-10-0069-01 Postsecondary enrolments, by International Standard Classification of Education, program type and credential type*. <https://www150.statcan.gc.ca/t1/tb11/en/tv.action?pid=3710006901>