



McGill

**Graduate and
Postdoctoral Studies**

Brief to the House of Commons Standing Committee on Science and Research

Study of the Government of Canada's Graduate and Post-doctoral Fellowship
Programs.

Graduate and Postdoctoral Studies, McGill University

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Introduction

Graduate and Postdoctoral Studies (GPS) at McGill University is happy to contribute to this important discussion on the future of funding for Canada’s graduate students and postdoctoral fellows. Since their establishment in 2003, the Canada Graduate Scholarships and Post-doctoral Fellowships administered by the Tri-Council Agencies have supported the work of thousands of Canadian researchers. However, over the last 20 years, the value of these awards has remained largely stagnant while their purchasing power has dropped by approximately 50%. The devaluation of federal graduate and post-doctoral awards is particularly worrying in our current context of rapid increases to the cost of living in Montréal and across Canada.

The growing economic precarity of graduate and post-doctoral studies in Canada has a negative impact on both the competitiveness of McGill and other Canadian universities on the world stage and the academic productivity and mental health of the next generation of Canadian researchers. This was a reality made clear in the recently released “Bouchard Report” from the Advisory Panel on the Federal Research Support System. We agree with the authors of the report in their estimation that “current support for graduate students, the researchers of tomorrow, is at a breaking point.”¹

A significant and sustained increase in federal funding for Canada’s graduate students and post-doctoral fellows would not only mean increased productivity and competitiveness for Canadian researchers and universities; it would also constitute an investment in the future of the Canadian economy more generally. Although graduate students, and PhD students in particular, are often imagined solely as “professors in training,” research shows that the vast majority of Canadian PhDs have careers other than that of the traditional tenure-track professor. For example, the TRaCE McGill Project showed that approximately 75% of McGill PhD graduates worked in sectors beyond the professoriate, including entrepreneurship, health care, government, and private enterprise.² PhDs mobilize the high-level knowledge and skills acquired through their research and training to make key and unique contributions to Canada’s knowledge-based economy. It is already clear that Canada’s future prosperity will depend on these expert researchers and workers capable of tackling a range of complex issues, such as improving health care, the influence of generative AI, or how to respond to rapid climate change. Without increased federal support, Canadian universities will be unable to train and retain these much-needed highly qualified personnel.

McGill Graduate and Postdoctoral Studies makes the following recommendations:

¹ Innovation, Science, and Economic Development Canada, Report of the Advisory Panel on the Federal Research Support System (accessed July 2023).

² The TRaCE McGill project gathered information on more than 4500 McGill PhDs who graduated between 2008 and 2018. McGill University Graduate and Postdoctoral Studies, McGill TRaCE Executive Summary (accessed July 2023).

Recommendations

Recommendation 1: Increase Tri-Agency Graduate Student Scholarship amounts to account for inflation over the last 20 years

In consonance with many of the other organizations that have submitted briefs to this Standing Committee, McGill GPS recommends increasing the dollar amount of Tri-Agency Canada Graduate Student Scholarships to account for inflation. We urge the federal government to:

- Increase all Master's-level scholarships by 48%, from the current \$17 500 to **\$26 000/year for 1 year**, to account for inflation since 2003.
- Merge the different categories of PhD-level scholarships (PGS-D and CGS-D) and offer them at the current level of the CGS-D (\$35000/year for 3 years).
- Increase the value of post-doctoral fellowships by 33%, from the current \$45 000 to **\$60 000/year for 2 years**, to account for inflation (this award amount increased by \$5000 since 2003)
- Increase the value of all graduate and post-doctoral fellowships annually in accordance with the consumer price index to ensure they remain competitive in the Canadian and global context.

Recommendation 2: Increase the number of awards offered to graduate students and post-doctoral fellows.

The number of awards offered to graduate students and post-doctoral fellows by the Tri-Agencies has not kept pace with the growth in Canadian higher education over the last 20 years. We recommend:

- Tripling the number of Master's-level awards granted by the Tri-Agencies from the current level of approximately 3000/year to **9000/year**.³
- Doubling the number of PhD and post-doctoral-level awards granted by the Tri-Agencies. This would mean an increase from approximately 2000/year to **4000/year** for the PhD awards, and from approximately 500/year to **1000/year** for post-doctoral fellows.⁴

Recommendation 3: Increase the amount and number of research grants awarded to Canadian researchers through the Tri-Agencies.

Many graduate students derive at least part of their funding from their supervisors' research grant funding. Increased federal research grant funding not only raises Canada's research standing on the global stage but also provides much needed support for the next generation of Canadian scientists and researchers.

³ Natural Sciences and Engineering Research Council, [Canada Graduate Scholarships – Master's award allocations](#) (accessed July 2023).

⁴ Social Sciences and Humanities Research Council, [Competition Statistics](#) (accessed July 2023); Natural Sciences and Engineering Research Council, [2022 Scholarships and Fellowships Competition Results](#) (accessed July 2023); Canadian Institutes of Health Research, [Funding Decisions Database – CIHR Fellowships](#) (accessed July 2023); Canadian Institutes of Health Research, [Funding Decisions Database – Canada Graduate Scholarships Doctoral Award](#) (accessed July 2023).

Recommendation 1

An increase in the value of federal graduate and post-doctoral fellowships, virtually stagnant since their inception, is desperately needed. Although other funding agencies, such as Québec's *Fonds de recherche du Québec* (FRQ), have helped alleviate the lack of funding at the federal level, overall support for graduate students remains inadequate.⁵ Graduate students and postdoctoral fellows are key contributors to research in Canada, full-time researchers working on questions highly relevant to Canada's future prosperity. As a recent opinion piece in the *Ottawa Citizen* from Sarah Laframboise and Senator Stan Kutcher puts it, "People in these positions are knowledge creators, not simply knowledge receivers. They are today's 'emerging experts,' upon whom Canada will rely to create the society of tomorrow."⁶

We echo the other briefs submitted to this Committee: inflation over the last 2 decades, including exceptionally high current levels of inflation, means that funding for graduate students and post-doctoral fellows is sorely insufficient. This has a widely acknowledged negative impact on the productivity and mental health of this population and reduces the competitiveness of Canadian universities in attracting top graduate and post-doctoral talent.

As the *Bouchard Report* acknowledges, despite federal government investment in Budget 2018 (\$925 million over five years and \$235 million ongoing) to increase Tri-Agency research support, Canada continues to lag behind its peers. The report cites ambitious investments internationally, including the US *CHIPS and Science Act* (\$200 billion over 10 years), Japan's creation of a US\$ 87 billion fund to support research and promote economic growth, and the UK's commitment to increase annual investment in research and development to £20 billion by 2024-2025. The report also points to Canada's under-investment in research and development as a share of GDP: while Canada currently invests 1.6% of GDP in R&D, Germany and Finland plan to invest as much as 3.5% and 4% of GDP, respectively, in coming years.⁷

The authors of the report highlight that research investment in these countries is "understood as a necessary condition of wellbeing and prosperity at the individual and collective level as well as an additional tool for global diplomacy and influence." Moreover, if the federal government fails to increase funding to internationally competitive levels, "Canada will fall behind in an increasingly competitive global marketplace and lose its status as an international magnet for talent and a research collaborator of choice."⁸

This is all the truer considering the current difficulty of pursuing graduate and postdoctoral training. To do so, individuals must choose to live in a situation of economic precarity over a period of several years (as many as 10 years if one pursues Master's, PhD, and postdoctoral studies). Understandably, this is a sacrifice that many are unwilling or unable to make. Ultimately, this is detrimental to the Canadian economy, since a whole generation of Canadians is receiving fewer technical skills and less advanced,

⁵ The FRQ recently increased the amount of their Master's and Doctoral fellowships to \$21 000 for Master's and \$25 000 for PhD. Fonds de Recherche du Québec, [Les FRQ investissent 270,3 M\\$ dans les octrois 2023-2024](#) (accessed July 2023).

⁶ *Ottawa Citizen*. [Canada's graduate students and post-doc experts need much more support than we give them](#) (accessed July 2023).

⁷ Innovation, Science, and Economic Development Canada, [Report of the Advisory Panel on the Federal Research Support System](#) (accessed July 2023).

⁸ Innovation, Science, and Economic Development Canada, [Report of the Advisory Panel on the Federal Research Support System](#) (accessed July 2023).

formal training that they need to compete in our globalized and knowledge-based society, increasingly reliant on a highly-educated and highly-skilled workforce.

McGill's results in the 2022 *Canadian Graduate and Professional Student Survey* (CGPSS) provide evidence of the impact of chronic underfunding of graduate students and post-doctoral fellows at one of Canada's top research institutions.⁹ According to the 2022 [survey results](#) for McGill Master's with Thesis and PhD students (eligible for federal funding), 19.8% of Master's students and 26% of PhD students received, at some time during their degree, funding from the Tri-Agencies.¹⁰ The proportion of students funded at McGill is above the national average.¹¹ Nevertheless, the survey's indicators for graduate student financial stability at McGill are bleak:

- **43.4%** of Master's and **25.8%** of PhD students answered that they relied on "Loans, saving, or family assistance" to fund their studies.
- **43.4%** of Master's and **40.9%** of PhD students said that work commitments constituted an obstacle to their academic progress.
- **67.9%** of Master's and **72.7%** of PhD students said that financial pressures were an obstacle to their progress.

Despite the high levels of these indicators of financial stress, McGill's results for these categories are slightly below the national average, except for graduate student reliance on loans, savings, or family assistance. Graduate student financial precarity coincides with significant mental health impacts: at McGill, **19.8%** of Master's students and **18.1%** percent of PhD students suffered from mental health disabilities, including depression, bipolar disorder, post-traumatic syndrome disorder, obsessive compulsive disorder, and generalized anxiety disorder.¹²

In short, a significant increase in the value of graduate and post-doctoral awards is necessary to ensure the well-being, productivity, and training of Canadian graduate students and post-doctoral fellows. Such an increase would bring Canada in line with other countries like the USA, the UK, Japan, and others while ensuring the competitiveness of Canadian universities in an international context.

Recommendation 2

Over the last 20 years since the establishment of the Canada Graduate Scholarships program, the number of graduate students and post-doctoral fellows studying in Canadian universities has increased significantly. Despite this, the number of Tri-Agency awards granted annually has remained stagnant.¹³ The data illustrate this point:

⁹ In 2022, the CGPSS collected responses from nearly 65 000 graduate students enrolled in 54 different Canadian universities. McGill Analysis, Planning, and Budget, [Survey Results](#) (accessed July 2023).

¹⁰ 1042 McGill PhD students and 629 McGill Master's with Thesis students responded to CGPSS in 2022. McGill Analysis, Planning and Budget, [CGPSS McGill Summary Report 2022: Doctoral Students](#) (accessed July 2023); McGill Analysis, Planning and Budget, [CGPSS McGill Summary Report 2022: Master's Students – With Thesis](#) (accessed July 2023).

¹¹ The 2022 CGPSS national results showed 17.9% of Master's with Thesis students and 23.8% of PhD students at the 54 Canadian institutions surveyed received federal funding at some point during their degrees. McGill Analysis, Planning and Budget, [CGPSS National Summary Report 2022: Doctoral Students](#) (accessed July 2023); McGill Analysis, Planning and Budget, [CGPSS National Summary Report 2022: Master's Students – With Thesis](#) (accessed July 2023).

¹² McGill Analysis, Planning and Budget, [CGPSS McGill Summary Report 2022: Doctoral Students](#) (accessed July 2023); McGill Analysis, Planning and Budget, [CGPSS McGill Summary Report 2022: Master's Students – With Thesis](#) (accessed July 2023).

¹³ Innovation, Science, and Economic Development Canada, [Report of the Advisory Panel on the Federal Research Support System](#) (accessed July 2023).

- Considering only the period of 2011-2021, graduate student enrolment at McGill grew from 7144 in 2011 to 9038 in 2021, a **26.5% increase**.¹⁴
- In 2021, **23 243** PhD students were enrolled in Canada’s top 5 universities alone (McGill, University of Toronto, University of British Columbia, University of Alberta, and Université de Montréal).¹⁵ In the same year, approximately **2000** awards were granted to PhD students by the Tri-Agencies.¹⁶
- In 2013, **36.3%** of McGill PhD students reported receiving some form of funding from the Tri-Agencies during their programs. As mentioned above, by 2022 this number had fallen to **26%** due to increased enrolment in doctoral programs.¹⁷

The current number of graduate and postdoctoral awards granted by the Tri-Agencies is sorely insufficient in relation to the demand for advanced study in Canada. A significant increase in the number of Tri-Agency awards available is vital to ensure the future competitiveness and productivity of Canadian universities, students, and researchers. Therefore, McGill GPS **recommends tripling the number of Master’s awards** (from 3000/year to 9000/year) **and doubling the number of PhD and post-doctoral awards** (from 2000/year and 500/year to 4000/year and 1000/year, respectively) to respond to the growth in graduate and post-doctoral studies in Canada over the last two decades.

Recommendation 3

Finally, we would like to echo the *Bouchard Report* and many of the briefs submitted to this committee in recommending an increase in the amounts awarded to Canadian researchers through Tri-Agency research grants.

Many graduate students rely, at least in part, on funding in the form of research assistantships and stipends from their supervisors. A large portion of these funds are granted to Canadian researchers through the Tri-Agencies. The authors of the *Bouchard Report* agree that “A significant portion of support for graduate students and postdoctoral fellows is paid not through scholarships but through stipends or salaries out of grant funding awarded to supervising professors” and estimate that some 35 000 graduate students and post-doctoral fellows are financially supported in this way.¹⁸ For supervising professors, funds destined to supporting graduate students and postdoctoral fellows usually represent a large proportion of the amounts awarded through research grants.

Due to increasing costs of living coupled with insufficient federal research grant funding, researchers are forced to make difficult decisions. In many cases, they are forced to divert funds, that would

¹⁴ Note that these totals include PhD students and both thesis and non-thesis Master’s students. PhD enrollment at McGill grew from 3287 in 2011 to 4022 in 2021, a 22.3% increase. McGill University Senate, [Graduate and Postdoctoral Studies Annual Report to Senate 2016](#) (accessed July 2023); McGill University Senate, [Graduate and Postdoctoral Studies Annual Report 2022](#) (accessed July 2023).

¹⁵ McGill University Senate, [Graduate and Postdoctoral Studies Annual Report 2022](#) (accessed July 2023); Université de Montréal Bureau du Registraire, [Statistiques officielles : sommaire des étudiants inscrits, Automne 2021](#) (accessed July 2023).

¹⁶ Social Sciences and Humanities Research Council, [Award Recipients for SSHRC Doctoral Fellowships: Fall 2021 Competition](#) (accessed July 2023); Social Sciences and Humanities Research Council, [Award Recipients for Canada Graduate Scholarships – Doctoral Program: Fall 2021 Competition](#) (accessed July 2023); Natural Sciences and Engineering Research Council, [Competition Year 2021 Statistics](#) (accessed July 2023); Canadian Institutes of Health Research, [Funding Decisions Database](#) (accessed July 2023).

¹⁷ At the national level, 29.6% of PhD students reported receiving federal support in 2013 versus 23.8% in 2022. Canadian Association for Graduate Studies, [CGPSS National Summary Report: All Respondents](#) (accessed July 2023); McGill Analysis, Planning and Budget, [CGPSS McGill Summary Report: Doctoral Students](#) (accessed July 2023).

¹⁸ Innovation, Science, and Economic Development Canada, [Report of the Advisory Panel on the Federal Research Support System](#) (accessed July 2023).

otherwise be used for necessary research materials and equipment, to pay their graduate and post-doctoral collaborators livable wages. The underfunding of Canadian researchers has a direct impact on their own research productivity and that of their graduate and post-doctoral trainees. By contrast, with greater federal financing in the form of research grants and scholarships for graduate students and post-doctoral fellows, researchers can channel these funds more efficiently into producing cutting edge knowledge for Canada's future.

Without significant increases in federal funding to Canadian researchers, they will continue to be uncompetitive in the global research ecosystem since, as the cost of living continues to rise, they will be increasingly unable to attract and retain top research talent in Canadian universities.

Summary

In summary, McGill Graduate and Postdoctoral Studies urges the federal government to take long-overdue action to ensure the future vitality of Canada's university and research environment and ensure the financial, physical, and mental well-being of Canada's future researchers. We reiterate our recommendations to this committee:

- 1. Increase the dollar amount of graduate and post-doctoral scholarships to respond to their devaluation over the last 20 years due to inflation.**
 - a. Increase Master's scholarships by **48%** to **\$26 000/year**.
 - b. Merge CGS-D and PGS-D and offer them at **\$35 000/year** for three years.
 - c. Increase the value of post-doctoral fellowships by 33% to **\$60 000/year**.
 - d. Index all graduate and post-doctoral awards to the consumer price index.
- 2. Increase the number of graduate and post-doctoral awards offered by the Tri-Agencies.**
 - a. Triple the number of Master's awards to **9000/year**.
 - b. Double the number of PhD and post-doctoral awards to **4000** and **1000** per year, respectively.
- 3. Increase the amount and number of grants awarded to Canadian researchers through the Tri-Agencies.**

These changes, if implemented, would have an immediate positive effect on Canada's emerging researchers and would be a significant contribution to the reinvigoration of Canada's research ecosystem.

Profile: Graduate and Postdoctoral Studies, McGill University

Graduate and Postdoctoral Studies (GPS) promotes university-wide academic excellence for graduate and postdoctoral education at McGill. GPS provides leadership and strategic direction across the university in close collaboration with the academic and administrative units, and the graduate and postdoctoral community. GPS strategic priorities include:

- Ensuring competitive financial support for students
- Supporting graduate students to complete their degree in a timely manner
- Guaranteeing high quality supervision for graduate students
- Designing and structuring graduate programs
- Ensuring the quality of thesis review and administration
- Improving the graduate student experience and provide professional training for both academic and non-academic careers