

# **Brief for Pre-Budget Consultations 2021 Federal Budget**

Presented to the Standing Committee on Finance (FINA)  
of the House of Commons of Canada

**By *École de technologie supérieure (ÉTS)***



Le génie pour l'industrie

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## Summary

*École de technologie supérieure* (ÉTS) is committed to working with the Government of Canada to promote innovation and economic development and to enable Canada to relaunch its economy in a post-pandemic world.

Economic development is a driving force behind the mission of ÉTS, which is well placed to play a leading role in creating new companies and fast-tracking innovation thanks to the relationship it has built with industry, whether from a research, training or entrepreneurship perspective.

In order for Canada to emerge from the present crisis and take a leadership position in the new economy in terms of innovation and radical change, the government, universities and industry must join forces to navigate the many obstacles standing in the way of companies accessing the innovations that are being created on university campuses.

## Recommendations

1. **Increase the Federal Government's investment in university infrastructure and promote the adoption of new technologies and services, especially those produced by start-ups and through research conducted by Canadian companies and governments;**
2. **Launch campaigns aimed at encouraging entrepreneurship at universities and promote collaborative research between industry and student clientele at the undergraduate level as well as the graduate and post-graduate levels, through:**
  - i. **recurring public financial support from granting agencies;**
  - ii. **a call for projects for the Canada First Research Excellence Fund focusing on potential technological innovations that promote the growth of emerging industrial sectors;**
  - iii. **enhancement of assistance measures for start-ups within the first 5 years;**
3. **Promote the equitable delivery of the Federal Government's practical internship program for students by naming a single third-party partner in Québec to manage the program across all economic sectors in Québec; and**
4. **Increase funding intended to promote Canada as a preferred destination for university studies and implement measures to facilitate the establishment of international students and their integration into society.**

## **Recommendation 1.**

***Increase the Federal Government's investment in university infrastructure and promote the adoption of new technologies and services, especially those produced by start-ups and through research conducted by Canadian companies and governments.***

The Canadian economy has been severely hamstrung by the recent Covid-19 health crisis, but on a wider scale, it has also been hampered over the last number of years by significant changes linked to global energy transition. Changing consumption habits driven by an increasing awareness of the impact of climate change, by enhanced production capabilities resulting from new extraction technologies and by opposition to energy transport megaprojects have all impacted government authorities. The frequency of these transformations has led to an effort to regulate the corresponding new emerging technologies.

For decades, the growing trends of population concentration in cities and enhanced mobility have created the ideal conditions for the propagation of contagious diseases and increased energy consumption.

In order to mitigate the consequences of these realities, the Government of Canada must focus on a profound transformation of the Canadian economy, moving toward an economy based on the production of high value-added goods and services. Canadians need jobs, of course, but more importantly, they need rewarding, stimulating and enduring jobs.

The long-term competitiveness of the Canadian economy must be based on the availability of a technologically skilled workforce and productivity that is competitive with other G8 countries in general, and with the United States in particular. Looking specifically at the manufacturing sector, our competitiveness depends on the development of new technologies in order to avoid being at the mercy of a monopoly of foreign powers.

As a whole, the university sector already contributes to this effort, as does ÉTS specifically, as the second largest engineering school/faculty in Canada. The intensity level of collaborative research carried out with industry is among the highest in Canada, and is comparable to MIT. According to UBI Global, Centech, the ÉTS technology company accelerator, is among the 20 best-performing university incubators in the world, rivaling those in Tel-Aviv and Boston. In keeping with its mission, ÉTS contributes to closing the gap between training and productivity in areas related to high technology.

## **Recommendation 2.**

***Launch campaigns aimed at encouraging entrepreneurship at universities and promote collaborative research between industry and student clientele at the undergraduate level as well as the graduate and post-graduate levels, through:***

- i. recurring public financial support from granting agencies;***
- ii. a call for projects for the Canada First Research Excellence Fund focusing on potential technological innovations that promote the growth of emerging industrial sectors;***
- iii. enhancement of assistance measures for start-ups within the first 5 years.***

In addition to funding their research, recruiting students, and especially Canadian students, is one of the main challenges facing researchers. On the one hand, government financial support for graduate and post-graduate students has risen only slightly in recent years. On the other hand, even before the pandemic, the labour shortage in the engineering sector had forced industry to offer constant salary increases. As a result, it is becoming very difficult to get Bachelor students in Canada to continue to the graduate and post-graduate levels.

In a post-pandemic context, where certain employment sectors are impacted more negatively, students may be enticed to pursue their training through graduate and post-graduate studies in order to take part in research in partnership with industry. This approach may facilitate the creation of new technologies in light of rapid commercialization, new companies and training in emerging advanced-skill areas that may no longer be targeted.

The Federal Government can help universities to increase their attractiveness to graduate and especially post-graduate students. It is worth noting the efforts already deployed through the implementation of government programs aimed at encouraging companies to hire doctoral students, such as MITACS. These are the types of efforts that must be continued and developed. However, if it is appropriate to find incentives for our students to go into the research field, it is also important to strengthen the mechanisms that make it easier for companies to hire more employees who have been involved in research and have obtained a PhD.

It is also important to get students interested in post-graduate studies, so that they will have a desire to create companies. In consolidating an approach that focuses on collaborative research and incubation, the government should enhance the financial assistance available to student researchers for creating companies. The development of pedagogical innovations may lead to an entrepreneurial profile among the training that is offered for engineers.

Toward this end, the Federal Government should launch a campaign to promote technological entrepreneurship at the university level and enhance the financial assistance measures available to start-ups within their first five years of incubation and development through technological and applied research.

### **Recommendation 3.**

***Promote the equitable delivery of the Federal Government's practical internship program for students by naming a single third-party partner in Québec to manage the program across all economic sectors in Québec.***

A total of 1,114 employers called upon ÉTS for its student interns in 2019. In addition, the Canadian Government has acknowledged the importance of supporting integrated training in the workplace in Québec and the rest of Canada.

However, the Federal Government's practical student internship program has not achieved the expected level of success in Québec since it was introduced in 2018. In fact, data from Employment and Social Development Canada (EDSC) reveal that Québec represented 25.9% of all post-secondary school registrations in Canada in 2016-2017. By comparison, the latest data for the program from 2018 reveal that only 11% of all placements took place in Québec, which has led a number of Québec universities to reach out to the Federal Government.

The low rate of penetration for the program in Québec may be attributable to the fact that the mode of delivery involves external partners that are not well-known in or overly familiar with Québec. In addition, these organizations have developed their own rules for attributing the funds, which may differ from one partner to another. Finally, the steps that have been taken to publicize the program in Québec have had very little impact. In short, the mode of delivery for the program using third-party partners puts Québec companies and students at a clear disadvantage. Against the backdrop of the pandemic, the need to remedy this situation has become urgent in recent months.

In order to mitigate these realities, it is crucial to ensure regional equity in the distribution of wage subsidies that reflect university registration levels through the implementation of a dedicated regional envelope. The distribution of this envelope should be prorated in accordance with the number of paid internships offered by each institution with a view to ensuring distribution throughout all regions of the province.

Toward this end, the government should name a single third-party partner in Québec, whether it is Canada Economic Development for Quebec Regions (CED) or an independent non-profit organization, to take over management of the program across all economic sectors in Québec.

#### **Recommendation 4.**

***Increase funding intended to promote Canada as a preferred destination for university studies and implement measures to facilitate the establishment of international students and their integration into society.***

Canada is a vast country with a sparse population, an increasing life expectancy and a low birth rate. The inversion of the demographic pyramid is particularly worrisome in terms of the sustainability of the Canadian social safety net and the economic growth of the country that supports it. In light of this, the presence of international students is a valuable resource, not only for Canadian university campuses, but for the country as a whole.

Although Canada enjoys a favourable perception, and will continue to be a preferred study destination in the post-pandemic world, it will take a number of years to get back to the level of welcoming international students that we experienced before this health crisis.

From a research perspective, integrating international students from all 3 levels into research teams will allow us to attract the best talent and to meet some of the research-related labour demands. It will also help to build strong collaborative relationships among international scientific networks. Many student-researchers who return to their country of origin after completing their studies maintain productive ties with the educational system in which they received their training.

The length of university studies also promotes solid integration into Canadian society among those students who choose to immigrate to Canada. In addition, the quality of the training offered at our universities and the fact of holding a Canadian diploma greatly increase the employability of immigration applicants.

To mitigate the demographic problem that Canada will face in a post-pandemic world, the government should facilitate the establishment of foreign immigrants in general, and international students in particular. They have skills and expertise that are of real value to companies and industries right now. These represent key factors in the economic recovery. They also represent a specific population that is poised to help resolve many of the problems facing our society.

Considering the foregoing, the Federal Government should increase investment in the following areas:

- 1) Support for recruitment strategies and the introduction of new programs promoting recruitment in higher education;
- 2) Support for universities through the implementation of measures aimed at facilitating the establishment of international students on campuses and within communities, from before they arrive in Canada until they are fully integrated within the context of the pandemic;
- 3) Modification of Canadian immigration standards and services and border services to facilitate the process of students entering Canada and obtaining the required permits.