

2 August 2018

Executive Summary

This submission is presented by the University of New Brunswick [UNB]. UNB is New Brunswick's national comprehensive university. Named as Startup Canada's *Most Entrepreneurial Post-Secondary Institution* in 2014, UNB concentrates 70% of publicly funded research and is widely recognized as the heart of NB's innovation ecosystem. It is also recognized as a productive platform for generating entrepreneurs and new enterprise, with 100 startups since 2010.

UNB is deeply engaged in returning New Brunswick to economic growth, with a strategic plan that emphasizes the role of innovation and entrepreneurship in creating enhanced economic productivity, global competitiveness, and job growth opportunities.

UNB recommends that the following measures be adopted in building Canada's next federal budget:

- Sustain investment in research and development in all areas of Canada, to create economic opportunities and enhanced national competitiveness.
- Include initiatives that support population growth and workforce development, especially those that support innovation and entrepreneurship activity and address disparities.
- Address an Innovation Gap in New Brunswick, by restoring horizontal equity in Research & Development investment.

Enhancing economic productivity in Canada

Members of the Committee may know New Brunswick as a province experiencing significant demographic, economic, and fiscal stress. New Brunswick's future is uncertain. Without a concerted and collaborative effort to return New Brunswick to economic growth, Canada is vulnerable to consequences that reach beyond the borders of our province. A strong and healthy Canada requires strong and healthy provinces. An effort to maximize the economic and human potential of New Brunswick and other regions in Canada is a worthy effort in nation building.

A sustainable New Brunswick needs to return to economic growth, propelled by enhanced economic productivity and global competitiveness. Without enhancing New Brunswick's economic productivity, our province will be unable to offset the costs associated with an aging

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population, provide families with the services they need, or attract the investment and jobs needed to secure our future. High performance in economic productivity has become a prerequisite for much of what we value in modern Canadian society.

Creating the conditions for high economic productivity will require exceptional collaboration among industry, government, and academia. Canada's economy needs strength on each of these fronts.

Innovation fuels Canada's economic productivity, and within our post-secondary institutions it supports opportunities for enhanced teaching and learning. At UNB, we think it is beneficial for every undergraduate student to have an opportunity to engage in research, entrepreneurship, and public engagement. We want these to be the defining characteristics of a UNB education, leading to graduates with deeper knowledge, relevant experience, and significant value to others around them. When students are engaged in innovation and entrepreneurship, everyone wins.

Across Canada, universities like UNB are instruments of economic adjustment, creating valuable and transformative economic opportunities despite significant challenges. In New Brunswick, we see three key opportunities to accelerate progress:

Altering New Brunswick's demographic profile

In New Brunswick, our demographic and fiscal challenges are inseparable.

Regional disparities pull working age New Brunswick's away, and with them the tax revenues that support delivery of public services. As the C.D. Howe Institute pointed out in the *Telegraph-Journal* [*New Brunswick's demographic challenge*, 16 January 2015]: The average health care costs of someone in their 70s are almost double those for someone in their 50s, and almost four times those for someone in their teenage years.

The outmigration carries with it other consequences, as well. New Brunswick's transition to an economically productive and globally competitive digital economy isn't hampered by a significant skills gap. Our strong record of startups and innovation are evidence of that. New Brunswick's challenge in sustaining and growing our digital-skills workforce is a youth retention problem, not only a skills-development challenge.

UNB is responding to the *Calls to Action* issued by the Truth and Reconciliation Commission of Canada, with a particular emphasis on bridging within one generation the educational attainment gap that exists between indigenous and non-indigenous populations. The process

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of Reconciliation is essential to maximizing New Brunswick's economic and human potential. Every future matters.

The University of New Brunswick has a proud record as one of Canada's leaders in the internationalization of higher education. The attraction of international students, especially graduate students and post-doctorates, is a high priority for UNB as we seek to grow industrial capacity for innovation. This is consistent with the aims of the Atlantic Growth Strategy, and supported by collaboration between governments, industry, communities, and post-secondary institutions. However, progress in international student recruitment and retention is compromised by visa approval rates and response times in markets of significance, such as Nigeria and Ghana.

By working together to create economic opportunities in New Brunswick, we are ensuring that communities, employers, and citizens can develop the productivity and adaptability necessary to secure a prosperous future.

Reshaping New Brunswick's demographic profile will require a committed effort over several years.

But implications of New Brunswick's deficit and debt require a more accelerated approach. In a province of about 750,000 people, the 2018-19 provincial budget projects a deficit of \$189 million, and adds \$372.3 million to a net debt that's now set to hit \$14.4 billion by the end of March 2019. Returning New Brunswick to economic growth will require a dramatically altered level of economic productivity.

Accelerating the return to economic growth in New Brunswick: innovation and entrepreneurship

High performance in economic productivity has become a prerequisite for much of what we value in modern Canadian society. As a modern public university, UNB sees a role for itself in advancing the economic performance of our region and nation.

When it comes to improving all aspects of New Brunswick's economic performance, enhanced innovation is the single most effective and expedient strategic option available to our province and its economy. For several years now, this is where UNB has focused its institutional effort. With about three quarters of the publicly funded research activity, UNB is the heart of New Brunswick's innovation ecosystem. UNB is the largest agglomeration of innovation talent, the social point for collaboration, and the natural node of globe-spanning networks. We want to make the most of this, on our province's behalf.

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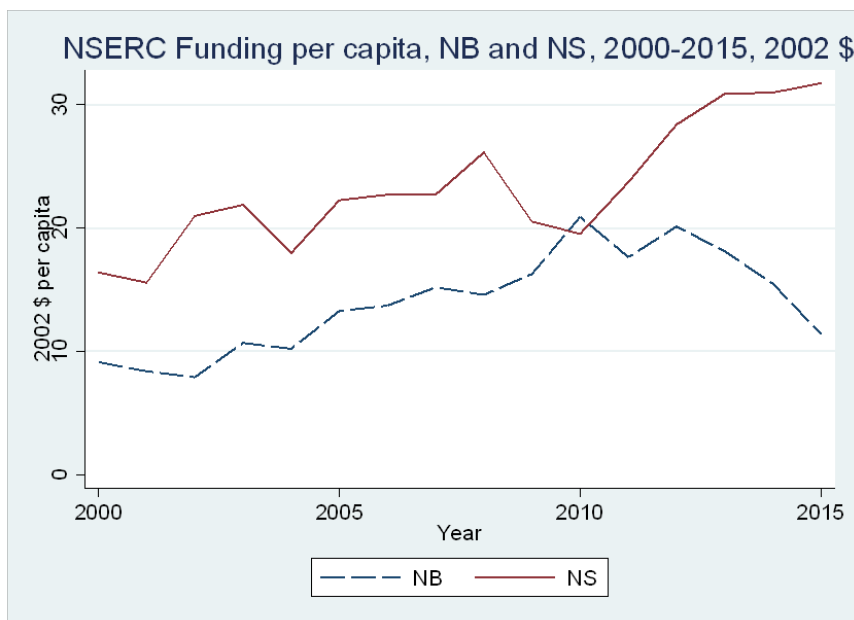
Innovation is good for our economic productivity, but it also supports better teaching and learning, which is our primary purpose. We think it's beneficial for every undergraduate student to have an opportunity to engage in research, and we want this to be one of the defining characteristics of a UNB education. We think the end result is a graduate with deeper knowledge, relevant experience, and significant value to others around them. When students become engaged in research, everyone wins.

The innovation 'force multiplier' that UNB brings to this set of strengths is a commitment to entrepreneurship in a wide spectrum of social and economic undertakings. By providing a platform for mobilizing knowledge and launching entrepreneurial talent across disciplines, UNB is accelerating New Brunswick's ability to put innovation to work.

Not coincidentally, this deep engagement in economic and social development through innovation and entrepreneurship also provides an exceptionally rich learning environment for students, and numerous benefits for the communities we serve.

This is why I was so pleased when the Province of New Brunswick launched 'New Brunswick's Innovation Agenda' on April 25th. This document speaks to a clear and prominent role for UNB in accelerating both innovation and the development of human capital.

The Agenda also speaks to a role for Canada's federal government. It notes that in the early 2000s, federal spending on R&D in New Brunswick nearly doubled from \$43 million per year in 2000 to \$84 million in 2007 but that since then, federal spending on R&D has flat-lined in New Brunswick while growing by 13 per cent across the country.



Addressing the impediment of horizontal inequity

Important differences in the industrial base and resource endowments exist among provinces, including those in Atlantic Canada. Understanding the distinctive amalgam of strengths and opportunities in each of these is essential

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to effective direction of strategies designed to maximizing the economic and human potential of each province.

[chart: generated from from CAUBO FIUC database for NSERC values with purchasing power values at constant 2002, using the CPIs for each province, and divided by provincial population.]

Unfortunately, existing regionalized approaches to policy development underperform in efforts to respond to these realities. Existing regional approaches to federal investment in Atlantic Canada lead us away from providing an equal and fair chance at success.

It is notable that Canada has high reliance on the university sector and federal funding for R&D amongst OECD countries. New Brunswick is among lowest, if not the lowest, among Canadian provinces. In driving a return to higher productivity and economic growth is fuelled by innovation and entrepreneurship, New Brunswick is starting from a deficit position.

The unintended consequence of a regionalized approach to federal policy development and investment is the distortion of federal R&D spending. This is readily visible in the per capita funding gap between Nova Scotia and New Brunswick, two similar and adjacent provinces within the same region.

This distortion is creating an Innovation Gap that presents a significant impediment to New Brunswick's effort to modernize its economic productivity and performance, undermining its potential for national and global competitiveness. The result is a persistent competitive disadvantage that compromises important opportunities to accelerate collaborative innovation with industry.

Bridging the Innovation Gap would result in rapid gains in productivity, competitiveness, and job creation in New Brunswick. In Budget 2019, we need to work together to find a way to invest in growth that works for all of us.