

The Mitacs logo features the word "Mitacs" in a bold, white, sans-serif font. The letter "i" is lowercase and has a white dot above it. The letters "M", "t", "a", "c", and "s" are uppercase.

*Inspiring innovation  
Inspirer l'innovation*

## **Mitacs Budget Submission to the House of Commons Standing Committee on Finance**

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**March 2016**

## Summary

Canada's ability to strengthen connections and collaborative partnerships across sectors – internationally and within our borders – is essential to making Canada a more innovative and productive competitor in the global economy.

This year Mitacs submits three recommendations to the House of Commons Standing Committee on Finance to achieve the Liberal government's commitment to promote economic growth:

1. Champion the growth of innovative Canadian companies by promoting their integration into high-value global supply chains;
2. Encourage international innovation linkages and research collaborations; and
3. Increase coordination and collaboration across Canada's innovation ecosystem.

## Introduction

Canada enjoys many competitive advantages in the global economy: a highly educated workforce, world-leading post-secondary education and research institutions, and an exceptional entrepreneurial environment. Given the rapid growth and strategic investments of developing nations, Canada must fully employ these advantages to remain a significant player in the global economy, and an attractive country in which to invest, research, and innovate. Individual initiatives are not enough; we must find ways to integrate and coordinate our efforts, building synergy through a networked innovation ecosystem focused on common goals and outcomes.

Despite its many advantages, Canada's global economic competitiveness is endangered by its long-recognized poor record on innovation, R&D, and productivity. Productivity is an essential component of sustainable wealth and job creation, but Canada lags significantly behind other major western economies on key indicators.<sup>1</sup> For example, in 2014 Canada's labour productivity, measured in gross domestic product (GDP) per hour, was USD\$51.2, which is only 77% of US labour productivity (USD\$66.5) and ranks Canada 16th worldwide behind most major economies including those of France (USD\$64.0), Germany (USD\$63.4), and Switzerland (USD\$61.1).<sup>2</sup> Canada must do better.

Mitacs recommends a three-pronged approach to improve Canada's productivity and create stable, well-paying jobs. First, we must build upon the efforts of accelerators and incubators to grow innovative Canadian companies by connecting them with global partners; second, we must strengthen Canada's ability to innovate and collaborate internationally; and third, we must increase the level of coordination and collaboration across Canada's innovation ecosystem, supporting and aligning successful initiatives.

Previous investments in research and innovation have demonstrated Canada's commitment to support university research excellence and experiential learning. In particular, federal support for the Mitacs *Accelerate* graduate research internship program provides an important example of the Government of Canada's commitment to Canada's next generation of researchers and innovators. Likewise, support for Mitacs *Globalink* by federal, provincial, and international government partners underlines the importance of building links between Canada's young researchers and the world. Mitacs looks forward to working with the Government of Canada to boost productivity by harnessing the power of our country's research excellence and, most importantly, our next generation of innovators.

<sup>1</sup>OECD (2015), Gross domestic product (GDP) (indicator). doi: 10.1787/dc2f7aec-en

<sup>2</sup>The Conference Board of Canada. (2015). Total Economy Database. Retrieved from <http://www.conference-board.org/data/economydatabase/>

## Mitacs Recommendations:

### 1. Champion growth of innovative Canadian companies by promoting their integration into high-value global supply chains.

The Government of Canada is committed to growing businesses and supporting entrepreneurs, and has demonstrated this with a proposed \$200 million annual investment for Canadian incubators and accelerators. As these companies grow and mature, they will need support integrating into global innovation supply chains. In today's economy, international trade increasingly involves multi-stage production systems. Materials being exchanged are not so much finished goods as they are a multitude of components, which combine to add value and build products. Positioning Canadian companies as key players within such value chains is vital to long-term economic growth.

As Canada proceeds with large-scale free-trade agreements, Canadian companies are gradually diversifying away from the US economy. However, they remain optimized for the North American value chain,<sup>3</sup> and research suggests that Canadian firms are not as connected into global value chains as they could be.<sup>4</sup> In fact, the pace by which Canadian companies integrate into global value chains has fallen in recent years, negatively impacting GDP per capita growth by nearly 0.2 percentage points.<sup>5</sup> In response, Canada must proactively identify mechanisms to grow innovative, high-potential companies, particularly by connecting them to global high-value supply chains. This supports the findings of a recent federally commissioned report on strategies for supporting Canadian start-ups, which recommended increased exposure to international markets as a strategy for growth.<sup>6</sup>

Mitacs *Converge* is a pilot program that builds strategic research and commercialization partnerships, with a primary focus on integrating Canadian small and medium-sized enterprises (SMEs) into globally-competitive innovation supply chains. Mitacs *Converge* facilitates business investment in Canadian R&D by building partnerships between large multinational enterprises (MNEs), Canadian SMEs and Canadian researchers. The resulting research, development and commercialization projects – cost-shared and administered by Mitacs – provide economic benefit for all partners.

The primary goals of Mitacs *Converge* are:

- To drive firm growth at Canadian SME and Canadian location of MNE;
- To facilitate FDI in Canadian companies and Canadian research; and
- To build training and employment opportunities for Canadian HQP.

Through a recent Mitacs policy research project,<sup>7</sup> we know that business leaders highlight Canada's start-up environment as an asset in attracting foreign direct investment in innovation and other R&D activities. *Converge* helps ensure that start-ups and innovative SMEs have access to international connections and opportunities, promoting firm growth and creating jobs.

*"If the start-up environment is supported and innovative, it attracts the attention of large MNEs looking to expand." - Leveraging Canada's Innovation Ecosystem (2015).<sup>8</sup>*

<sup>3</sup> Koldyk, L., Quinn, L.M. & Evans, T. (2015, May 20). Chasing the chain: Canada's pursuit of global value chains. *Institute for Research on Public Policy*. Retrieved from <http://irpp.org/research-studies/aots6-koldyk-et-al/>

<sup>4</sup> Aiello, Rachel. (2014, Dec. 1). Canada's global innovation standing continues to drop, says World Economic Forum. *The Hill Times*. Retrieved from <http://www.hilltimes.com/news/policy-briefing/2014/12/01/canadas-global-innovation-standing--continues-to-drop-says-world/40438>

<sup>5</sup> Van Assche, Ari. (2015, April 28). Global value chains and the rise of a supply chain mindset. *Institute for Research on Public Policy*. Retrieved from <http://irpp.org/research-studies/aots6-van-assche/>

<sup>6</sup> Centre for Digital Entrepreneurship and Economic Performance. (2015). *Accelerating Canada's Start-Up Ecosystem: a review of Canadian business accelerators and business incubators*. Retrieved from <http://deepcentre.com/billiondollarfirms/do-accelerators-and-incubators-make-a-difference>

<sup>7</sup> Higham, S., Walker, V.E., Annan, R. (2016) *Leveraging Canada's Innovation Ecosystem: opportunities to increase R&D investment in Canada*. Mitacs.

<sup>8</sup> Ibid.



## 2. Encourage international linkages and research collaborations.

To remain competitive in a globalized world, Canada will need an increasingly global orientation. Partnerships between institutions from different countries on major research projects allow for the exchange of ideas and knowledge diffusion and the sharing of human and financial resources. As the OECD explains, “By forging linkages between people, companies (domestic and foreign), and institutions, national systems of innovation support knowledge and human capital formation... promoting knowledge dissemination, innovation, and upgrading.”<sup>9</sup>

Mitacs proposes to support efforts to expand international research collaborations, promote two-way student mobility, and increase Canada’s global competitiveness. Mitacs will accomplish this by fostering international research collaborations, connecting Canadian researchers and companies to global markets, and boosting Canada’s innovation agenda through the Mitacs *Globalink* Program.

To date, Mitacs has supported over 2,200 international student research internships. Beginning in 2009, Mitacs has been bringing top international undergraduate students to Canada to participate in the *Globalink* summer research internship program. This summer Mitacs will host over 750 interns and currently has partnerships with eight countries, with an additional eight agreements in development. *Globalink* supports the creation of international research partnerships and provides funding to support two-way student mobility that will ensure Canadian research solutions continue to help solve real-world problems. These connections and partnerships extend far beyond our national borders and will allow Canada to compete and thrive in the global economy.

*Globalink* will help ensure that Canada’s post-secondary institutions continue to attract the world’s brightest minds. Key outcomes from the program to date include:

- 91% of past interns who returned to Canada for graduate studies indicated that their participation in the Globalink Research Internship (GRI) program significantly contributed to their decision to come to Canada;
- More than 75% of GRI interns have successfully convinced at least one fellow student or friend to come to Canada for a research internship.
- 22% of past interns who are currently enrolled in graduate studies are studying in Canada compared with only 9% of controls;
- In the absence of the GRI program, only 7% of past interns would have pursued a research internship in Canada.

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<sup>9</sup> OECD, WTO and World Bank Group. (2014). Global value chains: challenges, opportunities, and implications for policy. *Report prepared for submission to the G20 Trade Ministers Meeting, Sydney, Australia. 19 July, 2014.* Retrieved from [http://www.oecd.org/tad/gvc\\_report\\_g20\\_july\\_2014.pdf](http://www.oecd.org/tad/gvc_report_g20_july_2014.pdf)



### 3. Increase coordination and collaboration across Canada's innovation ecosystem.

Mitacs believes that to stimulate growth, drive productivity, and create jobs, the federal government must continue to support and strengthen the Canadian innovation ecosystem by making it easy for the key stakeholders within this community to work together towards common goals. Industry, universities and governments need to work smarter: collaboratively and effectively. For example, closer collaboration between companies and universities has been identified by the OECD as an effective strategy for boosting productivity growth.<sup>10</sup> Too often, the interconnectedness of our national ecosystem is not fully recognized by stakeholders. Tellingly, Canada ranks a lowly 19<sup>th</sup> globally on measures of university-industry collaboration in R&D,<sup>11</sup> a critical component of effective national innovation systems.

Mitacs is committed to working with its partners in the innovation space to build synergy and coordinate efforts in research, innovation and training. Mitacs works on behalf of its 64 university members and more than 2,000 industrial partners to build collaborative research projects. Funded by the federal government and all provincial governments, Mitacs is coordinating efforts to facilitate innovation with organizations nationwide, including ISED, NRC-IRAP, NSERC, SSHRC, CFI, Genome Canada and numerous others. Working together in pursuit of shared outcomes, with a focus on flexibility and responsiveness, gives our innovators the greatest chance for success.

As highlighted in a recent Mitacs policy paper,<sup>12</sup> a lack of coordination between innovation support programs was identified by Canadian business leaders as a weakness that deters foreign investment in Canadian R&D. As a result, Mitacs recommends continued emphasis on coordination and integration of efforts across the innovation landscape. This effort must be supported by a commitment to regular and rigorous evaluation of program outcomes so that scarce resources can be most effectively allocated. Dissemination of evaluation outcomes will also encourage cross-sector coordination and collaboration between organizations, and can highlight opportunities for potential beneficiaries.

## Conclusion

Canada has a solid foundation on which to build tomorrow's economic growth, and there is much reason to be optimistic. But amidst global economic uncertainty and in an era of slow growth, it is essential that Canada address its persistent problems with productivity by taking steps to promote research and innovation. Drawing on over 15 years of experience delivering programs in support of collaborative R&D and economic development, the recommendations above stem from Mitacs' leadership within Canada's research and innovation community. By strengthening the role of Canadian companies in high-value global supply chains, by leveraging human capital globally, and with targeted and strategic funding to promote collaborative R&D, Canada can improve overall productivity and move to a position of leadership in global competitiveness rankings.

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<sup>10</sup> OECD (2015), *The Future of Productivity: Joint Economics Department and the Directorate for Science, Technology and Innovation Policy Note*. Retrieved from <http://www.oecd.org/eco/growth/The-future-of-productivity-policy-note-July-2015.pdf>

<sup>11</sup> Cornell University, INSEAD, and WIPO. (2014): *The Global Innovation Index 2014: The Human Factor In innovation*. Fontainebleau, Ithaca, and Geneva.

<sup>12</sup> Higham et al. (2016).

