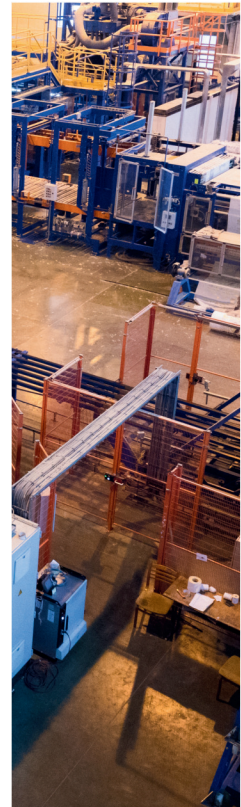


ASSESSING CANADIAN INNOVATION, PRODUCTIVITY, AND COMPETITIVENESS: EXECUTIVE SUMMARY

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Assessing Canadian Innovation, Productivity, and Competitiveness: Executive Summary

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Canada faces unprecedented challenges in innovation, productivity, and competitiveness. The first step in addressing them is to develop a clear understanding of the Canadian economy's underlying structure and performance in each area. Policymakers must then tailor strategies for specific industries and technologies instead of focusing on principally on macro factors.

KEY TAKEAWAYS

- Canada lags peer competitors on key innovation indicators, particularly in the areas of research and development, intellectual property, and innovation outcomes.
- Canada's productivity performance has been dismal. For comparison, American labour productivity growth was 160 percent faster than Canada's from 2002 to 2020—and America's growth in that period was actually low in historical terms.
- From industry to industry, Canadian labour productivity growth is quite divergent, with some sectors growing substantially and others actually declining.
- Canada's competitive position in advanced industries is weak, as its global market shares have fallen dramatically over the last 25 years. It now has 42 percent less advanced-industry output as a share of its economy than the global average.
- Canada's crisis cannot be adequately understood or addressed by looking only at broad macro factors such as tax rates, infrastructure, and education. Policymakers must develop economic strategies focusing on firm, sector, and technology levels.

It has become a cottage industry in Canada to delve into the nature and causes of Canada's struggling innovation, productivity, and competitiveness (IPC) performance. While much good analysis has been conducted, at the end of the day, there is still no consensus on the extent and causes of Canada's poor IPC performance. And because of that, often reflecting a need to identify the "silver bullet" solution, numerous conclusions and recommendations have been put forth: less regulation, more regulation (e.g., antitrust enforcement), tighter linkages with North America, weaker linkages with North America, more education, and a change in culture, among others.

Getting the analysis and policy recommendations right is critical because the environment in which Canada finds itself is significantly more challenging than even a decade ago. First, China has become the world's largest manufacturer and advanced industry producer, placing significant competitive pressures on Canadian firms in a host of industries. In this regard, the demise of Nortel and the concomitant rise of Huawei were just an opening salvo.

Second, there has been an Organization for Economic Cooperation and Development (OECD)-wide productivity slowdown as we have waited for the maturation of the next wave of general-purpose technologies (artificial intelligence (AI), next-gen chips, advanced electro-mechanical systems, etc.) and their broad-scale adoption. But Canada's slowdown has been worse than that of many countries, including the United States'. This stagnation poses a significant threat to Canada as an aging population increasingly exerts a drag on economic growth and as lower relative living standards increase outmigration of knowledge workers to America.

Finally, Canada has not adequately translated spending billions at research universities and having a highly educated workforce into robust rates of domestic innovation, either through organizations adopting new technologies or companies producing and selling technology globally. As more and more technologies require a beyond-Canada scale for success, this poses new challenges for Canadian entrepreneurs and companies.

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Some of Canada's challenges are intrinsic. Abundant natural resources are both a blessing and a curse (a blessing because the wages in the sector are so high and a curse because their exports lead to a relatively higher value of the loonie). Canada's proximity to the U.S. market provides opportunities to Canadian companies, but it also is a "black hole" gravitational pull that attracts Canadian talent, intellectual property (IP), and companies. Moreover, Canada's foreign branch plant firms, built behind a 100-year tariff wall, create industrial capability that might not otherwise have emerged, but that also means limited research and development (R&D) and exports.

But other Canadian challenges can be overcome, provided Canadians want to overcome them. More could be done to encourage universities to play a stronger role in supporting private sector innovation. The SR&ED tax credit could be redesigned to be a spur to R&D increases. Canadian policymakers could stop looking to Europe as a regulatory model for emerging technologies and instead look to the United States for ways to grow a globally vibrant technology economy. More could be done to create a Canadian single market, rather than a market of 10 provinces. Ottawa

could adopt a robust, sectoral-based productivity strategy. And more could be done to place IPC renewal at the centre of Canadian politics, for all the political parties.

This report—the first of the Information Technology and Innovation Foundation’s (ITIF’s) Canadian Centre for Innovation and Competitiveness—examines these issues. But it first clarifies the key differences between the three concepts of IPC—terms that are commonly confused in Canadian policy discourse. It then presents data on Canadian IPC, comparing performance with the United States and six other comparator nations (Australia, China, Germany, South Korea, Poland, and the United Kingdom). Finally, it lays out the following ten overarching principles we believe should guide future IPC policy efforts:

1. Reject “silver bullet” solutions.
2. Move beyond the idea that national economies can succeed by focusing on basic economic ingredients.
3. Think in terms of specific industries and technologies, not markets and the overall economy.
4. Look to “productionists” for advice on IPC.
5. Focus less on industrial recruitment and more on supporting companies already in Canada.
6. The only way to avoid the gravitational pull of the United States is to make our own.
7. See big and medium-sized businesses as beautiful.
8. Embrace North American integration, not separation.
9. Reject the precautionary principle and embrace the innovation principle.
10. Make IPC a top priority.

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