

# NEEDED: AN INNOVATION STRATEGY FOR THE DATA-DRIVEN ECONOMY



Report of the Standing Senate Committee  
on Banking, Commerce and the Economy

The Honourable Pamela Wallin, Chair  
The Honourable Colin Deacon, Deputy Chair

## Needed: An Innovation Strategy for the Data-Driven Economy



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## THE COMMITTEE MEMBERSHIP



The Honourable  
Pamela WALLIN  
*Chair*



The Honourable  
Colin DEACON  
*Deputy Chair*

### The Honourable Senators



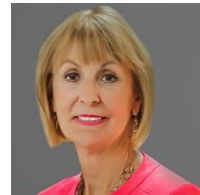
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Larry W. Smith



Hassan Yussuff

***Ex-officio members of the committee:***

The Honourable Senator Marc Gold, P.C., or Patti LaBoucane-Benson

The Honourable Senator Donald Plett or Yonah Martin

***Other Senators who have participated in the study:***

The Honourable Senator Andrew Cardozo

The Honourable Senator Pat Duncan

The Honourable Senator Rosa Galvez

The Honourable Senator Yuen Pau Woo

***Parliamentary Information and Research Services, Library of Parliament:***

Adriane Yong, Analyst

Mehrab Kiarsi, Analyst

***Senate Committees Directorate:***

Karine Déquier, Clerk

Debbie Larocque, Administrative Assistant

## ORDER OF REFERENCE

Extract from the *Journals of the Senate* of Thursday, December 16, 2021:

With leave of the Senate,

The Honourable Senator Wallin moved, seconded by the Honourable Senator Quinn:

That the Standing Senate Committee on Banking, Trade and Commerce be authorized to study matters relating to banking, trade and commerce generally, as described in rule 12-7(8); and

That the committee submit its final report no later than June 30, 2023, and that the committee retain all powers necessary to publicize its findings until 180 days after the tabling of the final report.

The question being put on the motion, it was adopted.

Gérald Lafrenière

*Interim Clerk of the Senate*

Extract from the *Journals of the Senate* of Tuesday, May 2, 2023:

The Honourable Senator Wallin moved, seconded by the Honourable Senator Verner, P.C.:

That, notwithstanding the order of the Senate adopted on Thursday, December 16, 2021, the date for the final report of the Standing Senate Committee on Banking, Commerce and the Economy in relation to its study on matters relating to banking, trade, commerce and the economy generally, as described in rule 12-7(10), be extended from June 30, 2023, to December 31, 2025.

The question being put on the motion, it was adopted.

Gérald Lafrenière

*Interim Clerk of the Senate*

## INTRODUCTION

In February 2021, Statistics Canada reported on economic performance associated with digitalization in Canada over the previous two decades. The two principal findings were that:

- between 2002 and 2019, labour productivity grew by an average of 22.1% in the digitally intensive sector as compared to an average of 6.3% in the non-digitally intensive sectors; and
- digitally intensive sectors were far more resilient during the COVID-19 recession, both for labour and output.

Given the determining role that business investment plays in improving labour productivity and enabling the digitization of our economy, our committee began to study business investment, generally, under its December 16, 2021, order of reference. An interim report was released on June 20, 2022.

The committee resumed its study on March 8, 2023, this time focusing more narrowly on business investment in the disproportionately fast growing digitally intensive sector, including those businesses that rely heavily on intellectual property (IP) and data. Over the course of eight meetings, the committee heard from officials from the Department of Finance Canada and Innovation, Science and Economic Development Canada, the Council of Canadian Innovators, the Business Council of Canada, Coalition for a Better Future, witnesses representing the technology sector, venture capital and private equity firms, think tanks, an economic development organization, as well as intellectual property experts, researchers and economists. Written briefs were also provided by the Chair of Intellectual Property Ontario and the Canadian Pension Plan Investment Board.

This report provides a summary of witness testimony and recommendations for key necessary policy changes for adapting to and fostering an innovation-based and data-driven economy. Our committee's recommendations are intended to signal an urgent and much needed refocusing of public policy priorities, and are specifically focused on the intangible economy, which consists of businesses that create wealth through digital, data, IP and other intangible assets.

## EXECUTIVE SUMMARY

The Standing Senate Committee on Banking, Commerce and the Economy (the committee) is calling for an urgent update in the federal government's policies as it relates to incentivizing and retaining commercial value of businesses in Canada. The economic advantages that defined Canada's strategy in the 20th century were centered around a resource-based, tangible economy, but we are also entering a new era.

Current government policies, programs and technical knowhow are not adapted to the realities of the innovation-based and data-driven economy – or the intangible economy. This is where the lion's share of value is created today and will likely be created in the future. Most peer nations, including the United States, have already shifted their attention. Without coordinated policy changes that adapt to the realities of the intangible economy, Canada will continue to see an erosion in both domestic and foreign investment, and in standards of living.

Business investment has exhibited a lacklustre trajectory over the past couple of decades, resulting in a notable decline in Canada's productivity performance compared to other Organisation for Economic Co-operation and Development (OECD) countries. These concerns have been brought to the attention of the government and this committee on multiple occasions, including in the committee's 2022 interim report titled *Fourth Report: Business Investment in Canada* and its 2018 report titled *Canada: Still Open for Business?*

In the present study, the committee received evidence suggesting that in order to stimulate business investment, it is imperative to adopt policies that foster a coordinated and targeted whole-of-system approach towards the generation and preservation of intangible economic value in Canada. This approach encompasses the following key aspects:

1. **Accelerating the implementation of a globally competitive intellectual property (IP) regime.** A robust IP regime plays a central role in promoting innovation, cultivating high-growth enterprises, and ultimately driving productivity growth and economic prosperity for the Canadian population.
2. **Establishing a national data strategy and digital standards.** To establish a strong national data strategy, Canada should become a leader in developing digital standards so that Canadian interests are reflected in the technologies that Canadians use.
3. **Unleashing new streams of capital.** Promoting business investment inflows is vital for economic growth as it stimulates economic activity, drives productivity and innovation, and supports infrastructure development. Increased investment fosters job creation, enhances competitiveness, and generates a multiplier effect that



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benefits various sectors of the economy. Canadian pension funds and banks could play an important role in this regard.

4. **Modernizing government procurement policies.** To drive economic growth, the federal government should use public procurement as a strategic tool to support growing Canadian companies rather than foreign multinationals.
5. **Urgently updating federal framework legislation for data usage, privacy and competition.** Modernizing the *Personal Information Protection and Electronic Documents Act* (PIPEDA) and competition policies should be a top priority if Canada wants to compete with other jurisdictions in an innovation-based and data-driven economy and become the most trusted jurisdiction globally.

## ECONOMIC GROWTH IN CANADA: THE ROLE OF BUSINESS INVESTMENT AND INTANGIBLE ASSETS

Gross Domestic Product (GDP) per capita, despite some recognized shortcomings<sup>1</sup>, is the most commonly used measure of average living standards by economists. It measures the total value of goods and services produced by a country in a given year divided by its population.<sup>2</sup>

In the economic literature, labour productivity growth is considered the primary determinant of the long-term growth in GDP per capita. The main drivers<sup>3</sup> of labour productivity growth are believed to be Total Factor Productivity (TFP) growth (i.e., growth in how efficient an economy is in combining labour and capital into outputs), human capital investments, and capital deepening (i.e., the growth in the capital to labour ratio) although the latter is not as important for long-run growth.<sup>4</sup> The growth in TFP is mainly determined by technological advancements (discovery and application of new ideas) and allocation of resources at the microeconomic level as well as human capital investments. The discovery of new ideas is a direct result of allocating greater resources to research endeavours.

According to a recent report by Statistics Canada, between 2018 and 2020, Canada's ratio of gross domestic expenditures on Research and Development (R&D) to GDP was approximately 33% lower than the OECD average.<sup>5</sup> Furthermore, as shown in Figure 1, Canada had the lowest number of resident patent applications per million inhabitants in the Group of Seven (G7) in 2021, which reflects a trend seen for several years.

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<sup>1</sup> While income per capita is used as the main measure of the welfare of the average citizen, [economists](#) have [pointed out](#) there are several critical factors that impact living standards that GDP fails to account for (e.g., leisure time, income inequality, health outcomes, crime rates, and the state of the natural environment).

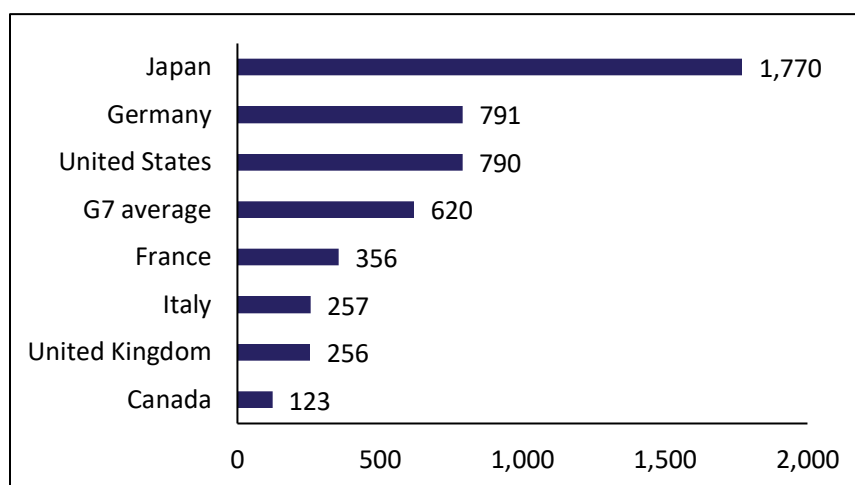
<sup>2</sup> Organisation for Economic Co-operation and Development, [National Accounts at a Glance 2013](#), p. 20.

<sup>3</sup> C.I. Jones, [Chapter 1 – The Facts of Economic Growth](#), Handbook of Macroeconomics, Volume 2, 2016, pp. 3-69.

<sup>4</sup> TFP serves as the crucial indicator, quantifying the effectiveness with which inputs are transformed into outputs. It commonly serves as a reliable proxy to gauge the overall efficiency of technology. According to [Statistics Canada](#), over the past 40 years, around 90% of Canada's per capita GDP growth can be attributed to growth in labour productivity.

<sup>5</sup> Statistics Canada, [Gross domestic expenditures on research and development, 2020 \(final\), 2021 \(preliminary\) and 2022 \(intentions\)](#), The Daily, 27 January 2023, p. 3.

Figure 1 – Resident Patent Applications per Million Inhabitants, G7 Countries, 2021



Source: Figure prepared by the Library of Parliament using data from the [World Intellectual Property Organization statistics database](#), last updated in March 2023.

Business investment plays a crucial role in discovering and applying new ideas and in driving the growth rate of capital deepening. Moreover, when businesses invest less, it hampers the productivity of employees due to the scarcity of both tangible and intangible capital. As a result, lower levels of business investment can lead to reduced productivity among workers. Furthermore, it should be noted that a deceleration in the accumulation of knowledge capital could also potentially affect TFP through a decrease in knowledge spillovers.

In Budget 2022, the federal government acknowledged that "Canadian businesses have not invested at the same rate as their [United States (U.S.)] counterparts" and warned that "[u]nless this changes, the OECD projects that Canada will have the lowest per-capita GDP growth among its member countries" over the 2020 to 2060 period (see Figure 2).<sup>6</sup> However, Canada may avert this outcome by implementing measures to stimulate business investment. For instance, the Department of Finance Canada's own calculations reveal that if Canadian business investment were to increase, leading to a rise in Canada's projected growth rate to the OECD average, the annual income of the median Canadian family with children could increase by \$4,000 (in 2019 dollars) by 2030.<sup>7</sup>

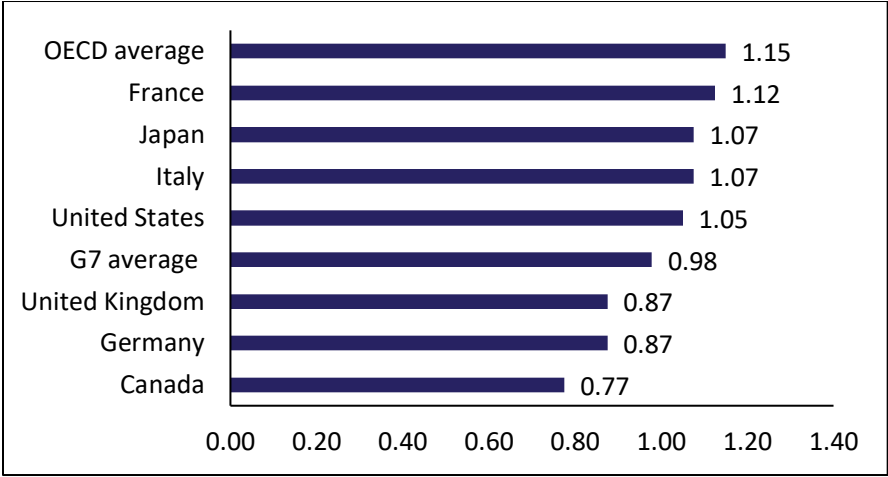
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<sup>6</sup> Government of Canada, [A Plan to Grow Our Economy and Make Life More Affordable](#), Budget 2022, p. 25.

<sup>7</sup> Ibid., p. 26.

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Figure 2 – Average Potential Annual Growth in Real GDP per capita, G7 Countries, 2020-2060 (%)



Source: Government of Canada, [A Plan to Grow Our Economy and Make Life More Affordable](#), Budget 2022, Chart 28.

## KEY POLICY CHANGES TO FOSTER AN INNOVATION-BASED AND DATA-DRIVEN ECONOMY

### 1. Accelerating the implementation of a globally competitive intellectual property regime

One of the central and recurring themes in the witness testimony was the importance of implementing a strong IP regime in Canada. This regime could lead to increased innovation, the development of new technologies and higher productivity levels. Moreover, witnesses said that knowledge-based industries thrive under a strong IP regime that allows companies to capitalize on their innovations and gain a competitive edge in the global market. By attracting foreign direct investment, which is facilitated by strong IP protection, Canada could benefit from technological advancements, knowledge transfers and increased productivity.

*A fundamental point that I see our governments conflate every day are the terms “research” and “innovation.” These terms are used interchangeably in policy, legislation and program delivery as though they were synonymous.*

Natalie Raffoul, Brion Raffoul Intellectual Property Law

Many of the witnesses highlighted the distinction between research and innovation, emphasizing the need to translate ideas into commercialized products and services. They argued that funding should be directed towards innovation outcomes, such as the development and commercialization of new products and services and IP, and they also stressed that innovation and commercialization are crucial for Canada's economic prosperity and global competitiveness.

Witnesses highlighted the importance of capturing the most value-added activities of the global value chain (e.g., intellectual property, data and branding), which requires an industrialized process and a supportive ecosystem for innovators. They also stressed the value of data assets and the need to consider them in mergers and acquisitions. In their view, the current system tends to assign intellectual property rights to foreign industry partners, leading to leakage of patents and intellectual property outside of Canada.

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*More than half of all industry IP that comes out of Canadian universities is assigned to foreign companies. In a particularly egregious example of Canada's so-called AI strategy, with hundreds of millions of dollars in public funding, only 7% of the IP generated ended up in Canadian industry hands, with 75% of the IP generated being owned by foreign companies.*

James Hinton, Intellectual Property Lawyer

They expressed concerns that Canadian companies face challenges when competing globally due to a lack of protection in areas such as data and intellectual property. While they did not advocate for protectionist policies, they emphasized the need for rules on data and IP protection to level the playing field. Witnesses explained that a strong IP regime would align government policies, legal frameworks and economic objectives to create a cohesive plan that promotes innovation, protects IP and data rights and fosters productivity growth. By integrating IP considerations into various aspects of national development plans, Canada could cultivate an environment that nurtures creativity and supports the commercialization of intellectual property. This would involve leveraging the expertise of various stakeholders, including government agencies, research institutions, industry associations and legal entities to develop policies that facilitate IP retention and acquisition.

To establish a globally competitive IP regime, witnesses suggested that Canada should strengthen enforcement mechanisms, provide clear IP protection guidelines, streamline registration processes, facilitate the resolution of IP disputes, and address issues related to privacy, competition, IP leakage and regulatory structures to foster IP retention and acquisition.

Some witnesses specifically indicated the need for a “one-stop shopping” approach to guide innovators through the intellectual property and commercialization process and connect them with relevant industry players.

Witnesses underscored the criticality of implementing a robust IP ownership strategy. They argued that without a strong focus on IP ownership, Canada risks losing economic benefits and the ability to capture the value generated by innovative companies. They suggested that Canadian businesses should prioritize owning and commercializing IP because it plays a significant role in capturing economic value and ensuring their freedom to operate in global markets.

*...nobody would define Canada as a particularly entrepreneurial jurisdiction. Why is that? I think it's cultural. There's potentially a certain degree of complacency. We live a good life, and maybe that determines how many risks we're willing to take with that good life.*

The Honourable Anne McLellan, Coalition for a Better Future

Witnesses suggested that including IP education into school curricula, offering training programs for professionals and organizing workshops could enhance Canada's capacity for innovation and productivity growth. Moreover, fostering collaboration between academia and industry could bridge the gap between research and commercialization, leading to increased IP retention and other economic benefits.

Some witnesses argued that collaboration and partnerships, both domestically and internationally, are important for establishing a strong IP regime. Engaging with industry, research institutions, and international partners provides opportunities for knowledge exchange, technology transfer and market access. Strategic collaborations help create an environment that stimulates innovation, promotes IP retention and enhances global competitiveness.

Witnesses discussed the need to bridge the gap in Canada's management skills, and technology and market risk assessments. They pointed out that top talent capable of building and scaling companies often ends up working for foreign multinational branch offices, resulting in missed opportunities for Canada. They suggested that providing disproportionate government support to foreign multinational companies exacerbates this issue and hampers the realization of benefits for Canada. They proposed the establishment of a conducive environment that retains talent and enables the growth of Canadian-owned companies.

*In terms of performance, we have something of a paradox in Canada. Even though we have an educated population, that is, a large percentage of people have high school or post-secondary diplomas, there are gaps in basic numeracy and literacy skills and business training.*

Norma Kozhaya, Conseil du patronat du Québec

The committee observes that witness testimony emphasized the importance of IP protection and retention, comprehensive national strategies, supportive legal frameworks, education and skill development, as well as collaboration with industry and partners. By adopting these strategies, Canada could foster innovation, drive productivity growth and establish itself as a leading global player in IP retention and acquisition.

Therefore, the committee recommends:

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**That, as part of its Strategic Intellectual Property Program Review, the federal government update its intellectual property strategy to account for the expanding role that intangible assets play in the Canadian economy. In particular, the strategy should require that:**

- the federal government facilitate the acquisition of intellectual property rights;**
  - federal research grants be conditional on significant intellectual property rights being retained in Canada for the benefit of the Canadian economy;**
  - the federal government establish a “one-stop shopping” approach to guide innovators through the intellectual property and commercialization process;**
  - the federal government promote collaboration between all levels of government, academia and industry, both in Canada and internationally, so that innovation best practices can be shared;**
  - the federal government support the development of educational programs and skills development in intellectual property, entrepreneurship and commercialization that are targeted to students, researchers and businesses; and**
  - the government strengthen Canada’s intellectual property laws and enforcement mechanisms so that they are globally competitive.**
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## **2. Establishing a national data strategy and digital standards**

Witnesses mentioned several common themes related to the implementation of a national data strategy. One of the most prominent themes was the emphasis on building trust and ensuring privacy. Witnesses consistently stressed the need to establish citizen trust by



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granting individuals control over their data, including the right to consent and the ability to delete or be forgotten. Transparency, data auditability and disclosure of data usage are essential elements for fostering trust and protecting privacy.

*In 2020, each Canadian citizen generated almost two megabytes of data per second. Per second.*

Sachin Aggarwal, Think Research Corporation

Another significant theme was the importance of data governance and regulation. Witnesses proposed clear regulations and standards to govern data usage, advocating for requirements such as data disclosure, penalties for breaches, and extending liability to executive teams and boards of directors.

Many witnesses believed that education and data literacy are critical components in the development of a national data strategy. They suggested that data literacy should be taught to individuals from an early age to improve their digital literacy skills and knowledge about privacy concerns.

Other witnesses suggested moving beyond a singular focus on research and development and adopting a more strategic approach to commercializing data. This strategic approach would leverage procurement, regulations and standards to grow markets and support Canadian companies. By aligning commercialization efforts with national objectives such as emission reduction and economic growth, they argued that Canada could drive innovation and create a competitive advantage.

*You can't just fund your way into economic prosperity. [...] in clean technology, we own less than 1% of the global intellectual property.* James Hinton,  
Intellectual Property Lawyer

The committee agrees with witnesses that building citizen trust, protecting privacy, establishing clear regulations, promoting data literacy and adopting a strategic approach to data commercialization are key elements of the comprehensive national data strategy that Canada should develop.

Consequently, the committee recommends:

**That the federal government develop a national data strategy and data governance legislative framework that provides clear rules regarding the use, sharing and storage of data, protects privacy and promotes data literacy.**

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Witnesses also mentioned the importance of Canada being a leader in setting the legal framework for data governance and developing the standards for how data should be used in digital technologies. They noted that some jurisdictions are strategically developing rules that serve their own interests to capture the economic benefits associated with data. In their view, if Canada is not setting data standards that reflect Canadian interests, other jurisdictions' interests will be built into the data standards and technologies that Canadians use.

Others noted that if governments let the private sector set the standards about how data is governed, stored or utilized, it will make decisions that mostly benefit its shareholders rather than society. Some stressed the need to establish federal and provincial data authorities and agencies to consolidate and standardize data assets.

*Let's make sure we use this technology in ways that are compatible with values and drive the strategic imperatives we have as a country. Because if we don't do it, then someone else's values will be built into these technologies, and we will be on the receiving side of those.*

Kurtis McBride, Miovision

The committee recognizes that being a leader in setting global digital standards would be a critical part of having a strong data strategy.

Thus, the committee recommends:

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**That the federal government, in collaboration with relevant standards organizations, support the development of digital standards.**

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### 3. Unleashing new streams of capital

Witnesses provided various perspectives on the reasons for low business investment in Canada and made recommendations. First, they emphasized that economic growth is essential for job creation, rising incomes, a cleaner environment, and an improved quality of life for every Canadian. However, despite Canada’s success in expanding the labour force, the output per worker, or productivity, has struggled to improve over the past few decades. Witnesses noted that insufficient investment in information and communications technology and R&D were strong predictors of low productivity growth.

The following table presents the R&D intensity ratio, which represents the ratio of a country’s R&D expenditures to its GDP, for the Group of Seven (G7) countries during the 2018 to 2020 period. This ratio allows for meaningful comparisons of data between countries over time, regardless of currency disparities. The table reveals that throughout all three years, Canada's R&D intensity ratio remained consistently below the G7 average and significantly lower than that of the U.S.

**Table 1: Gross domestic expenditures on R&D intensity in the G7 countries, 2018 to 2020**

Country	2018	2019	2020
United States	3.01	3.18	3.45
Japan	3.22	3.21	3.27
Germany	3.11	3.17	3.13
France	2.2	2.19	2.35
Canada	1.74	1.76	1.89
United Kingdom	1.71	1.71	-
Italy	1.42	1.46	1.51
G7 average	2.34	2.38	2.6

Source: Table prepared by the Library of Parliament using data from Statistics Canada *Gross domestic expenditures on research and development, 2020 (final), 2021 (preliminary) and 2022 (intentions)*, The Daily, [Chart 2](#), 27 January 2023.

One common factor highlighted by many witnesses behind low business investment was the lack of competition in various sectors of the Canadian economy (e.g., provincial alcohol monopolies). This lack of competition tends to make businesses less efficient and innovative. Canada’s poor ranking in terms of public procurement among OECD countries was also noted as a contributing factor.

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*We hear this all the time from businesses that they have a really great idea or they are growing like top seed. Then when they go to get the capital in Canada, it's very difficult to get the kind of financing they might get elsewhere.*

Simon Kennedy, Innovation, Science and Economic Development Canada

The structure of the Canadian economy, which consists of a large proportion of small companies and a limited number of large companies, was seen as a challenge. Export-oriented companies that face international competition tend to invest more and experience higher productivity growth. Some witnesses also expressed concerns about Canadian companies being absorbed by larger foreign companies, leading to a loss of potential growth and innovation. They emphasized the need to retain Canadian IP and wealth within the country by providing incentives for Canadian companies to remain Canadian-controlled and attracting executive management talent to build and scale Canadian firms.

Many witnesses also believed that complacency could be another important factor explaining low business investment in Canada. In their view, this complacency stems from a lack of urgency and hunger to take risks, make investments and drive innovation. To address complacency and stimulate business investment, they suggested that Canada needs a mindset shift. It should diversify the economy beyond resource-based industries and actively compete in more value-added industries. A comprehensive long-term growth strategy with robust industrial and innovation policies should be implemented, accompanied by incentives to encourage business investment in key sectors.

*If we say that it's because Canadian innovators are just not hungry enough or they're risk-averse, then that's it; what can you do? However, if the issue lies in the fact that when you hit a certain ceiling of growth, you then become a target, and there are companies out there in this world of patent thickets who are simply waiting to see company innovation become successful.*

Dan Ciuriak, Centre for International Governance Innovation

Witnesses collectively emphasized that pension funds have a crucial role to play in addressing low business investment and promoting innovation in Canada. They argued that pension funds should invest more in Canadian businesses, particularly in innovative Canadian start-ups. Witnesses believed that Canadian pension funds have the potential to be significant investors in venture capital funds, which would provide much-needed support

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to Canadian businesses. They also suggested that Canadian pension funds have a bias against private Canadian technology companies, which needs to be corrected.

Witnesses made the following recommendations that could help spur business investment in Canada:

- Investing in collective approaches: Encouraging pension funds to invest in collective projects or partnerships that promote innovation and productivity growth. This could involve funding collaborations between academia, industry, and research institutions to develop new technologies or solutions.
- Providing IP funding: Supporting pension funds to invest in companies or projects that have strong intellectual property portfolios. This could incentivize businesses to focus on research and development, protect their innovations and attract more investment.
- Coordinating efforts: Facilitating coordination between pension funds, government agencies, and private investors to align investment strategies and priorities. This coordination can help identify promising sectors, target specific industries for investment and reduce fragmentation in the investment landscape.
- Developing IP-savvy business leaders: Promoting the development of business leaders who understand the value of intellectual property and its role in driving innovation and investment. This could involve providing training programs, educational initiatives or mentorship opportunities to enhance IP literacy among entrepreneurs and executives.

*A dual mandate approach [for pension firms] is actually fundamental to having a world class innovation economy. Even if you look in one of the most competitive markets in the world, and I worked in Silicon Valley for 20 years, the California pensions have dual mandates to invest in and start venture capital firms to invest in California. That's also the case in New Jersey and in New York.*

Chris Albinson, Communitech

It is clear to the committee that Canada needs deeper sources of private capital to support the growth of Canadian companies. In looking at the role that the Caisse de dépôt et placement du Québec plays in supporting the economy of Quebec, the committee wonders whether other large Canadian pension plans should fulfill a similar role for Canadian businesses.

As a consequence, the committee recommends:

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**That the federal government review whether the mandate of the Public Sector Pension Investment Board (and if possible, the mandate of the Canadian Pension Plan Investment Board in collaboration with the provinces) should be expanded to ensure a continuing contribution to Canada’s economic development.**

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#### 4. Modernizing government procurement policies

Many witnesses identified the shortage of mid-sized and larger Canadian companies as one reason why business investment, especially investment in intangible assets, remains low in Canada compared to other countries. While Canada is successful in generating ideas and starting new businesses, it needs more high-growth small businesses commonly called gazelles to drive economic growth.

One solution mentioned by many witnesses was for government procurement to play a larger role in helping small businesses grow. One witness stated that public procurement could be used strategically to provide unique solutions for public sector needs and stimulate growth in key sectors. Another witness mentioned that despite the limitations set out in Canada’s free trade agreements, government procurement has not been used enough to help Canadian small businesses grow and develop into a strong industrial sector, especially when compared to the United States.

*You don’t become a rapidly growing, successful economy by having a bunch of small businesses that stay small or a bunch of big businesses that are only interested in consolidating their position. Rapid economic growth comes from gazelles.*

Philip Cross, Fraser Institute

In addition to helping small businesses scale, one witness indicated that the government needs to think about how to use procurement in a way that will generate more Canadian companies. It was suggested that if the government cannot find a single Canadian firm that has all the requisite skills for a particular project, rather than granting it to a foreign company, it should first consider a consortium of Canadian small businesses.

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Several witnesses spoke about the success of other countries in supporting their domestic businesses through government procurement. They explained that Canada's innovation policy is focused on supporting companies' operating expenses or university research with the expectation that commercialization will automatically follow. However, other countries such as the United States, Germany, South Korea and Israel provide more direct support for commercialization, including through public procurement.

*The Americans are not worried about buying their fleet of vehicles from American companies, so why are we? You want to create global champions, but governments have to be part of the solution on public procurement.*

Robert Asselin, Business Council of Canada

Some witnesses suggested that the government should perhaps focus less on investments in fundamental research and development, and instead focus on using procurement, regulations and standards to achieve economic goals such as growing Canadian companies, creating jobs and expanding the tax base. As well, it was noted that the bias of Canada's procurement policies for the lowest-cost bidder often favours foreign companies because they can reduce their price thanks to government support that is not available to Canadian companies.

Many witnesses asserted that one reason why so many U.S. companies are successful at innovation is due to the country's strategic use of public procurement through legislation such as the *Inflation Reduction Act* and through programs such as those governed by the Defense Advanced Research Projects Agency and the National Aeronautics and Space Administration.

In terms of ways to update government procurement policies, one witness suggested that the federal government award lots of smaller contracts to Canadian companies that are below the procurement limits set out in free trade agreements. Another proposed that the federal government implement legislation similar to the United States, with 3.2% of procurement going to Canadian-controlled private corporations with a legislated requirement for a 5% improvement in either price or productivity. It was argued that changes to procurement policies should not be done through a pilot program, where often no product or service ends up being purchased from Canadian companies. Lastly, it was pointed out that with its substantial purchasing power, the federal government should update its procurement guidelines to incorporate innovation and to secure intellectual property and data rights.

*In the Department of Finance, we're very focused on these issues about business investment and levels of business investment in the country going forward. This is a very complex problem, and it doesn't have silver-bullet solutions. This is about bringing a range of government efforts together to try to tackle the problem, which, as I say, has been with us for a long time, but, frankly, in the near term it's gotten worse.*

Michael Sabia, formerly at the Department of Finance Canada

The committee agrees that the federal government should use procurement as a strategic tool to support growing Canadian businesses rather than foreign multinational companies. As noted above, the federal government is in a unique position to be able to use its considerable purchasing power to drive growth and create gazelles across many sectors of the Canadian economy, which in turn would help boost business investment.

For that reason, the committee recommends:

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**That the federal government, while still respecting its obligations under Canada's international trade agreements, update its procurement policies and directives to establish minimum targets for the percentage of contracts it awards to Canadian companies, particularly small and medium-sized enterprises.**

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## **5. Urgently updating federal framework legislation for usage of data, privacy and competition**

Witnesses spoke about how Canada has fallen far behind other countries in modernizing its legislative frameworks to adapt to the innovation-based and data-driven economy.

Legislation regulating data use and the protection of personal privacy was most often mentioned as needing to be urgently updated. While Bill C-27, the Digital Charter Implementation Act, 2022, received first reading on June 16, 2022, it was only referred to committee for study in April 2023. This bill seeks to fully reform the federal privacy statute, the *Personal Information Protection and Electronic Documents Act* (PIPEDA), incorporate the concept of data portability and introduce separate legislation to regulate artificial intelligence and data.



## Needed: An Innovation Strategy for the Data-Driven Economy

Many witnesses also expressed concerns over Canada's weak domestic market, interprovincial trade barriers and the low levels of competition found in many sectors of the Canadian economy. As part of this discussion, some noted the ongoing *Competition Act* review, which was launched by the federal government in November 2022.

*I think the one thing we have to remember is that perhaps the reason we have so much regulation in this country is, quite frankly, that we don't have a lot of competition. Competition is what will drive business investment.*

The Honourable Lisa Raitt, Coalition for a Better Future

According to one witness, updating privacy legislation at the federal level to ensure national interoperability needs to be a top priority for the government. Another indicated that the government should modernize privacy legislation, but in a comprehensive way that focuses more on establishing trust between Canadians and the government. Furthermore, the government should consider whether changes in privacy legislation could have a negative effect on Canadian data companies. One witness expressed his support for Bill C-27 and the *Competition Act* review but stressed that these legislative and policy changes need to be considered as a package rather than in isolation. Furthermore, he emphasized that these changes need to be consistent with other initiatives, such as free trade agreements, innovation policies, consumer protection laws, open banking and the digitalization of money.

The committee readily concurs that updates to federal legislation regulating data and privacy need to happen urgently and draws attention to the fact that it recommended swift changes to modernize PIPEDA in its study on open banking in 2019. Since that time, no amendments have been made to align PIPEDA with global privacy standards. Reform is also needed to modernize Canada's competition policies for the intangible economy and the committee urges the government to consider the negative effect that low competition has not only on consumers, but also on business investment and economic growth in certain sectors of the Canadian economy during its review of the *Competition Act*. In the view of the committee, modernizing these legislative frameworks is long overdue.

As a result, the committee recommends:

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**That the federal government prioritize the advancement of reforms in privacy and competition law.**

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## CONCLUSION

The central theme of the witness testimony revolved around the importance of implementing a modern IP regime and a national data strategy in Canada to ultimately drive productivity growth by encouraging innovation and business investment. Modernizing government procurement policies and frameworks governing privacy, data and competition are also needed to support the growth of Canadian businesses.

Witnesses stressed that long-term strategic investments by Canadian pension funds could provide stability and support to Canadian businesses, foster their growth and benefit the overall investment climate. In addition, the committee believes that an evaluation of existing innovation funds and funding organizations should be conducted, and that regulatory reform and the reduction of red tape should be pursued. In our view, the federal government also needs to initiate a change in Canadian culture so that we can think “bigger” when developing Canada’s innovation policies.

As other countries have already begun to strategically adapt to the new innovation-based and data-driven economy, Canada must act urgently to implement these changes so that it is not left behind.

*Canada is on the sidelines in the global ownership of IP and data, contributing to their creation but not contesting their ownership and ensuing benefits.*

Jim Balsillie, Council of Canadian Innovators

## APPENDIX A – Witnesses

### Wednesday, March 8, 2023

Prateek Sureka, Head of Public Policy and Government Relations, Communitech

Chris Albinson, Chief Executive Officer, Communitech

David Helliwell, Co-Founder and Executive Board Chair of Thrive Health, As an individual

Benjamin Bergen, President, Council of Canadian Innovators

### Thursday, March 9, 2023

John Ruffolo, Co-Founder, Managing Partner, Maverix Private Equity, As an individual

Mathew Micheli, Chief Executive Officer and Co-Founder, Viral Nation Inc., As an individual

Jim Balsillie, Chair, Council of Canadian Innovators, As an individual

Hamid Arabzadeh, Chairman and Chief Executive Officer, Ranovus, As an individual

### Thursday, March 23, 2023

Mike McLean, Chief Executive Officer, Innovation Asset Collective, As an individual

Robert Fay, Managing Director, Centre for International Governance Innovation

Dan Ciuriak, Senior Fellow, Centre for International Governance Innovation

### Thursday, March 30, 2023

Frédéric Bouchard, Dean, Faculty of arts and science and Full Professor, Department of Philosophy, Université de Montréal, As an individual

Robert Gagné, Director, Centre for productivity and Prosperity, HEC Montreal

Norma Kozhaya, Vice-President, Research and Chief Economist, Conseil du patronat du Québec

Stéphane Paquet, President and Chief Executive Officer, Montréal International

## Needed: An Innovation Strategy for the Data-Driven Economy

### **Wednesday, April 19, 2023**

James Hinton, Intellectual Property Lawyer, As an individual

Natalie Raffoul, Managing Partner, Brion Raffoul Intellectual Property Law

### **Thursday, April 27, 2023**

Kurtis McBride, Chief Executive Officer, Miovision

Sachin Aggarwal, Chief Executive Officer, Think Research Corporation

### **Wednesday, May 3, 2023**

Myra Tawfik, Don Rodzik Family Chair in Law and Entrepreneurship and Distinguished University Professor, Faculty of Law, University of Windsor, As an individual

The Honourable Lisa Raitt, P.C., Co-chair, Coalition for a Better Future

The Honourable Anne McLellan, P.C., Co-Chair, Coalition for a Better Future

Hendrik Brakel, Senior Director, Policy and Government Relations, Canadian Venture Capital Private Equity Association

### **Thursday, May 4, 2023**

Charles Vincent, Assistant Deputy Minister, Small Business and Marketplace Services Sector, Innovation, Science and Economic Development Canada

Mark Schaan, Senior Assistant Deputy Minister, Strategic and Innovation Policy Sector, Innovation, Science and Economic Development Canada

Simon Kennedy, Deputy Minister, Innovation, Science and Economic Development Canada

Michael Sabia, Deputy Minister, Department of Finance Canada

Rhys Mendes, Assistant Deputy Minister, Economic Policy Branch, Department of Finance Canada





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