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From Hype to Output: How AI Investment Translates to Real Productivity Gains

Artificial intelligence could help address Canada's long-standing productivity slowdown, but the economic payoff may take time. While Canadians are heavy users of generative AI, business adoption remains limited – suggesting policy should focus on accelerating adoption across firms and sectors while maintaining Canada's research and infrastructure strengths.

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From Hype to Output: How AI Investment Translates to Real Productivity Gains

by Rosalie Wyonch

- **Artificial intelligence has renewed optimism about improving Canada's long-standing productivity problem, but history shows that general-purpose technologies often take decades to produce measurable economy-wide gains. Early adoption typically produces modest improvements as firms experiment and invest in complementary assets such as data, skills, and organizational changes.**
- **Canada performs reasonably well in international AI rankings and produces strong research output, but it lags leading countries in computing capacity and commercialization. Canadians are among the most frequent users of generative AI tools globally, yet business adoption remains uneven and relatively limited.**
- **Canadian data show that about 12 percent of businesses currently use AI, and most report little change in employment following adoption. Many firms say AI is not relevant to their operations or lack the knowledge needed to implement it effectively, suggesting adoption barriers remain significant.**
- **Policy should therefore prioritize accelerating AI adoption and diffusion across sectors while maintaining Canada's research and infrastructure capacity. Governments can support this by improving regulatory clarity, expanding data access, strengthening AI literacy, and encouraging firms to experiment and integrate AI into their operations.**

Introduction

Canada faces a persistent productivity challenge. Growth in output per work-hour has stagnated for decades, and the gap with the United States continues to widen.[1] Policymakers have long sought levers to reverse this trend, and the rapid emergence of artificial intelligence (AI) – particularly generative AI since

1 Average annual labour productivity growth was about 3 percent in the 1960s and 1970s, but fell to 1 percent between 2000 and 2019. From mid-2020 to mid-2023, labour productivity declined. Labour productivity has since resumed modest annual growth of below 1 percent (Statistics Canada Table 36-10-0206-01).

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late 2022 – has prompted renewed optimism that a transformative technology might finally deliver the productivity gains that have proved elusive.

This *Commentary* discusses the impacts of AI technologies, with a focus on more recent generative AI. In particular, these technologies are unique in their low barriers to adoption and use in terms of both skill and cost as generalized tools. With such low barriers to entry, there is potential for rapid adoption and scaling of AI technologies across many sectors of the economy. Yet enthusiasm must be tempered by evidence: general-purpose technologies (such as AI) historically take decades to reshape economies, and the path from adoption to measurable productivity growth is neither linear nor guaranteed.

This *Commentary* examines AI's potential contribution to Canadian productivity growth through an evidence-based policy lens. It begins by establishing what AI technologies are and how technological change translates into economic output, drawing on the concept of the "productivity J-curve" to explain why early-stage adoption often fails to register in macroeconomic statistics. The paper then situates the current AI investment boom in a historical and international context and summarizes research quantifying both the infrastructure-driven and adoption-driven channels through which AI may affect GDP. A comparative analysis positions Canada among its international peers, revealing a paradox: world-class research output coexists with middling commercial translation and infrastructure capacity. Detailed examination of Canadian business adoption data shows significant variation across industries and provinces, with early signs that initial experimentation may be giving way to more selective, sustained implementation.

The central argument is that maximizing the likelihood that AI technologies will boost Canada's productivity growth requires policy focused on accelerating AI adoption and diffusion across sectors. While government investment in computing capacity supports the domestic development of AI technologies (and democratizes access to computing power), government resource constraints, significant uncertainty about AI development trajectories, and the relatively smaller size of the Canadian AI economy suggest that AI infrastructure policies should focus on maintaining and improving Canada's relative international competitiveness. Policies that encourage firms to experiment, learn, and eventually reimagine their operations around AI capabilities can position Canada to capture productivity gains as the technology matures. AI, as a generalized technology, can be deployed across many industries and is linked to other economic development and industrial policy priorities, including small- and medium-sized business growth and international trade diversification. This paper concludes with policy recommendations that balance the uncertain timeline of AI's macroeconomic impact against the risk of falling further behind more aggressive international competitors.

The Current AI Boom in Context

The emergence of generative AI since late 2022 has triggered an unprecedented wave of capital investment and rapid enterprise adoption. This technological shift is reshaping economic growth dynamics through two channels: the direct contribution of infrastructure investment to GDP and longer-term productivity gains from AI adoption across industries. Understanding the magnitude, timing, and distribution of these effects is essential for policymakers seeking to position their economies to benefit from AI's transformative potential. Much of this section refers to the US economy, where more data on AI investment and GDP effects are available.

Box 1: Backgrounder on AI and Economics

Before addressing the impacts of AI on Canadian productivity and growth, it is useful to define what artificial intelligence technologies are and how technology diffuses through the economy and contributes to productivity growth. This section also explores existing research on how generative AI and the recent AI investment boom are shaping the current development and adoption landscape.

The OECD defines an AI system as "a machine-based system that for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment" (OECD 2024). There is no unified consensus on what is (or isn't) AI, but most generally familiar AI applications can be categorized as either generative or predictive/analytical.[a] **Generative AI** (GenAI) can create many types of content in seconds, including text, code, data analysis, images/video, and even speech or music. **Predictive AI** models future scenarios and makes predictions to guide decision-making or further analysis. This *Commentary* focuses on recent advancements in generative AI.

Technology affects economic output through a deceptively simple relationship: GDP grows when we produce more, and new technologies are the primary driver of improving our ability to produce more per hour of labour. This **labour productivity growth** is the main mechanism through which technology – embodied in capital equipment – lifts living standards. **Total factor productivity** (TFP) captures an even broader effect: the output gains that can't be explained by simply adding more or better workers or capital. TFP growth reflects innovation that stems from improved production methods, better organization, and new knowledge. Economists attribute most long-run GDP growth in developed economies to TFP improvements rather than the accumulation of machines or labour. AI-based productivity gains, measured either as growth of average output per worker or as total factor productivity growth, can come from a number of distinct channels (see Acemoglu and Restrepo 2019a): automation, task complementarity, deepening of automation, and new tasks.

New technologies often take decades to show up in productivity statistics. Electricity was invented in the 1880s but didn't transform manufacturing until the 1920s, once factories were redesigned around electric motors rather than steam-driven belt systems. Computers followed a similar pattern; economist Robert Solow famously quipped in 1987 that "you can see the computer age

a Within Canada, there is no consistency in the definition of AI across government institutions (C.D. Howe Institute, forthcoming). Economists tend to use various definitions of AI, for instance: "AI is a loose term used to describe a range of advanced technologies that exhibit human-like intelligence including machine learning, autonomous robotics and vehicles, computer vision, language processing, virtual agents, and neural networks" (Furman and Seamans 2019[5]); or "AI is an umbrella term that refers to a computer system that is able to sense, reason, or act like a human" (Brynjolfsson, Li, and Raymond 2023[6]). Recent work jointly carried out by computer scientists and economists (Sastry et al. 2024[7]) posits: "Artificial intelligence (AI) refers to the science and engineering of building digital systems capable of performing tasks commonly thought to require intelligence, with this behaviour often being learned rather than directly programmed."

Box 1: Continued

everywhere but in the productivity statistics." The payoff came later, during the productivity surge of the late 1990s. This delay occurs because complementary investments are needed: worker training, organizational restructuring, and supporting infrastructure. The technology itself is often just the beginning.

In addition, the effects of a new technology are not evenly distributed across the economy (Howitt 2015). Some industries see dramatic gains while others lag. And GDP itself may undercount technology's benefits, particularly in the case of new or free goods and services.[b] Brynjolfsson et al. (2023) estimate that improvements in smartphones have added approximately 0.63 percentage points to welfare growth[c] per year (from introduction to 2018) in the US that is not captured in official GDP calculations.

General-purpose technologies (GPTs) tend to follow a common adoption trajectory. Blit (2025) describes this as a "3R Framework":

1. Replace: new technologies displace older ones within existing workflows.
2. Reimagine: new processes and business models emerge around the technology, often transforming industries through "creative destruction" (Schumpeter 1942).
3. Recombine: the GPT becomes integrated across the economy and enables new innovations, some of which may become GPTs themselves.

AI technology is in the early stages of the "replace" phase. Replacing existing technologies and labour with AI without broader process innovation is associated with relatively minor improvements in productivity compared to the "reimagine" phase. Economists describe the relationship between phases of technology adoption and productivity gains through the **productivity J-curve**. Initial spending on capital and labour accumulates nontangible assets (data, models, skills, etc.) which are not fully captured in GDP measures. Later, productivity gains might be overestimated when the gains from those intangible assets translate to AI products and new processes that are measured in GDP statistics. This means that in standard measures, productivity may decline before increasing (resulting in productivity J-shaped dynamics) (McElheran et al. 2023). Realizing these gains requires complementary investments and effective integration of AI systems into business operations, along with organizational changes and appropriate skilled labour (Agrawal, Gans, and Goldfarb 2023).

As adoption and learning continue, measurable productivity growth may remain negligible or modest in the short term but accelerate later. Firms must experiment with the technology and adapt processes and business models to capture its benefits. This is important in the context of public policy because the benefits of government spending related to AI adoption will likely be undervalued in current GDP accounts, and they may take significant time to measurably affect productivity growth.

b The measurement of the net benefits of new and disappearing products depends on the type of price index statistical agencies use to deflate final demand aggregates (Diewert, Fox, and Schreyer 2018).

c Refers to the authors' proposed measure of "GDP-B" that quantifies the consumer benefits of new and free goods. It is an alternative and expanded measure analogous to GDP, but not strictly a measure of production output.

Capital expenditure on AI infrastructure has reached historic proportions. Hyperscaler companies – Amazon, Google, Meta, Microsoft, and Oracle – allocated about $342 billion to capital expenditures in 2025, a 62 percent increase from the previous year (Aliaga 2025). Estimates suggest AI-related capital expenditures could reach US$527 billion in 2026 (Goldman Sachs 2025). This spending encompasses semiconductors, data centres, networking equipment, and the power infrastructure required to support "compute"-intensive AI workloads.

In Canada, the federal government announced $2 billion over five years starting in 2024-25 for the Canadian Sovereign AI Strategy, including $705 million for "compute" infrastructure. Microsoft has also announced it is spending $19 billion on AI infrastructure investment in Canada between 2023 and 2027, with $7.5 billion of that over the next two years (Smith 2025). Industry categories related to AI[2] accounted for $195 billion in 2021 and grew to $229 billion in 2024, representing 9.3 to 10 percent of Canada's GDP, respectively.

The impact of AI investment on the US economy is significant, though estimates vary widely. In the first nine months of 2025, GDP product categories related to AI investment (such as computing and communications equipment, data centre structures, software, and research and development) represented 37 percent of real GDP growth and 8 percent of real GDP (Levine 2025).[3] Other estimates suggest AI contributed roughly 1 percentage point to US GDP growth in 2025 (Boussour 2025; Goldman Sachs 2025; Aliaga 2025), making it the second-largest contributor to growth after consumption (Singh 2026).[4] The scale of investment in AI infrastructure in the US has led to debate about whether it is fueling an equity market bubble (BNP Paribas 2025; Barnette and Peterson 2025). There have been multiple "AI winters" in the past – periods of significant decline in enthusiasm, funding, and progress in the field of AI.[5]

However, much of the spending on AI infrastructure does not translate directly into domestic GDP because many inputs are imported – for example, semiconductors manufactured in Taiwan. This is particularly important for Canada, since both infrastructure inputs and the outputs of dominant AI companies (AI products and software) are predominantly located abroad. Secondary economic effects and labour dynamics associated with the expansion of infrastructure investment are also important to consider. Data centre construction has had significant impacts on the construction industry in the United States. The top 50 contractors by size have doubled revenues within a year, and salaries for trades workers are 32 percent higher for data centre projects compared to other

2 Information and communication technology sector [T013]; computer and electronic product manufacturing [334]; software [5132]; computing infrastructure providers, data processing, web hosting, and related services [518]; R&D [5417]; and computer systems design services [5415]. See Statistics Canada Table 36-10-0434-03.

3 Fourth quarter data show AI categories represented 14 percent of real GDP growth (Levine 2025). The US Bureau of Economic Analysis notes that the government shutdown in October and November of 2025 resulted in delays in many principal data sources that are used to produce GDP estimates (BEA 2025).

4 Notably, over any five-year period, the growth of US aggregate productivity is fully accounted for by the growth in a subset of industries representing less than half the economy, and those industries are rarely the same from one period to the next (Harberger 1998).

5 The first major AI winter occurred from 1974 to 1980, with the publication of the "Lighthill report" and subsequent withdrawal of funding by major agencies such as the Defense Advanced Research Projects Agency (DARPA) in the US. The second major winter occurred from the late 1980s to the mid-1990s and was mostly due to unmet expectations for expert systems' capabilities. See: https://www.perplexity.ai/page/a-historical-overview-of-ai-wi-A8daV1D9Qr2STQ6tgLEOtg?login-source=oneTapPage&login-new=false.

construction (Paoli 2025). Once built, however, data centres require relatively few permanent workers.

There are also counter-balancing factors to consider. Corrado et al. (2025) show that while investment in data as an intangible asset can improve efficiency, the growing importance of proprietary datasets slows the diffusion of innovation. So far, the negative impact on diffusion outweighs the efficiency gains from intangible data capital.

Currently, the main channel through which AI is measurably increasing US GDP is capital expenditures. Over the longer term, however, these investments must translate to products and services that meaningfully increase productivity to have a sustained effect on growth. So far, the acceleration of AI development and diffusion has not been associated with higher productivity growth at the macroeconomic level across G7 countries (Filippucci et al. 2024; Andre and Gal 2024; Goldin et al. 2024). As with earlier general-purpose technologies, widespread productivity gains may take years to materialize.

Estimates of AI's long-term productivity impact for the US vary widely – from 1.5 percent labour-productivity growth annually (Goldman Sachs 2025) to less than 1 percent cumulatively over a decade (Acemoglu 2024), as shown in Figure 1. Some researchers argue that the long-run impact may instead arise from persistently faster growth rather than a one-time productivity shift (Baily, Brynjolfsson, and Korinek 2023). The timeline and magnitude of significant macroeconomic growth related to AI adoption depend on continued improvements in AI capabilities, widespread adoption, and complementarities with human skills and other technologies (Filippucci et al. 2024).

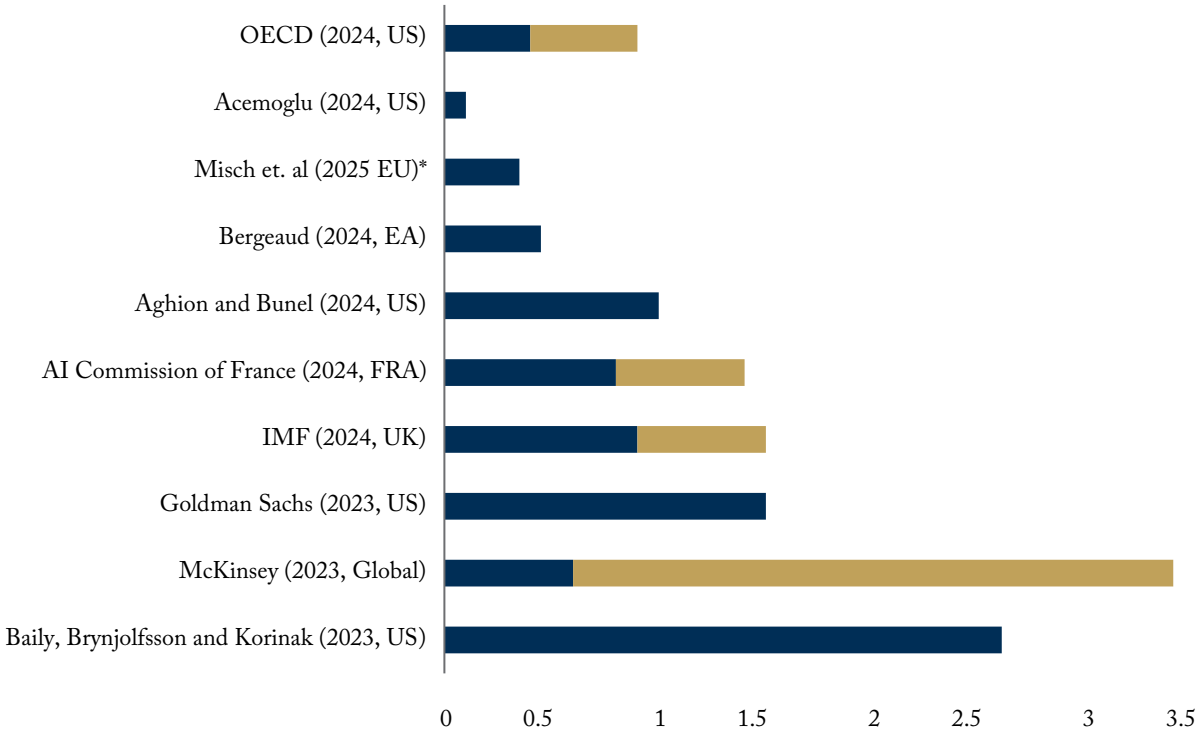
There is some evidence that AI is already having labour market effects: Brynjolfsson, Chander, and Chen (2025) estimate that early career workers in AI-exposed occupations experience a 16 percent relative employment decline while employment remained stable for more experienced workers. Across occupational categories in the US, 2.6-75.5 percent of occupations could have at least 50 percent of their tasks affected by GenAI (Arnon 2025). Research on the UK labour market finds that 11 percent of occupational tasks are exposed to generative AI automation/augmentation as part of "low-hanging fruit" implementation cases, and up to 59 percent of tasks will be exposed to Gen-AI as it develops into more integrated systems (Jung and Desikan, 2024). Heneseke et al. (2025) find that the price premium for AI-exposed tasks declined by 12 percent from 2017 to 2023/24 and that job postings were 5.5 percent lower in 2025-Q2 than if pre-GPT hiring patterns had persisted.

As AI technology is adopted, some labour market disruption is inevitable, but that does not mean that AI necessarily leads to widespread unemployment. Job losses can occur only if innovation outstrips growth in demand for new products and services. Further, the potential for automation does not necessarily translate into actual automation: the decision to automate depends on factors such as firm size, competitive pressure, and the cost of a machine versus the cost of human labour. As technology diffuses and improves productivity, GDP and wages increase, which increases demand for goods and services, creating new employment. Rapid technological progress is regularly accompanied by fears of widespread unemployment. In reality, however, markets adjust dynamically to technology adoption over time, and widespread unemployment is unlikely (Oschinski and Wyonch 2017).[6]

At the firm level, growing evidence suggests AI can improve labour productivity in many contexts (Figure 2, Table A1). Meta-analysis of research

6 See Ouimetter, Teather, and Allison (2024) for a discussion of the "AI stack" and accelerating enablers for the development of AI applications, particularly the complementary "tooling layer" that enables customers to build their own models or augment frontier model foundations with proprietary data.

Figure 1: Predicted Increase in Annual Labour Productivity Growth Over a 10-year Horizon Due to AI, Percentage Points



Note: When the source presents a range of estimates as the main result, the lower and upper bounds are indicated in blue. In cases where modelling predictions primarily focus on TFP, labour productivity is obtained using simple assumptions about the aggregate capital multiplier (Acemoglu 2024; Aghion and Bunel 2024; Bergeaud 2024; Misch et al. 2025). The estimates refer to the countries shown in brackets.

*Calculation in Misch et al. 2025 refer to 5-year horizon, presented in annualized form.

Source: Fillippucci et al. (2025).

measuring the productivity effects of generative AI shows mixed results across studies and applications. But on average, the use of GenAI tools increased labour productivity (in particular, tasks or departments) by 17 percent (Coupe and Wu 2025).

Despite these gains, there is a notable divide in the wide adoption of tools like ChatGPT and enterprise-grade AI systems (Challapally et al. 2025). Nearly 80 percent of organizations report exploring or piloting large language model (LLM) products, and 40 percent report deployment. These tools primarily enhance individual worker productivity but are not deployed for core business functions.[7] By contrast, 60 percent of companies have evaluated enterprise or custom systems, yet only 5 percent reach production.

7 GenAI-driven workforce reductions concentrate on customer support operations, administrative processing, and standardized development tasks.

Tools that succeeded had low configuration barriers and immediately noticeable value, while those that require extensive upfront customization often stalled in the pilot stage. The core barrier to scaling is not infrastructure, regulation, or talent. It is GenAI's lack of capacity to learn or remember over time (particularly static enterprise tools relative to rapidly evolving consumer-facing tools).[8] Aside from enterprise-level adoption and development, there is significant adoption of AI technologies by individual workers to enhance personal productivity. In 2024, 40 percent of the working-age population in the US was using GenAI, 23 percent used it for work, and 9 percent used it every workday (Bick, Blandin, and Deming 2025). The high failure rate of AI pilots can be explained by the productivity J-curve and the current stage of development and adoption (intangible capital accumulation that leads to future productivity improvement). A high failure rate of pilots shows experimentation and contributes to ongoing development on the one hand. On the other, companies that experiment with AI and abandon it might be less likely to adopt it in the future, despite rapid evolution.

Productivity gains from new technologies are uneven across sectors and difficult to predict because they depend on where technological change occurs.[9] Adoption is also shaped by market competition, regulation, and the current distribution of technology within industries (Howitt 2015). Given the uncertainty around AI's trajectory and the sectors where it may generate the largest gains, productivity improvements are possible, but expectations may also exceed outcomes. Bridging from the initial development and experimentation phase to widespread adoption, eventual integration and process changes can be accelerated by addressing technical, institutional, and bureaucratic barriers (Ouimetter, Teather, and Allison 2024). Empirical modelling suggests that people, process, and data readiness are required in addition to technology/capital investment to achieve long term operational success (Uren and Edwards 2023). Government policy should be economically broad-based and not narrowly focused on particular industries or applications. It should also be cautious and balance uncertain long-run productivity gains with maintaining competitiveness in a rapidly developing global technology market.

How Canada Compares Internationally

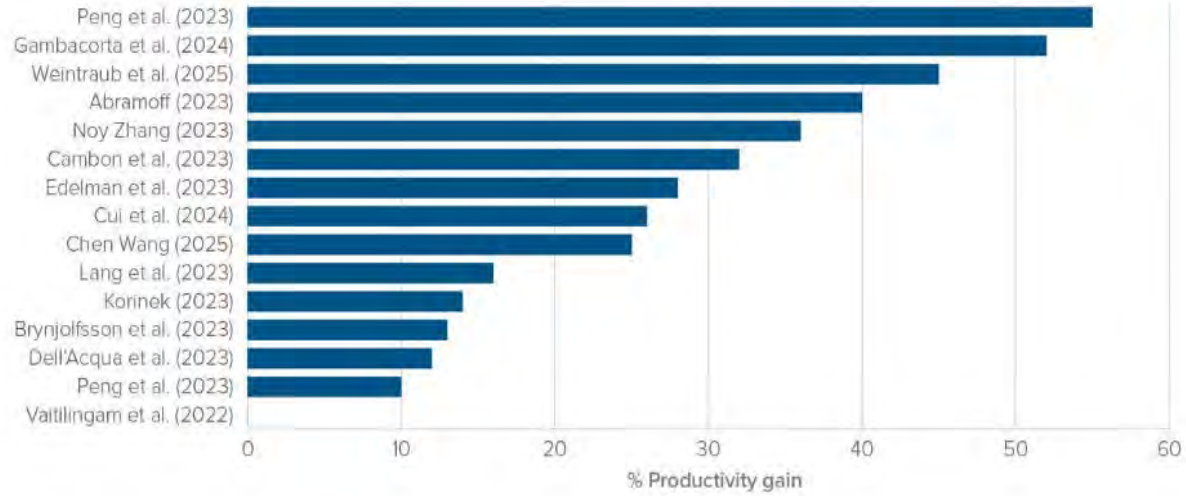
Canada performs reasonably well in international AI rankings, placing eighth overall across five different international AI rankings (Figure 3).[10] Rankings vary widely depending on their focus and data sources (Table A3). For example, China's rank ranges from second in the Global AI Index ranking but 32nd in the Global Index on Responsible AI (GCG 2024). Canada ranks highest in the Global AI Index (eighth) and lowest on the IMF's AI

8 Challapally et al. note that concerns about model output quality were a large barrier to AI implementation. This appears counterintuitive when 40 percent of knowledge workers use AI tools personally. They note a fundamental tension: users demand learning and memory capabilities for enterprise work that they can access through personal use of major LLM interfaces. Integrated enterprise tools, however, tend to be more static than the rapidly evolving commercial products for personal use. This creates a negative feedback loop and resistance to adopting and using enterprise AI tools.

9 The most productivity-enhancing applications of AI technology might not yet be conceived, and the most obvious applications might yield only marginal productivity gains. For example, when scientists first discovered how to produce a laser beam in Bell Telephone Laboratories, the company didn't patent the innovation because management couldn't see a conceivable use for it in telecommunications (Howitt 2015).

10 Sample includes all countries that appear in the top 20 of any of the rankings. For each, the rank of each country was standardized to a scale of zero to one (the range is defined by the lowest ranking country in the sample in a given index). The overall score is the average across indexes.

Figure 2: Estimated Effect of Generative AI Adoption on Labour Productivity-Academic Studies



Source: Goldman Sachs Global Investment Research (2025).

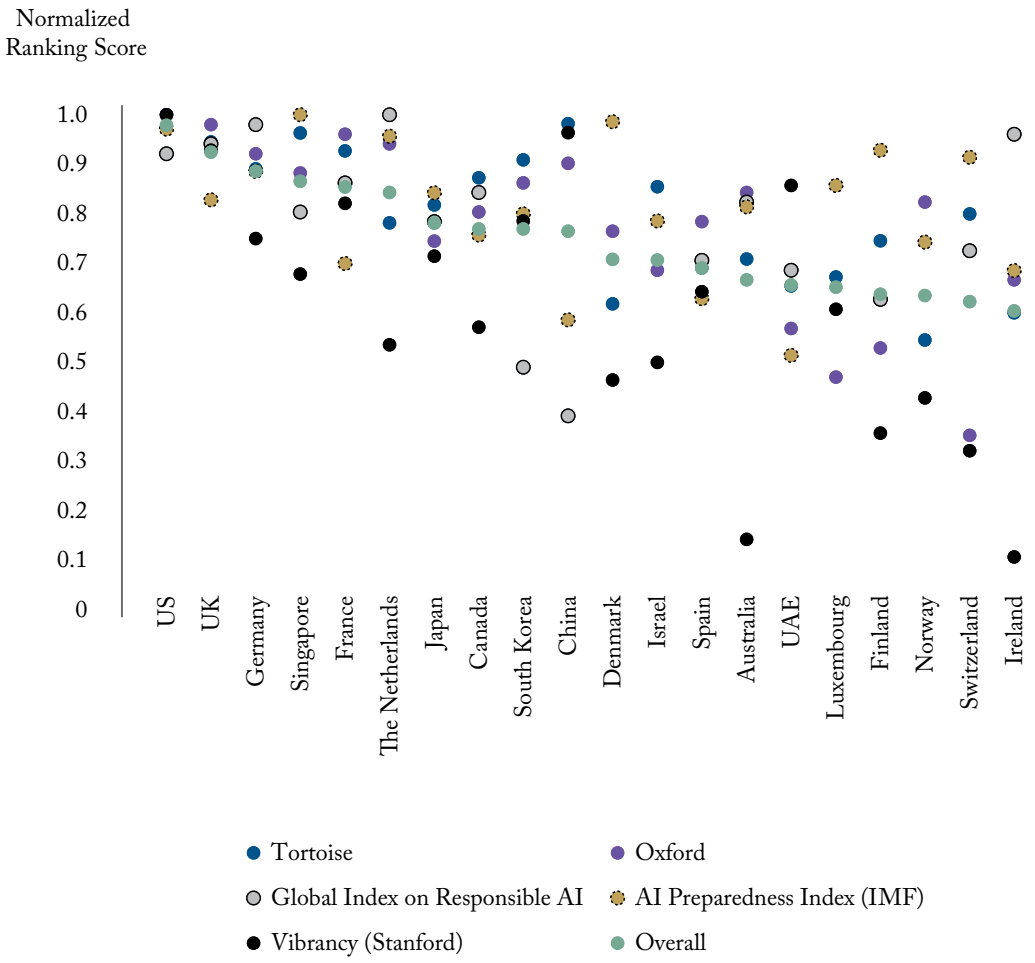
Preparedness Index (18th). Canada has also fallen in the rankings over time – from fourth in 2021 to eighth in 2025 on the Global AI Index (White and Cesareo 2025) and from fifth in 2022 to 12th in 2025 on the Government AI Readiness ranking (Rogerson et al. 2023; Iida et al. 2026). Notably, Canada's score improved across categories measured in the Oxford AI Readiness Index, suggesting that advancements in AI adoption, development, and public policy have been made, but they have not kept pace with some international peers.

In terms of development and infrastructure, Canada is a high performer, but not a clear leader among the metrics tracked by the OECD's AI Policy Observatory. More AI research is produced in Canada than in the US or UK (relative to population size). Canada has higher venture capital investment (as a share of GDP) in AI startups than many peer countries, but falls far behind the US and Israel, the clear leaders in the category (OECD. AI 2026a,b). Canada also maintains a respectable presence in computing infrastructure, with 19 of the world's top 500 supercomputers (Top500 2025) and public cloud regions (Lehdonvirta et al. 2025). Unfortunately, the processing power of those computers ranks only 18th out of 20 comparator countries (Top500 2025).

Taken together, these indicators reflect a familiar pattern in Canada's innovation system: strong research output but weaker commercialization. Continued investment in data and processing infrastructure will help maintain competitiveness, but public policy should also encourage private investment.[11] Given the scale of investment in

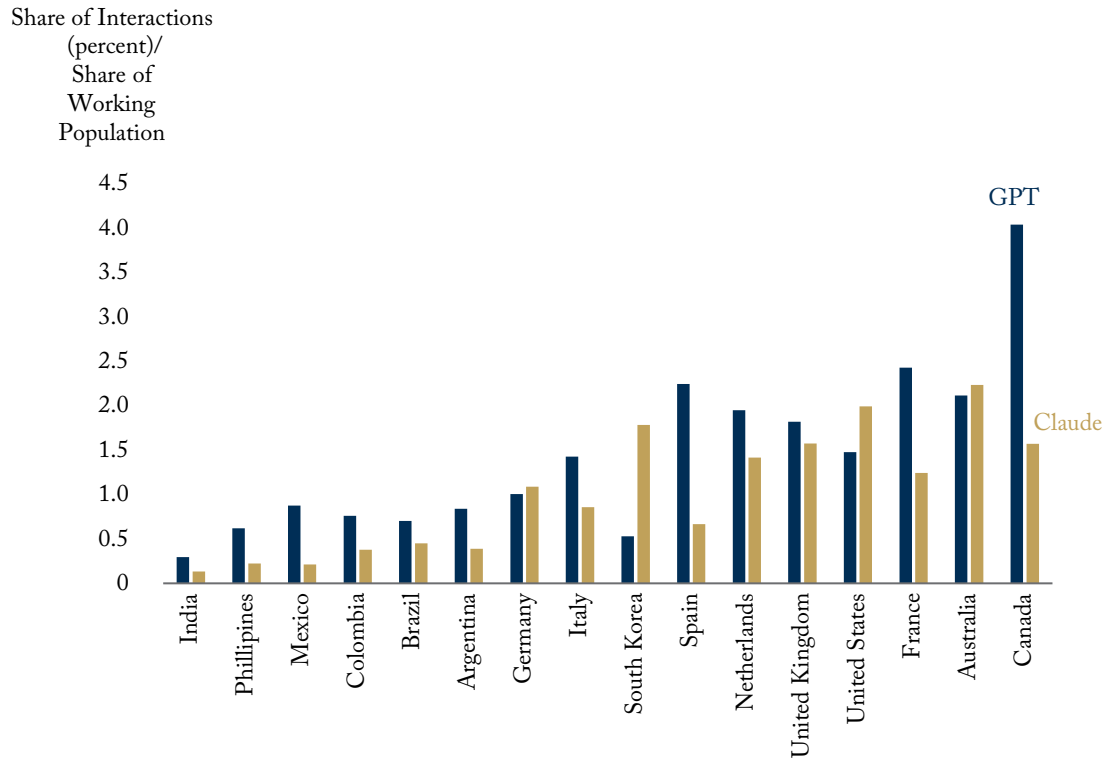
11 Notably, government spending on AI infrastructure would likely have a low multiplier, since the physical inputs and many of the resulting commercial outputs will not be domestic.

Figure 3: Global AI Ranking Comparison, Top 20 Countries



Sources: GCG (2024); White and Cesareo (2025); Iida et al. (2026); IMF (2023); Nestor et al. (2024).

Figure 4: General GenAI Usage by Country



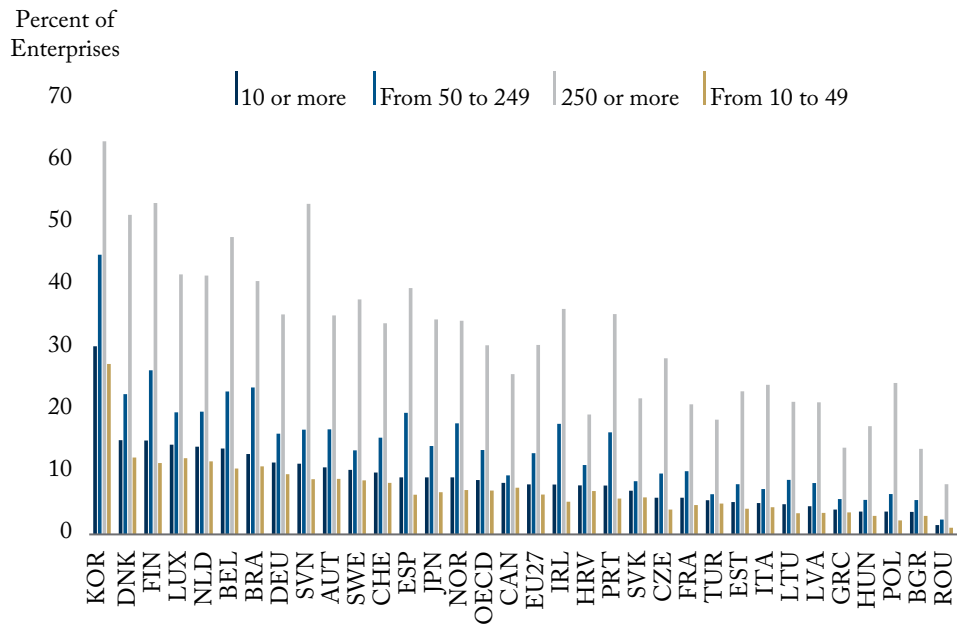
Sources: Appel et al. (2025); First Page Sage (2025); World Bank (2024); and author's calculations.

countries such as the United States and China, Canada is unlikely to match their computing capacity regardless of policy choices.

Evaluating the usage of major LLMs by country shows that the US and India account for the largest proportions of total users and interactions. After accounting for population size, however, Canada, Australia, and France show the highest usage rates among individuals (Figure 4).[12] While individual use does not directly translate to higher productivity in the production of goods and services, familiarity and comfort with AI

12 Note that until recently (June 2025), Gemini was available in a restricted set of countries. It has since expanded to around 190 jurisdictions and territories. Due to data limitations, it is not included for user analysis. The proportion of interactions cannot distinguish between low-adoption and high-average-usage vs. high-adoption and low-average-use. Higher-income countries show higher LLM usage rates. However, the adoption of LLMs is rapidly expanding, with disproportionate growth in low- to middle-income countries (GDP per capita of $10,000–$40,000) (Chatterji et al. 2025). In many cases, LLMs have had staged rollouts and were initially limited to the US or select jurisdictions. As the availability of AI tools increases in lower-income countries, and language offerings and capabilities expand, it is likely that adoption will continue to grow, but is inherently limited to the population with internet access.

Figure 5: Businesses Using AI, by Country and Enterprise Size, 2023



Note: No data available for China, India, or the US.

Source: OECD ICT Access and Usage Database (January 2026). https://goingdigital.oecd.org/datakitchen/#/cover/5/ict/indicator/explore/en.

tools among the general labour force will improve enterprise adoption prospects. A labour force with AI skills reduces enterprise training costs related to adoption and improves the likelihood of employees generating ideas for reorganizing business processes. Conversely, differences between consumer and enterprise applications can create barriers to workplace adoption (Challapally et al. 2025). Even so, if individual workers are using AI tools to increase their personal productivity, there will be marginal productivity effects from using publicly available tools for work tasks.

High individual adoption in Canada contrasts with lower rates of business adoption. Based on the most recent comparable data, Canada falls below the OECD average overall and for the proportion of medium and large businesses adopting AI (Figure 5). In Korea, Denmark, and Finland, more than half of large companies are using AI.

International data on the businesses' adoption of AI is highly variable. The OECD estimates 20.2 percent of businesses (with more than 10 employees) use AI,[13] while the McKinsey Global Survey finds that 88 percent of businesses experiment with AI in at least one function (McKinsey 2025; OECD 2025). However, only 10 percent of businesses in G7 countries were using AI for core business functions in 2024. Only 2 to 6 percent of firms across G7 countries have high intensity adoption related to core business functions (Fillipucci et al. 2025). High-intensity adoption is highest in the US, followed by Canada, the UK, and Germany.

13 As of 2025. Data in Figure 3 refer to 2023, including the most recent available for Canada.

Figure 6: Expected Adoption and Aggregate Labour Productivity Gains Over the Next Decade

Note: Shows medium adoption scenario (benchmarked by the adoption timeline of the internet/computers in each country).

Source: Filippucci et al. (2025).

There are common features of AI adoption across countries:

- Firm size: larger businesses are using AI at higher rates than medium or small businesses.[14] This could be related to factors including fixed costs of adoption, larger data resources, lower financing constraints, and complementary intangible assets such as information and communication technology (ICT) skills and research capacity (Calvino and Fontanelli 2023).
- Industry concentration: adoption is highest in ICT, followed by professional, scientific and technical services, and communications and marketing (OECD 2025).[15]
- Firm characteristics: higher productivity and younger enterprises are more likely to adopt AI (Calvino and Fontanelli 2023; Calvino, Costa, and Haerie, forthcoming).[16]

14 Across the OECD, 40 percent of firms with 250 or more employees, 20.4 percent for firms with 50-249 employees, and 11.9 percent for firms with 10-49 employees (OECD 2025).

15 So far, adoption has been more diversified across industries in the US and Canada, relative to other G7 countries (Fillipucci et al. 2025).

16 In regression analysis, the causes of this association are not clear. Firms with higher baseline productivity are using and developing AI technologies at higher rates.

Modelled projections suggest that high-intensity AI adoption among enterprises could reach 13 to 63 percent across G7 countries over the next decade, depending on adoption rates and technological progress (Fillipucci et al. 2025). The US is projected to have the highest adoption rates and the largest annual productivity growth related to AI, while Japan is projected to see the lowest. Canada ranks second in projected adoption across scenarios, but third or fourth in projected labour productivity growth, meaning that productivity gains will likely be relatively modest compared to international peers with similar (and slightly lower) adoption rates (Figure 6).[17] Estimates suggest that Canada will reach 32-62 percent enterprise adoption in the next 10 years, contributing 0.35 to 1.13 percentage points to annual labour productivity growth.

Overall, available data show that Canada is about average in terms of adoption and development capacity, and the US is a clear leader. Canada has a lower capacity for development related to AI infrastructure than some peer countries, but remains above average. Canadian individuals have higher adoption rates than those in most other countries. Business adoption is less clear-cut. Some indicators place Canada below the international average, while others rank Canada second in the G7 for high-intensity AI adoption in core business functions. For Canada to close the productivity gap, it will need sufficient AI infrastructure to remain competitive, broad adoption, but most importantly, more rapid or effective AI-enabled innovation to develop adaptations of business processes and new products and services.

Canada's AI Adoption Landscape

Having compared Canada with international peers, this section examines business adoption within Canada.

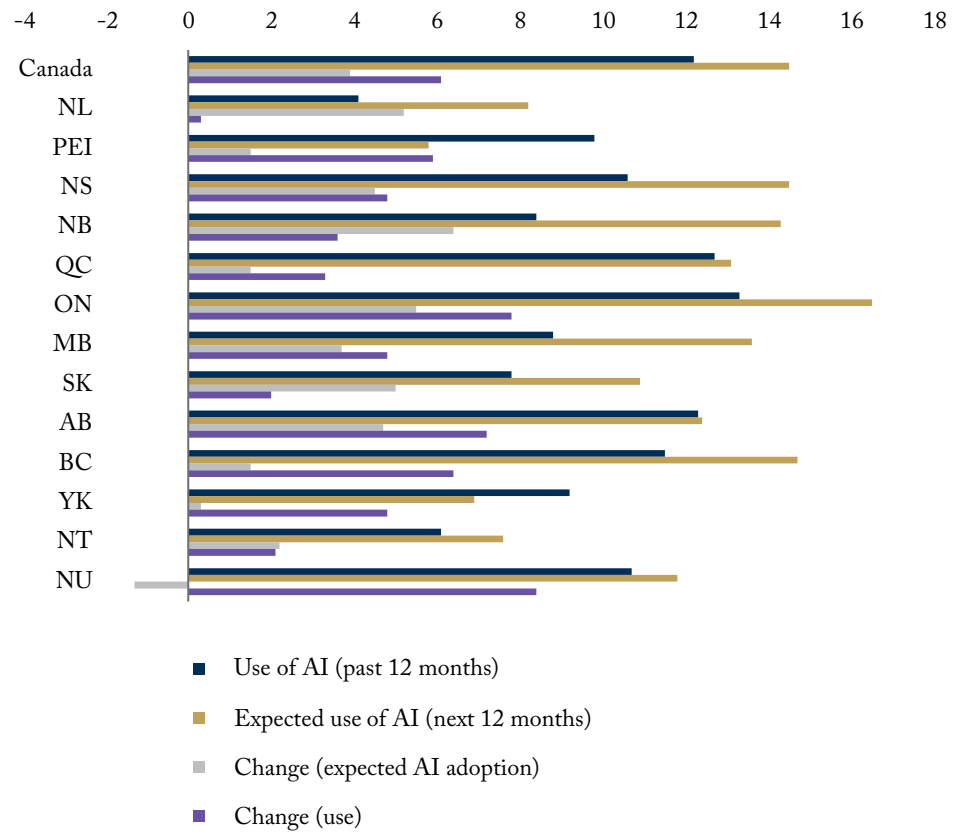
In the third quarter of 2025, 14.5 percent of businesses were planning to use AI within the next 12 months, a 3.9 percentage point increase from the previous year. As of the second quarter of 2025, 12.2 percent were already using AI. But two-thirds of businesses report no plans to adopt AI, and 18.9 percent were uncertain (Bryan, Sood, and Johnston 2025a). About six in 10 businesses think that AI investment is not important or not relevant to their business.

Planned adoption is highest in Ontario, British Columbia, Nova Scotia, and New Brunswick, with New Brunswick seeing the largest growth in the proportion of businesses planning to use AI compared to the previous year (Figure 7). Adoption is highest in information and cultural industries; finance and insurance; professional, scientific, and technical services; and healthcare and social services. It is lowest in mining and resources extraction, transportation and warehousing, and construction (Table A1).

Comparing previous and planned AI use shows that the share of businesses planning to adopt AI over the next 12 months is only 2.3 percentage points higher, compared with a 6.1 percentage-point increase from 2024 to 2025. In several sectors – including manufacturing, resource extraction, wholesale and retail trade, and professional services – planned adoption is lower than current usage

17 Germany is projected to have slightly lower adoption than Canada, but higher productivity growth in medium- and rapid-adoption timeline scenarios (with expanding AI capabilities).

Figure 7: Business Adoption of AI, by Province



Sources: Canadian Survey of Business Conditions, Q2:2024, Q3:2024, Q2:2025, and Q3:2025; Statistics Canada Tables: 33-10-0825-01, 33-10-0878-01, 33-10-1004-01, and 33-10-1045-01.0-1004-01, and 33-10-1045-01.

levels in Q2 2025 (Table 1). Adoption is most likely to increase in accommodation, food services, and real estate over the next year.

Provincial patterns are also uneven. Planned AI use in the information and cultural industries declines in five provinces (including a 39.7-percentage-point drop in New Brunswick) but rises in Ontario, Alberta, and Saskatchewan. In Q2 2025, businesses in Ontario, Quebec, and Manitoba were using AI at higher rates than the national average. By Q3 2026, however, only businesses in Ontario intend to use AI at higher rates than the national average. Businesses in Quebec and Alberta show little appetite for further AI adoption, while those in Prince Edward Island report plans to reduce AI use in 2026 compared with 2025.

Businesses engaging in some international activities are adopting AI at higher rates. Across all provinces, businesses that export services were using AI at higher rates than average. The same is true for importing services in all provinces except Nova Scotia. Businesses that relocated activities outside Canada or made investments outside Canada are also more likely to be using AI at the national level (though these same businesses show the largest declines in intended use over the coming

Table 1: Difference Between AI Use in the Past 12 Months and Planned AI Use, by Province and Industry

	Canada	NL	PEI	NS	NB	QC	ON	MB	SK	AB	BC
North American Industry Classification System (NAICS), all industries	2.3	4.1	-4	3.9	5.9	0.4	3.2	4.8	3.1	0.1	3.2
Agriculture, forestry, fishing and hunting	3.1	0	0	-3.3	5	0.8	12.4	-2	1.7	0.7	3.7
Mining, quarrying, and oil and gas extraction	-2.2	7.9	0	2.8	-2	3.3	-5.4	1	-3.1	0	-8.6
Construction	5.6	2.3	0	-2.4	-4.3	12	13	15.4	3.5	-8.7	-4.4
Manufacturing	-5.9	22.4	7.4	24.5	0.6	-6.2	-9.5	13.2	-6.8	-11.6	0.3
Wholesale trade	-2.8	11	-12.8	-7.7	12.6	-6.5	0	-13	9.6	-0.1	-9.1
Retail trade	-0.9	0.2	-22.7	10.6	8.4	-3.8	-0.6	2.2	9.7	-3.7	-0.3
Transportation and warehousing	4.8	6.2	-2.3	-1.9	4.3	0.7	5.8	-3.4	8.7	-0.9	15.8
Information and cultural industries	3	-11.4		-15.8	-37.9	-20.6	22.9	-9.9	22.7	18.2	-18.3
Finance and insurance	0.9	1.6	6.8	17.7	-8	-22.2	15.3	-1.2	-8.3	-8.1	-5.2
Real estate and rental and leasing	12.6	2.4	-5.8	-5.2	12.2	15.1	12.2	6.4	-7.5	6.6	21.2
Professional, scientific and technical services	-5.4	8	-3.4	-2.6	10.4	-17.4	-11.2	1.1	14.4	6.5	6.1
Administrative and support, waste management and remediation services	1.8	8.8	-2.5	-4.9	16.2	-1.5	8.5	1.8	5.2	-0.5	-5.4
Healthcare and social assistance	5.8	4.6	-0.3	6.7	9.8	7.9	2	26.1	-13.8	-1.5	13.8
Arts, entertainment and recreation	1.2	9.9	2.3	2.2	-12	-6.4	2	1.8	-10	15.6	3.6
Accommodation and food services	13.3	3.6	3.6	2.1	16.6	14.1	19.3	-7.2	3.3	13.3	5.2
Other services (except public administration)	1.4	3.1	-1	0.9	1.3	-6.5	-0.9	1.1	10.4	3.6	13.9

Sources: Canadian Survey of Business Conditions, Q2:2025, Q3:2025; Statistics Canada Tables: 33-10-1004-01, 33-10-1045-01; and author's calculations.

year). Importing and exporting goods has no clear association with AI adoption across provinces.

Overall, businesses involved in international services trade or cross-border investment show higher rates of AI use. This gap will likely close slightly over the year: firms without international activities report higher intentions to adopt AI than the overall business average (3.6 percent compared with 2.3 percent). Meanwhile, firms relocating employees or operations abroad, or investing internationally, report declining intentions to expand AI use.

Canada's AI adoption landscape (as of Q2 2025) generally mirrors international trends. Younger businesses (10 years or less) adopt AI more frequently than older firms, and large firms adopt more than small ones. The highest adoption rates are concentrated in ICT, finance, and professional, scientific, and technical services. Private enterprises had significantly higher adoption than government agencies and non-profits.

Planned adoption over the next year (reported in Q3 2025) suggests both continuation of these trends and broader diffusion. Government agencies and non-profits serving businesses plan to increase the use of AI at higher proportions than private enterprises. Only 0.1 percent of government agencies reported using AI in early 2025, but 24.3 percent plan on using it within the next year. Younger firms plan to continue to adopt AI at higher rates than older firms.

Planned adoption by firm size varies across provinces. In New Brunswick and Saskatchewan, small (5-19 employees) and medium-sized (20-99 employees) companies report adoption intentions above the national average, while larger firms show declining adoption. In Quebec, by contrast, larger firms continue to adopt AI more rapidly than smaller firms, widening the adoption gap.

Turning to employment effects, most businesses using AI report little change in staffing levels. Among firms that adopted AI in the previous 12 months (12.2 percent of businesses in Q2 2025), 89.4 percent reported no related change in employment (Bryan Sood and Johnston 2025b). Similarly, about 70 percent of firms planning to adopt AI expected no employment change, while another 10 percent are uncertain (Bryan Sood and Johnston 2025a). These results suggest firms may overestimate potential labour savings before implementation. After adoption, 15.1 percent of firms reported no reduction in employee tasks, while 47.2 percent reported only small impacts.

For businesses that do not plan to use AI in the next year, the most common reason is that the technology is not relevant to their products or services (78.1 percent). Only 1.5 percent of businesses said that previous use of AI did not meet expectations. Other common barriers include limited knowledge of AI, privacy, or security concerns, and the technology's perceived immaturity. Industries with fewer firms reporting AI as irrelevant tend to report lack of knowledge as the primary barrier to adoption.[18]

Government agencies report the highest rates of disappointment with AI performance (14.8 percent citing unmet expectations as the reason for non-use).[19] Regionally, businesses in British Columbia, Alberta, and Ontario report the lowest rates of saying AI is irrelevant to their activities (74.1-76.7 percent), while New Brunswick reports the highest share (88.3 percent). Notably, laws and regulations preventing or restricting the use of AI are one of the least commonly reported reasons for not using AI. This shows that existing industry regulations are not playing a strong role in prohibiting adoption in most industries.

18 Information and cultural industries, manufacturing, and wholesale trade.

19 Given the very low adoption rates of government agencies and relatively large planned increases in use, it is concerning that the agencies that have used AI in the past have not found it to be as useful as they had hoped.

Overall, Canadian data suggest that AI adoption continues to grow but at a slower pace than in 2024. In some sectors, AI use is likely to decline, suggesting that some businesses piloted or implemented AI and did not realize sufficient benefits to continue using the technology. While individuals in Canada use generative AI tools more frequently than those in many peer countries, business adoption remains comparatively limited, and most firms report little measurable labour savings from AI use so far.

Although these trends could indicate declining enthusiasm or unmet expectations, they are also consistent with the early stages of adoption for past general-purpose technologies, where experimentation precedes widespread productivity gains.[20]

Policy Discussion

Policymakers must recognize that maintaining Canada's competitive standing requires deliberate, differentiated strategies for AI infrastructure, development, and adoption – objectives that demand distinct policy approaches, skill sets, and resources. While the country currently performs respectably in international rankings, declining relative performance across multiple indices signals cause for concern.

There is significant uncertainty in the trend observations within Canada and across countries – from the beginning of 2024 to the present, we have only two observations of business AI adoption and intended use (from the Canadian Survey of Business Conditions). The OECD international comparisons also depend on this singular survey, and the most recent publicly available Canadian data is for 2023. Given the rapid changes to AI adoption and development, and its potential to have significant growth and productivity effects, we have shockingly little information about how AI is being deployed over time. Statistics Canada is ending the Canadian Survey on Business Conditions (CSBC), with the last scheduled release in August 2026. Budget 2025 allocated $25 million over six years and $4.5 million ongoing for Statistics Canada to implement the AI and Technology Measurement Program (TechStat) to support data and insights to measure how AI is used by organizations and understand its impact on Canadians, the labour force, and the economy. There is significant value and need for national statistics agencies to develop a standardized approach to measuring AI adoption to compare rates across countries, sectors, and over time. This expansion in data monitoring of technology adoption will enable social and economic policy research and inform evidence-based policymaking.[21]

Temporal considerations must also inform policy design. The substantial productivity gains that AI promises remain, by most credible estimates, a decade or more away. Current measurable benefits, while real, derive primarily from infrastructure buildouts and the "replace" phase of technology adoption, wherein AI-enabled tools substitute for existing technologies within established workflows and processes. These incremental improvements, averaging around 17 percent in labour productivity across various studies, represent meaningful but modest gains. The transformative potential of AI will materialize only when industries advance to the "reimagine" phase, restructuring business models, production processes, and organizational architectures around AI capabilities. History suggests this transition requires substantial complementary investments in training, organizational restructuring, and supporting

20 The productivity J-curve, combined with continuing technological innovation and adoption, results in modest or negligible measurable productivity growth early in the timeline but contributes to the rapid growth in the future.

21 See Sen (2026) for an in-depth discussion of data supply chains and governance for AI.

infrastructure – investments whose returns may not register in productivity statistics for years.

Infrastructure and Data

Data centres have near-immediate positive impacts on GDP and employment while they are being built, but then become an input to production themselves, while requiring significant energy inputs and minimal labour.[22] This means that government expenditure directed toward AI development and infrastructure faces inherent limitations as an ongoing economic stimulus. This reality does not argue against infrastructure investment, but rather for calibrated expectations about its short and long term macroeconomic impact and for complementary policies that maximize domestic value creation where possible. Infrastructure represents an investment in the foundational inputs that enable AI and future AI development, with direct GDP impacts occurring in the near term. Data centres themselves do not directly contribute to ongoing productivity growth; they increase the total raw computing capacity. How that capacity is used and deployed determines the longer-term growth and productivity impacts.

The government has a significant role to play in developing its own internal capacity for AI development and adoption, as well as ensuring reasonable access to computing and data resources across economic sectors and business sizes (in particular, for non-profit social enterprises and academic research). The latter objective will be achieved through a combination of policies, including direct spending on infrastructure, funding for low-cost and/or targeted borrowing programs to encourage business investment, and accessibility for small, social and non-profit enterprises. In addition, complementary development of open data assets and investment in initiatives that aggregate high-value administrative and public sector data assets while maintaining appropriate privacy and quality controls would enable AI development activities and improve accessibility for smaller- and lower-resource enterprises.[23]

Since large companies are already making significant investments in AI infrastructure around the globe, government policy should target improving Canada's attractiveness for that investment and development. For example, in November 2025, the government tabled Bill C-15. It includes accelerated capital cost allowance and expensing measures. The proposed measures are time-limited and include immediate capital cost deductions for certain productivity-enhancing assets.[24] In addition to investment, data centres require land, building/permit approvals, and potentially environmental, energy, and Indigenous impact assessments (and the skilled labour to construct them after approvals). Once they are built, they require significant energy resources for ongoing operations.

A comprehensive strategy will require all levels of government to streamline regulatory approvals and, where possible, implement parallel instead of sequential regulatory steps to speed development timelines. Reducing administrative development costs and shortening approval timelines would benefit general economic development, but could

22 In addition, the critical inputs for AI infrastructure (advanced semiconductors, specialized hardware) and the dominant software platform outputs are overwhelmingly sourced from outside Canada. Public investment in this domain generates a lower GDP multiplier than comparable spending in sectors with stronger domestic supply chains.

23 For example, the GEMINI database contains detailed administrative data from 40 participating hospitals in Ontario. GEMINI is a program of Unity Health Toronto and partnered with the Vector Institute to build a health data platform for artificial intelligence research in 2020.

24 In addition to: manufacturing machinery and equipment, clean energy equipment, zero-emission vehicles, and purpose-built rental housing. See EY Global (2025) for further explanation.

take significant time to implement. In the short term, a targeted strategy could involve identifying suitable development sites at the local or regional level and pre-screening them for energy capacity, required environmental impact assessments, and other considerations.

Adoption and Diffusion

Adoption-focused policy, by contrast, may offer marginal immediate benefits but has higher potential to generate productivity growth in the long term.[25] The analysis of business intentions to use AI in the future shows that the majority do not think it is currently relevant to their products or services. Further, the limited data available shows AI adoption across industries is slowing and could possibly decline in five industries over the year.

For companies that do think AI could be relevant to their business but do not plan to use AI, the most commonly cited reasons are a lack of knowledge about the technology, concerns about privacy and security, and that the technology is not yet mature enough. Manufacturing and wholesale trade, in particular, show a lower proportion of firms thinking that AI is not relevant to their products/services, and over 10 percent of firms are not planning to use AI due to a lack of skilled labour.

Given the relatively early stage of adoption and development, these barriers provide a target for government policy intervention. In particular, the government has signalled that it plans to update Canada's privacy legislation for AI, and it should do so sooner rather than later. An updated privacy policy could have the dual benefit of reducing the uncertainty of potential adopters and providing clarity for companies planning to develop AI technologies using Canadian data.[26] Similarly, governments have a role to play in increasing AI literacy and knowledge about the technology (see C.D. Howe Institute, forthcoming). Accelerating the adoption and development of AI in Canadian businesses is also supported by various general and specific tax subsidies, including the Scientific Research and Experimental Development (SR&ED) credit and capital cost allowances discussed above. While employee-training costs are generally tax-deductible, there is a need for a more comprehensive skills investment strategy, particularly in content development and availability for mid-career professionals, with a focus on practical applications. Increasing the labour force capable of implementing AI solutions across different industries is a critical complement to infrastructure investment and to encourage broad adoption and process innovation.

The evidence presented in this analysis shows that adoption in Canada generally follows international patterns – larger and younger firms tend to adopt AI at higher rates. This highlights that targeted policies encouraging technology uptake and growth in small and medium-sized enterprises could speed diffusion across sectors. In addition, it appears that engaging in international trade is associated with higher use of AI, though the intended future use is increasing for companies with no international business activities. In November of 2025, Canada, Australia, and India agreed to enter into a trilateral technology and innovation partnership that includes green energy, resilient supply chains for critical minerals, and the development and mass adoption of AI to improve welfare. Canada should continue to collaboratively secure critical input supply chains and enhance international cooperation on AI development and adoption.

The findings in this *Commentary* suggest that policies promoting trade diversification and encouraging a broader base of Canadian businesses to engage internationally are interrelated with AI

25 That potential, however, is not a guarantee of future success.

26 For a more in-depth discussion of privacy, see Sen (2026).

adoption goals. Rather than viewing AI policy in isolation, governments should recognize how existing priorities around business growth, trade promotion, and export development can reinforce technology adoption objectives.

Conclusion

The uncertainty about AI's development trajectory must be balanced with its potential to be revolutionary and a significant source of ever-elusive productivity growth. The country cannot afford to miss an opportunity that may substantially improve living standards and economic competitiveness over time. On the other hand, the uncertainty surrounding AI's ultimate productivity impact – credible estimates range from less than 1 percent to 15 percent cumulative GDP gains over the next decade – counsels against excessive concentration of public resources. This suggests a multi-pronged strategic approach that includes investment in infrastructure, enhancing research and development policy,[27] and updating privacy legislation. In addition, the government needs to rapidly implement the TechStat initiative to improve monitoring of the diffusion of AI and the associated economic effects. Many policies supporting AI infrastructure, development, and adoption are in the works, while data to monitor their effects is highly limited. The evidence base needs to expand to inform comprehensive and coordinated policy.

Policy should continue to pursue a balanced approach: support for infrastructure development and research capacity to maintain Canada's standing as a credible AI nation, combined with robust efforts to accelerate adoption across sectors and firm sizes. However, governments should resist the temptation to overemphasize AI at the expense of broader economic priorities.[28] Government policy can support AI development and diffusion without direct spending by focusing on a supportive regulatory environment based on principles to manage risk and potential harms, and some stimulus in the form of demand-side policies focusing on potential adopters.[29] AI represents one important element of Canada's productivity agenda, but not its entirety. Maintaining perspective on AI's current limitations and its uncertain trajectory will help ensure that policy balances risks and limited government resources while remaining responsive to emerging evidence.

27 The federal government has already increased Canada's SR&ED tax credit. It could also consider tax policy adjustments to enhance private capital investment (such as increasing the proportion of capital expenses that can be deducted per tax-year, as in Bill C-15). The scale of American investment further complicates the calculus. The United States is deploying capital toward AI development at a pace Canada cannot realistically match, and attempting to compete directly on infrastructure scale would divert resources from areas where Canadian policy can achieve greater impact. This argues for strategic prioritization of adoption-side interventions, research excellence, and niche capabilities rather than broad infrastructure competition.

28 Particularly when equity markets are debating hallmarks of past bubbles including excessive speculation, leverage, momentum-driven pricing and assets with minimal cash-flow.

29 Such as raising awareness of benefits and uncertainties, developing firms' absorptive and investment capacity, and moderating capital investment risks.

APPENDIX:

Table A1: Findings on Cost Savings from Adopting Generative AI Tools

Study	Domain	Outcome
Brynjolfsson et al. (2023)	Customer service with a generative AI assistant.	14 percent increase in task completion rate.
Jabarian and Henkel (2025)	Job interviews with a generative AI voice agent.	17 percent increase in job starts; 18 percent increase in retention rate.
Noy and Zhang (2023)	Basic professional writing with ChatGPT-3.5.	40 percent increase in speed; 18 percent increase in output quality.
Peng et al. (2023)	JavaScript programming with GitHub Copilot.	56 percent increase in speed.
Cui et al. (2025)	Software development with GitHub Copilot.	26 percent increase in task completion rate.
Wiles et al.(2023)	Job applications with algorithmic resume writing assistance.	8 percent increase in likelihood of hire.
Dell'Acqua et al. (2023)	Management consulting with GPT-4 (experimental setting)	12 percent increase in task completion rate; 25 percent increase in speed.

Sources: As listed in the first column above, Penn Wharton Budget Model (2025).

Table A2: Businesses Using AI in Producing Goods or Delivering Services over the Last 12 Months (Q2:2025, Percent)

	Canada	NL	PEI	NS	NB	QC	ON	MB	SK	AB	BC
North American Industry Classification System (NAICS), all industries	12.2	4.1	9.8	10.6	8.4	12.7	13.3	8.8	7.8	12.3	11.5
Agriculture, forestry, fishing and hunting	1.8	0	0	3.3	0	0.3	2.5	2.8	4.2	3.3	0
Mining, quarrying, and oil and gas extraction	5.6	0	0	0	3.6	8.6	11.5	2.5	3.8	2.8	10.1
Construction	3.6	0.1	4.2	2.7	9.7	2.3	1.5	2.7	1.2	10.1	5.1
Manufacturing	13.1	5.7	9.5	4.8	4	11.3	17.4	1.8	12.2	13.6	6.6
Wholesale trade	10.6	1.6	22	13	0	15.2	8.2	17.9	4.5	3.4	17.1
Retail trade	6.6	1.3	22.7	1.2	2.1	12.6	3.7	1.4	1.6	12.8	6
Transportation and warehousing	1.8	0	4.5	4.8	2.1	2.9	1.2	5.5	0.1	0.9	2.8
Information and cultural industries	35.6	28.3	F	33.9	47	44	29.6	30.7	12.4	25.2	44.5
Finance and insurance	30.6	21.6	8.4	27.9	34.5	55	27.1	22.7	39.4	26.4	20.5
Real estate and rental and leasing	11.8	10.7	13.8	28.3	11.7	16.7	13.3	15.3	21.7	8.2	3.1
Professional, scientific and technical services	31.7	22.1	23.3	33.9	36	36.9	39.2	31.9	16	16.7	22.9
Administrative and support, waste management and remediation services	9.8	2.6	10.8	19.4	6.6	8.2	8	4.7	1.5	17	12.9
Healthcare and social assistance	17.4	1.9	1.5	18.1	7	8.9	18.3	7	22.1	31.2	20.4
Arts, entertainment and recreation	14	0	0	8.1	20.3	29.5	7.3	17.3	16.9	5.3	8.4
Accommodation and food services	1.5	0.9	2.4	2.1	1.2	1.9	0.5	12.8	3	1.4	1.9
Other services (except public administration)	7.3	1.7	4.2	4.8	1.6	13.7	8.5	3.7	2.9	4.5	1.1

Source: Canadian Survey of Business Conditions, Q2:2025. Statistics Canada Tables: 33-10-1004-01.

Table A3: Information About AI Ranking Indices

Index	Structure	Categories and/or Variables
Government AI Readiness Index (Oxford)	6 Pillars, 14 Dimensions, 195 countries	Governance: Governance principles and regulatory compliance
		AI Infrastructure: compute capacity, data quality, enabling technical infrastructure
		Development and Diffusion: human capital, AI sector maturity, AI tech diffusion
		Resilience: safety and security, societal transition
		Public sector adoption: government digital policy, e-govt. delivery
		Policy capacity: policy vision, policy commitment
Global AI Index (Tortoise)	3 Pillars, 7 Dimensions, 122 indicators, 83 countries	Implementation: talent, infrastructure, operating environment
		Innovation: research, development
		Investment: government strategy, commercial
Global Index on Responsible AI (Global Centre on AI Governance)	3 Pillars, 3 Dimensions, 19 Thematic area, 136 countries	Thematic areas: competition authorities, public sector skills development, international cooperation, gender equality, data protection and privacy, public participation and awareness, bias and unfair discrimination, children's rights, labour protection and right to work, cultural and linguistic diversity, national AI policy, impact assessments, human oversight and determination, responsibility and accountablility, proportionality and do no harm, public procurement, transparency and explainability, access to remedy and redress, safety, accuracy and reliability
AI Preparedness Index (IMF)	4 Pillars, 7 dimensions, 28 indicators (29 variables), 173 countries	Digital Infrastructure: accessible, affordable and secured internet access; mature e-commerce infrastructure
		Innovation and Economic Integration: innovation, economic integration
		Human Capital and Labor Market Policy: education and digital skills, labor market flexibility and policies
		Regulation and Ethics: strong legal frameworks and enforcement mechanisms
Global AI Vibrancy Tool (Stanford)	8 Pillars, 42 indicators, 36 countries	Pillars: R&D, Responsible AI, Economy, Education, Diversity, Policy and Governance
OECD AI Policy Observatory	118 indicators (no combined ranking/ score)	Comprehensive catalogue of national AI strategies and policies. Some live data feeds and publicly accessible data.

Sources: GCG (2024); White and Cesareo (2025); Iida et al. (2026); IMF (2023); Nestor et al. (2024).

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