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CENTRE FOR CANADIAN INNOVATION AND COMPETITIVENESS

EXECUTIVE SUMMARY

Underinvestment in Capital Equipment Hinders Canadian Productivity Growth

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Canadian firms are underinvesting in productivity-enhancing capital such as machinery, software, and advanced technologies. Without targeted reforms to boost investment and improve data collection, Canada risks falling further behind in global competitiveness and economic growth.

KEY TAKEAWAYS

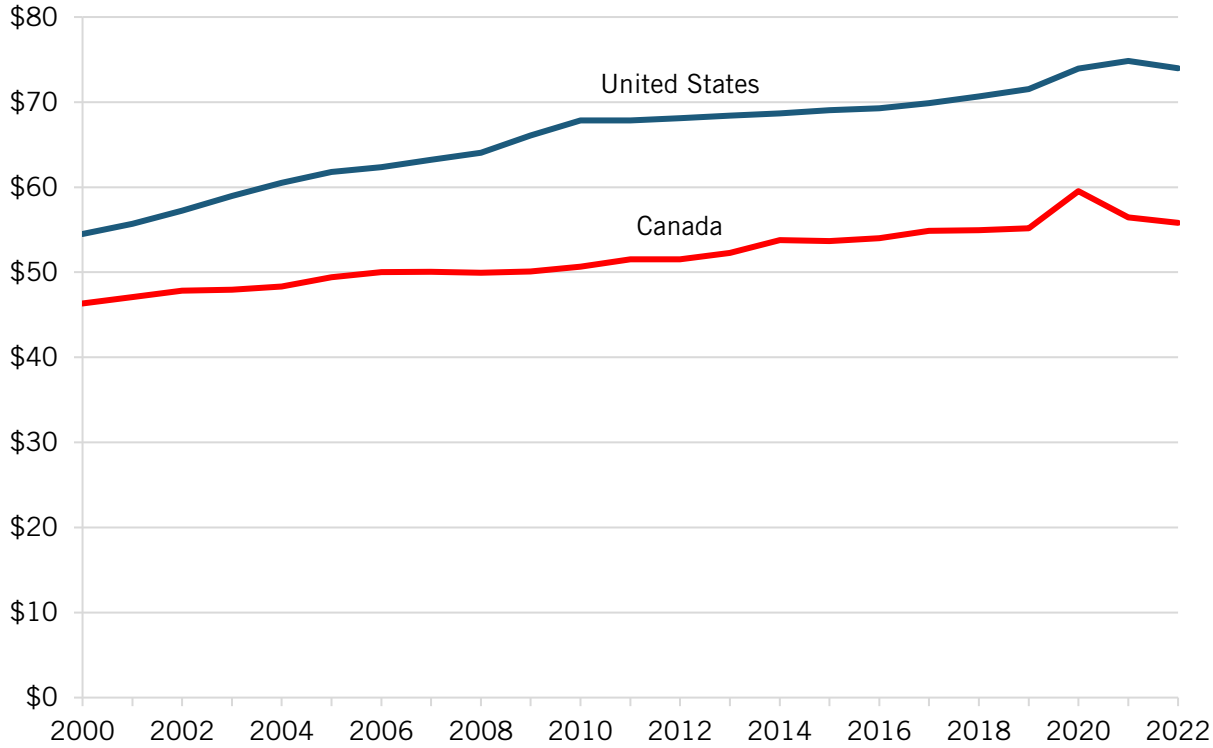
- Canada's investment in productive capital such as machinery, software, and equipment has declined in relative terms over the past decade, contributing to stagnant capital stock and a widening labour productivity gap with the United States.
- Headline capital investment figures overstate productivity by including low-impact assets like furniture and fleet vehicles, leading to misdiagnosis of business modernization.
- Canadian firms invest significantly less per worker in productivity-enhancing capital than U.S. firms, undermining competitiveness and long-term growth potential.
- The high share of small businesses in Canada limits scale and capital intensity. Removing size-based tax and regulatory advantages would shift the economy toward firms better positioned to invest and compete globally.
- Emerging technologies like robotics and AI represent major productivity opportunities, but widespread adoption depends on firm-level willingness and ability to invest in modern capital.
- To close the productivity gap, Canada should adopt first-year expensing for all productive capital, establish industry-specific productivity groups, and modernize Statistics Canada's capital investment data, particularly around software and leased assets.

Read the Full Report

Lawrence Zhang and Meghan Ostertag, "Canadian Capital Underinvestment Hinders Productivity Growth" (ITIF Centre for Canadian Innovation and Competitiveness, May 2025), innovationpolicy.ca.

Canada is in the midst of a productivity crisis, with labour productivity rising just 10 percent over the past decade, while the United States has surged ahead, growing 148 percent faster. This is not just an economic concern but a strategic one: As the United States shifts toward protectionism, Canada's productivity shortfall weakens its ability to compete, adapt, and defend its national interests.

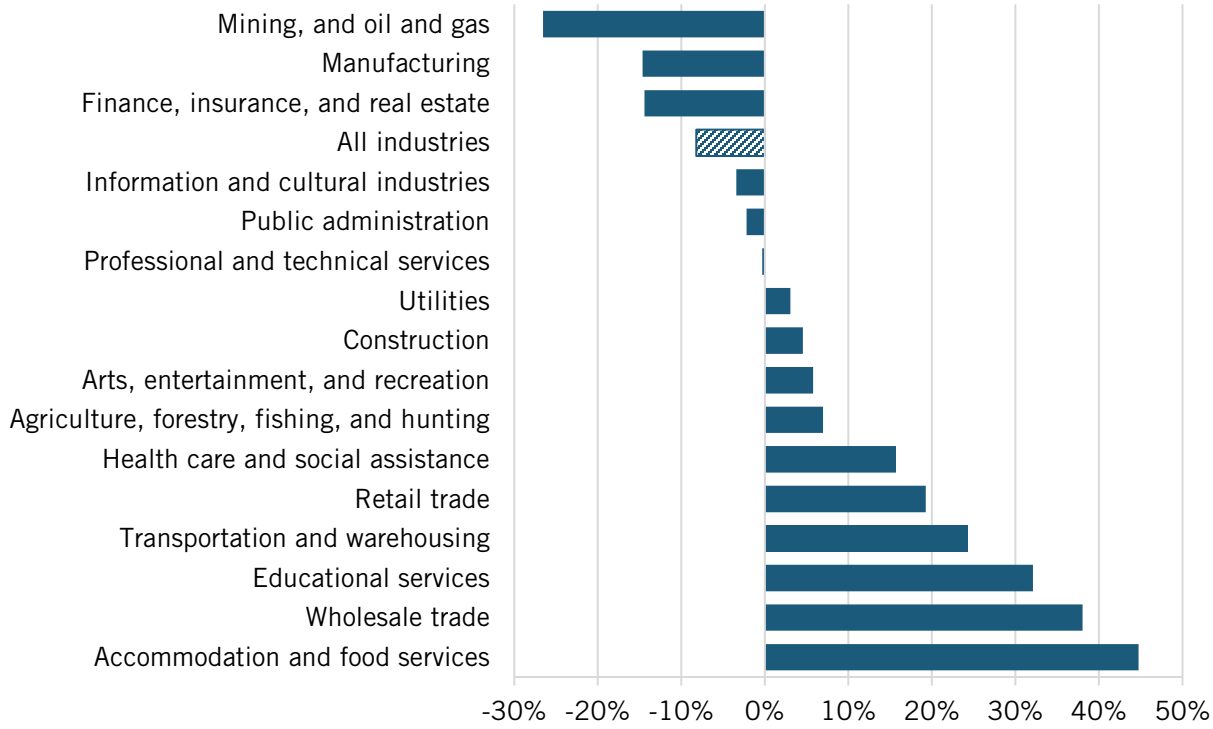
Figure 1: Labour productivity (2010 $US purchasing power parity per hour)



While there are many drivers of labour productivity, the most important is better "tools," particularly new machinery, equipment, and software. Canadian industries, overall, aren't investing enough in productive capital expenditures (software, industrial machinery, and computers and electronics). Though capital investments as a share of gross domestic product (GDP) fell by 20 percent economy-wide between 2013 and 2023, investments in productive capital in particular saw practically no change in relative levels of investment at just 1 percent growth. This is a key component of Canada's ailing productivity performance.

And while headline capital expenditure figures may appear stable, this is misleading. Much of the reported investment includes low-impact assets such as vehicle fleets, furniture, and uniforms—capital that does little to enhance labour productivity.

Figure 2: Change in productive capital stocks relative to value added, 2013–2023



Depreciation further worsens the picture. Capital depreciates over time, and productive capital stock has declined 8 percent as a share of GDP since 2013. Industrial machinery and computers and electronics have declined 19 percent and 10 percent, respectively. While software capital stock has increased, it has not been enough to offset these losses. Should the decline continue, the capital stock of many industries will be depleted in time, which may lead to lower levels of productivity, as workers will have limited access to productivity-enhancing machinery and equipment.

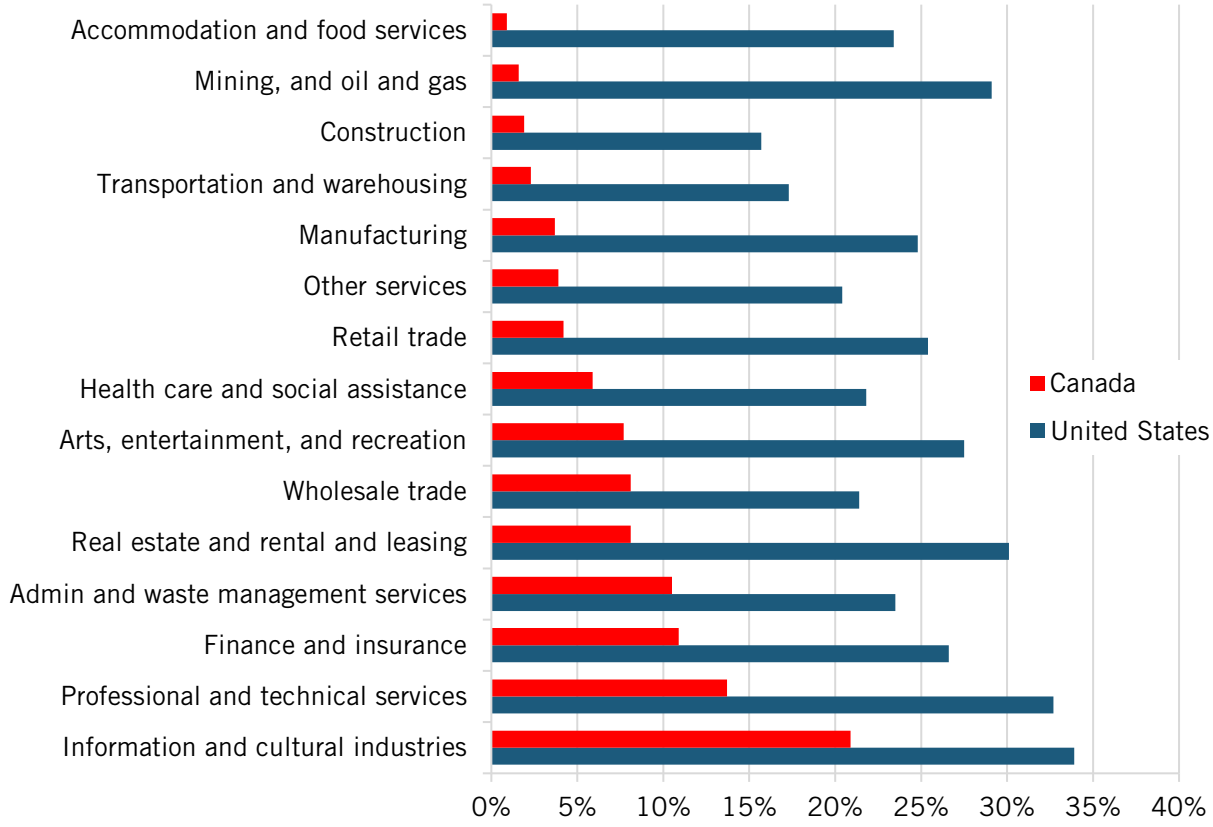
Some industries, such as mining, oil and gas, and finance, have experienced large increases in productivity despite falling capital stocks. But these gains often reflect sector-specific events such as the oil sands boom of the 2000s or digitization in financial services. More broadly, many industries have seen either stagnant or falling capital stocks, and many have experienced declining productivity at the same time. Between 2013 and 2023, Canada's productive capital stock fell even in high-potential sectors such as manufacturing, information and cultural industries, and wholesale trade.

Canadian firms are not keeping pace with competitors abroad. From 2013 to 2023, U.S. firms invested, on average, 11 percent of GDP annually in machinery, equipment, and intellectual property, compared with just 8 percent in Canada. Across almost all industries, Canada has consistently underinvested in productive capital compared with the same industries in the United States. In most sectors, such as agriculture, manufacturing, and information and cultural industries, the United States outpaced Canada by large margins.

A lack of detailed capital investment data hinders effective policy responses. Statistics Canada does not publish publicly available data on industry capital expenditures at a granular level. In the most detailed dataset, capital is classified into broad asset types such as non-residential buildings, machinery and equipment, and intellectual property products. These categories conflate productivity-enhancing capital with less-productive forms of investment such as furniture, uniforms, and mineral exploration, obscuring the relationship between capital investment and productivity. In many cases, the correlation between capital investment and productivity appears weak. But this may reflect imprecise data rather than an actual lack of connection. More granular data would allow policymakers to better understand who is investing in what and where investment is driving output gains.

The adoption of robotics and AI poses a major opportunity for firms to boost productivity, but Canada is falling behind global peers. Canada ranks just 17th in the world for manufacturing robotics adoption, and only 2 percent of firms report using robotics technology as of 2022. Similarly, AI adoption in Canada has fallen behind that of the United States. In almost all industries, barring information and cultural industries, AI adoption in Canada is less than half that of the United States. This is more than a missed opportunity; it's the erosion of Canada's competitive position in advanced industries.

Figure 2: Share of firms adopting AI, 2023–2024



Some argue that capital investment is falling because we are transitioning to a knowledge economy. Yet, there is little evidence that growth in research and development (R&D) is

displacing productive capital investment at scale. The substitution effect between changes in R&D and productive capital expenditures relative to value added is weak. Similarly, rising real estate costs drawing capital away from equipment also appears to weakly contribute to the problem, while suspicions that firms are substituting cheap labour in lieu of investing in productivity-boosting capital do not appear to be true.

Canada's smaller average firm size also plays a role. Small businesses accounted for 48 percent of GDP between 2016 and 2020 in Canada, compared with 43 percent in the United States. Smaller firms are typically less capital intensive and less productive. A 2014 report from Statistics Canada found that Canadian small businesses were just half as productive as large firms. Canada's smaller average firm size plays a role. While small businesses are essential, policy distortions that favour smallness, through tax breaks or regulatory carve-outs, discourage scaling. As a result, many firms remain too small to justify the kinds of capital investments needed to significantly raise productivity.

The federal government has taken some steps, such as the 2019 Accelerated Investment Incentive, which enhanced first-year expensing for certain types of capital. But the policy was limited in scope and implementation, and was quickly overshadowed by the COVID-19 pandemic. Levels of capital investment did not increase much after this policy, across the economy or in key sectors such as manufacturing.

To reverse the decline in capital intensity and close the productivity gap, policymakers should:

- allow all productive capital expenditures to be expensed for tax purposes in the first year, including machinery, software, and advanced technologies, across all sectors;
- adopt size-neutral policies so that firms of all sizes face the same tax and regulatory obligations, enabling more small firms to scale;
- establish a Prime Minister's Productivity Innovation Award to recognize Canadian firms demonstrating exceptional use of capital to drive output and operational efficiency;
- fund industry-specific productivity groups through Innovation, Science and Economic Development Canada (ISED), bringing together analytical staff and industry leaders to study global best practices and assess how Canadian organizations can adapt innovations to their own operations; and
- ensure that Statistics Canada improves the granularity of capital investment data, including breaking down capital expenditures by three-digit North American Industry Classification System (NAICS) codes and providing more detailed classifications for software, leased assets, and asset retirement.

Underinvestment in productivity-enhancing capital is a pernicious problem that policymakers urgently need to address. In an era when Canadian firms will have to compete more broadly on the global market because of reduced trade with the United States, this underinvestment is a strategic vulnerability, leaving Canadian firms less able to adapt and succeed. By boosting capital expenditures, Canada can drive innovation, enhance productivity, and boost the global competitiveness of Canadian businesses.