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# Canada's gross domestic product per capita: Perspectives on the return to trend



by Carter McCormack and Weimin Wang

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## Introduction

Slower economic growth over the past year and near-record population increases fuelled by temporary and permanent immigration have put the spotlight on recent trends in Canada's gross domestic product (GDP) per capita. Real GDP per capita has now declined in five of the past six quarters and is currently near levels observed in 2017. Recent reports by Porter (2024), Ercolao (2023), and Marion and Ducharme (2024) have all stressed the trend towards weaker per capita growth, highlighting its negative implications for living standards and wage growth. Recent declines in per capita output have also brought concerns over Canada's weak productivity performance to the fore, since historically, much of the long-term growth in GDP per capita has reflected sustained improvements in labour productivity.

Economic activity has slowed markedly during the past year as businesses and households continued to adjust to higher interest rates. Real GDP grew 1.1% in 2023, its slowest annual pace since lower oil prices weighed on growth in 2016, excluding the COVID-19 pandemic-related decline in 2020. Growth in 2023 was driven primarily by increases in exports and household spending, while lower business investment and declines in residential construction weighed on gains. As of late 2023, real output was 4.4% above pre-pandemic levels observed in the fourth quarter of 2019.

While the pace of economic activity has slowed, Canada's population continued to expand rapidly. During 2023, Canada's population grew 3.2%, an increase of over 1,271,000 people, roughly equivalent to the size of Calgary (Statistics Canada, 2022). With population growth outpacing output growth, GDP per capita has trended lower and is now 2.5% below pre-pandemic levels.

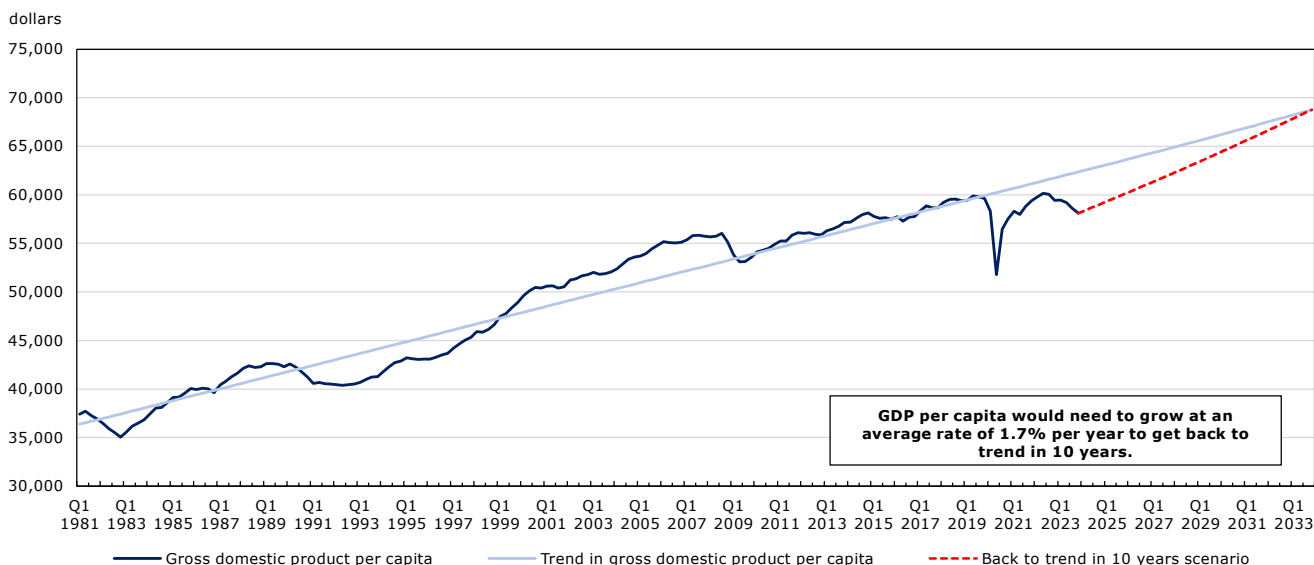
This article provides some additional perspective on the extent to which recent declines in GDP per capita represent a departure from the long-term trend in per capita growth, while highlighting factors that may effectively bolster per capita growth through improvements in business productivity. Drawing on recent research at Statistics Canada that examines the link between investment, competition and productivity, the article provides a guide to understanding how Canada fell behind and how it can get back to trend.

# Gross domestic product per capita: Returning to trend is no small task

GDP per capita is widely used to gauge differences in living standards across countries. Higher levels of per capita output are generally found in more developed economies with advanced infrastructure, better health care and education systems, and higher levels of access to technologies and innovation. Workers in countries with higher per capita output tend to be more productive and earn higher wages (Leung & Macdonald, 2022). While trends in GDP per capita yield valuable insights into changes in average incomes, they do not capture other dimensions of socioeconomic progress, including changes in income inequality or environmental sustainability. Accordingly, it is important to examine GDP per capita along with other indicators when conducting comprehensive assessments of economic and social well-being.

Chart 1 presents Canada's real GDP per capita over the last four decades, along with a measure of long-term trend growth (and a linear extrapolation of the long-term trend out to 2033). Since 1981, real GDP per capita has grown at an average annual rate of 1.1%, increasing from about \$36,900 per person to \$58,100 per person in inflation-adjusted dollars. The shock of the COVID-19 pandemic, coupled with falling per capita output in recent quarters, has left real GDP per capita 7% below its long-term trend, equating to a decline of about \$4,200 per person.<sup>1</sup> To return to its pre-pandemic trend over the next decade, GDP per capita would need to grow at an average annual rate of 1.7% per year.

**Chart 1**  
**Gross domestic product (GDP) per capita return to trend scenario analysis**



Sources: Statistics Canada, tables 36-10-0104-01 and 17-10-0009-01.

Per capita growth of this magnitude is ambitious and a marked departure from recent trends. It would be qualitatively similar to the 1.6% growth in GDP per capita that the United States has experienced since the onset of the pandemic. In 2023, real GDP in the United States grew by 3.3% (Bureau of Economic Analysis, 2024), vastly outpacing the 0.5% increase in the population, which is just now rebounding to pre-pandemic norms (United States Census Bureau, 2023). It should be noted that Canada has experienced extended periods of strong per capita growth in the past. From late 1991 to 2001, GDP per capita advanced at an average annual rate of 2.2%. As noted by Gu (2024), this coincided with sustained

1. Chained 2017 dollars.

improvements in labour productivity, bolstered by the implementation of the Canada–U.S. Free Trade Agreement and the widespread adoption of information and communication technologies.

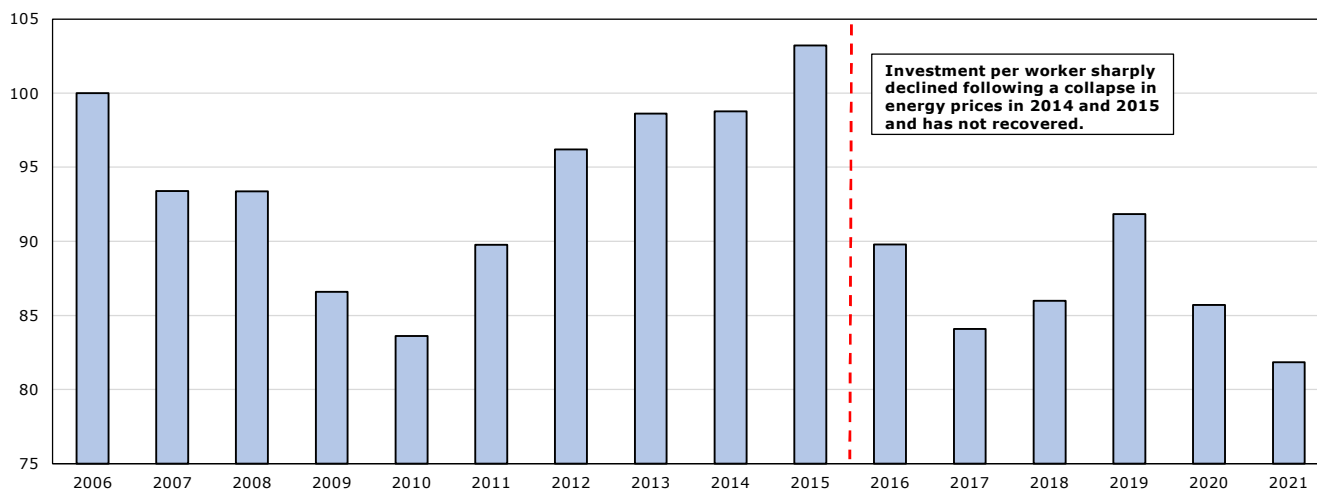
## Raising per capita output requires higher productivity (and capital spending)

As Wang (2022) notes, improvements in real GDP per capita can come from three sources—increases in (1) labour productivity (a measure of how efficiently workers transform inputs into output), (2) work intensity (the number of hours worked per employee) and (3) the employment-to-population ratio (the percentage of the population that is working). Of the three, improvements in labour productivity are critical, since they accounted for 93% of the growth in GDP per capita over the four decades preceding the pandemic (Wang, 2022). Structural trends in the labour market related to work intensity and population aging suggest that productivity will remain the key driver of GDP per capita in the post-pandemic era.

Improvements in productivity will require sustained increases in capital spending. New research by Gu (2024) underscores the link between investment and productivity growth. Indeed, the amount of fixed capital invested per worker was the most important source of labour productivity growth over the past 30 years. After increasing during the 1990s until 2006, investment per worker began to decline, especially after the collapse in commodity prices in 2014 and 2015. As of 2021, investment per worker in business sector industries was about 15% lower than in 2006 (Chart 2). Weaker competition between firms following the mid 2000s—through rapidly decreasing firm entry rates—further limited the amount of investment spending per worker, accounting for 30% of the decline.

**Chart 2**  
**Investment per worker, 2006 to 2021**

index (2006=100)



**Source:** Statistics Canada, National Accounts Longitudinal Microdata File database, special tabulations.

Gu and Willox (2023) extend the link between competition and productivity growth. The authors show that higher levels of market power in the information and cultural services industry in Canada, an industry group that includes telecommunications, have contributed significantly to the productivity gap between Canada and the United States, noting that “eliminating market power associated with limited competitive intensity has the potential to increase investment, technical progress and innovation.”

Other studies have also stressed the productivity-enhancing effects of capital investment as a way of addressing declines in Canada's GDP per capita. BMO Economics (2024) notes the extended declines in private investment in machinery and equipment (M&E) following the onset of lower commodity prices in 2014 and 2015, reporting that real spending on M&E currently remains below levels in 2008. Since investment levels pulled back in the mid-2010s, GDP per capita growth has averaged 0.1% per year. Porter (2024) further notes that real estate has been increasingly attractive to investors since the mid-2000s, further detracting from M&E outlays, which, in nominal terms, are currently around two-fifths of the level of real estate investment. As rapid population expansion continues to impact housing affordability and supply (Bank of Canada, 2023), the current focus on residential investment can be expected to weigh on M&E outlays in the near term.

While capital outlays are important for economic growth, the pace of population growth warrants particular emphasis in the current context, especially when comparing current trends in GDP per capita with Canada's past experience. The pace of population growth from 1991 to 2001, when GDP per capita was above its long-term trend, averaged 1.0%, about one-third of its current pace.

## Some open questions on the productivity puzzle

Based on long-run projections from 2021 to 2060, the Organisation for Economic Co-operation and Development predicts Canada will have the lowest growth in GDP per capita of all member countries (Guillemette & Turner, 2021). Attracting higher levels of capital investment to spur productivity growth and lowering market-related barriers that limit innovation and competition may help bolster output growth and partly offset potential declines in relative living standards.

There are many open questions about the types of business investment that will lead to sustained improvements in productivity. Traditional sources of capital investment are shifting. From 2006 to 2021, the share of intangible assets such as software and data as a portion of total fixed assets on firms' balance sheets rose from 8% to 17% (Gu, 2024). These intangible assets may prove to be important sources of productivity growth in the near term. Industries that relied heavily on digital technologies were much more resilient during the pandemic, with higher digital intensity in finance and wholesale trade industries contributing to productivity gains during the recovery period (Statistics Canada, 2022). The widespread adoption of digital services, accelerated by the pandemic, may bring about large-scale improvements in productivity similar to those that arose from the adoption of information and communication technologies in the 1990s. The ability of Canadian companies to harness the benefits of new competitive technologies related to artificial intelligence, robotics and digitalization will be critical to the link between investment and productivity in the coming years and potentially important contributors to changes in living standards.

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