

Work Smarter, Not Harder: Why productivity should be a priority for British Columbian and Canadian governments

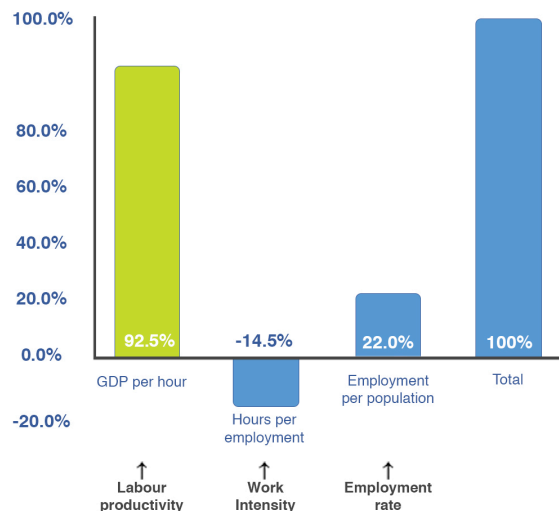
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Tight labour market conditions that prevailed before the pandemic have returned and are creating new challenges for governments seeking to measure economic progress. Last year, more than 160,000 jobs were created in British Columbia and the province currently has the lowest unemployment rate in the nation. The B.C. Labour Market Outlook also forecasts that over one million new jobs will be created by the year 2031.¹ Yet, these positive numbers mask an uncomfortable reality: an aging population is putting increasing pressure on employers to replace retiring workers. The Labour Market Outlook projects that even after accounting for reduced unemployment, young people entering the workforce, new immigrants and in-migrants from other provinces, B.C. is facing a supply gap of 83,000 workers over the next 10 years. If these jobs aren't filled or replaced, the province's Gross Domestic Product (GDP) by 2031 will be 2.6% lower than if they had been filled.²

So, where do we find these workers? Perhaps the better question is how can we make our existing workers more productive? Labour productivity, which is a measure of economic output (or GDP) per hour worked, has long been an indicator of economic growth. It is also the major contributing factor to GDP per capita, a proxy for standard of living: a rising GDP per capita indicates a strong tax base and improved living standards for the population. According to a recent Statistics Canada study, 92.5% of GDP per capita growth in Canada over the period from 1981 to 2019 was attributable to hourly labour productivity growth.³

Source of GDP per capita growth, 1981-2019, Canada



Labour productivity growth is strongly correlated with wage growth. One might assume that productivity improvements – like robots and automation – will displace workers and lower wages, but research shows the opposite is true. A recent study by the B.C. Business Council in the journal *International Productivity Monitor* showed that pay growth and labour productivity growth have been broadly aligned since 1961 at around 1.5% to 1.7% per annum.⁴ Indeed, wages tend to increase with productivity growth because over time the amount businesses are willing to pay workers will depend on the value of those workers' output. Increases in wages due to a shortage of labour tends to increase the need for productivity improvements to produce more output given higher labour costs. Whereas automation and artificial intelligence were once seen as a threat to workers, they are correctly being reframed as empowering to workers, because they enable workers to produce more output per hour worked, thus supporting wage growth.

Productivity growth also helps mitigate inflation. In a February 9, 2022 speech, the Governor of the Bank of Canada forecasted strong economic growth over the next couple of years but warned that with a tight labour market, we will need more productivity growth to keep inflation in check: *“Productivity growth is vital to non-inflationary growth and rising standards of living. At a time when inflation is already well above our target, this is more vital than ever.”*

Unfortunately, Canada is failing when it comes to productivity gains. The Organization for Economic Co-operation and Development (OECD) places Canada last among advanced economies in GDP per capita growth between 2020 and 2030 at 0.7% per annum.⁵ The Canadian government acknowledged the issue in its 2022 budget, noting *“Canada is falling behind when it comes to economic productivity.... This is a well-known Canadian problem—and an insidious one. It is time for Canada to tackle it.”*⁶

In British Columbia, our business sector will need to increase labour productivity growth to sustain historical GDP growth. Deetken Insight used Statistics Canada data to examine productivity growth for 96 industries in B.C.’s business sector between 1997 and 2019. This included 62 services-producing industries and 34 goods-producing industries.⁷ These 96 business sectors in B.C. achieved 2.7% annual growth in real GDP between 1997 and 2019.⁸ Of this 2.7% GDP growth, 1.4% was due to growth in labour productivity and 1.3% was due to hours worked annual growth.⁹

Over this period, the number of jobs in these industries grew at an annual rate of 1.5%. Jobs grew faster than hours because of a decline in average hours worked per job from 34.2 to 32.4 hours per week. A similar steady decline in “work intensity” – the number of hours worked per employed person – is observed in a recent study by Statistics Canada, which noted work intensity in Canada dipped considerably in 2020 because of the pandemic and recovered somewhat in 2021 but remained below pre-pandemic levels.¹⁰ Meanwhile, according to the B.C. Labour Market Outlook, the annual growth rate in employment from 2022 to 2031 is expected to be 1.2% for a corresponding set of industries, compared to 1.5% annual growth from 1997 to 2019.

Given B.C.’s expected lower employment growth rate and a continued downward trend in work intensity, the province’s business sector would need to achieve annual labour productivity growth of 1.7% to sustain its historical annual GDP growth rate of 2.7%¹¹, compared to its 1.4% historical annual productivity growth. This represents a substantial productivity gap: **B.C. will need to increase its productivity performance by 25% to maintain historical GDP growth rates.** In other words, over the 2022 to 2031 period, **B.C. will need to find an additional \$7 billion in productivity improvements over and above the \$26 billion that can be expected based on its historical productivity growth performance.**

B.C.’s shift to services-producing industries and away from goods-producing will create further challenges with respect to increasing our overall productivity. Labour productivity growth in goods industries has historically been higher than in services industries. Between 1997 and 2019, annual productivity growth across 34 goods-producing industries in B.C. was 1.6% compared to 1.3% for 62 services-producing industries during the same period. However, most economic growth going forward in B.C. will be in services: 69% of GDP growth, 84% of hours growth and 88% of job growth between 1997 and 2019 was in services-producing

industries. Based on the B.C. Labour Market Forecast and a comparable set of industries, 94% of job growth from 2022 to 2031 is expected to be in services-producing industries.¹²

This concentration in services-producing industries is common among advanced economies for two key reasons: (1) with rising incomes, an increasing portion is spent on services; and (2) productivity gains are more achievable with some types of goods-producing industries, which reduces their overall employment share.

There are numerous reasons why labour productivity generally tends to be lower in services-producing industries, including difficulty in achieving economies of scale and automating certain tasks. This will create greater challenges to B.C. going forward as the province continues its shift to a service-focused economy.

As B.C. and Canadian governments look to tackle their productivity problems, they should focus on several key areas:

1. What lessons can be learned from highly productive sectors that can apply to other sectors? Labour productivity varies across individual industries. In the goods-producing sector, the *wood products manufacturing industry* in B.C. achieved a 4.1% productivity growth rate between 1997 and 2019 whereas the *non-metallic mineral product manufacturing industry* experienced a 0.3% productivity growth rate during the same period. In the services-producing industries, the *truck transportation* sector had a 2.7% productivity growth rate between 1997 and 2019 compared to a 1.4% decline in the water transportation sector. What can highly productive sectors teach us about improving growth in less productive sectors?

2. What can industries that have experienced high hours growth do to focus more on productivity growth? Industries have generally achieved growth by either adding to workers' hours or increasing worker productivity, but not both. However, there are some exceptions. For example, the computer systems design and related services industry experienced annual hours growth of 5.7% per year between 1997 and 2019 and productivity growth of 2.2% per year and accounted for 4% of total GDP growth in B.C. during that period.

Industries that have experienced high hours growth and low productivity growth accounted for 44% of GDP growth between 1997 and 2019. How can these industries continue to grow their contribution to the B.C. economy but adjust their growth approach to focus more on productivity?

And what can we learn from those relatively few sectors that enjoyed both jobs and labour productivity growth?

Annual productivity growth of 62 service sectors and 34 goods sectors in BC 1997-2019



Interpretation: 25th to 75th percentiles are represented by the blue boxes. Bottom and top values in the sticks are the minimums and maximums, respectively. The values inside the box are the medians.

3. What can B.C. learn from other provinces to improve labour productivity in the same sectors? The *non-residential construction* and *engineering construction industries* together accounted for 5% of GDP in B.C. in 2019 and 6% of GDP growth between 1997 and 2019 among all business sectors we examined. Yet, their productivity growth rates between 1997 and 2019 were 0.2% and -0.1%, respectively. In comparison, Alberta's *non-residential construction* industry achieved annual labour productivity growth of 1.2% between 1997 and 2019, while Manitoba's *engineering construction* industry experienced annual labour productivity growth of 1.1% during the same period. What can B.C. learn from other provinces about improving labour productivity across sectors?

4. How can digital services help drive productivity gains? Labour productivity in the 96 business sectors in B.C. we studied increased 10.2% year-over-year between 2019 and 2020, despite the onset of the pandemic during this time.¹³ This was largely due to a reduction in hours worked among lower skilled workers while capital investments remained steady. However, adoption of digital services also likely played a role. A 2021 Statistics Canada study found that the digitally intensive sector, comprised of industries that rely heavily on information and communications technology or have large digital workforces and/or robots, experienced a much smaller negative impact from the COVID-19 pandemic than the non-digitally intensive sector.¹⁴ The study also found that labour productivity grew 22.1% between 2002 and 2019 in the digitally intensive sector, more than three times higher than that in the non-digitally intensive sector.¹⁵ Independent modeling by Deetken estimates that next generation mobile networks and the digital applications they will enable could account for approximately 15% to 20% of Canada's GDP growth by 2036.

In summary, governments should consider how they can help sectors increase their productivity, not just grow their workforce. Governments should seek to understand: What is the productivity growth recipe for each sector? What lessons can be learned from highly productive sectors that could be applied to other sectors within an industry or with other sectors? What can be learned from highly productive sectors in other jurisdictions? What lessons can we learn from the pandemic about how to apply digital services to improve productivity? And what are the key barriers to innovation?

Deetken Insight has developed perspectives on productivity for clients in both the private and public sectors. For a major telecommunications company, we developed a framework to estimate and showcase the economic growth available from productivity gains associated with 5G networks and related technologies. For a public healthcare provider, we developed a method and roadmap to increase the number of patient hours available per clinician by innovating its processes. Contact Deetken at +1 (604) 731-4424 or info@deetken.com to learn how we can help drive your organization's productivity growth.

Endnotes

¹ BRITISH COLUMBIA Labour Market Outlook. 2021. WorkBC. https://www.workbc.ca/getmedia/c43af36f-f408-4990-9ae1-c5b5f5f7be7a/BC_Labour_Market_Outlook_2021_9MB.pdf.aspx

² Ibid.

³ Government of Canada, and Weimin Wang. “The COVID-19 Pandemic and Gross Domestic Product per Capita Growth in Canada.” *Statistics Canada*, 25 May 2022, www150.statcan.gc.ca/n1/pub/36-28-0001/2022005/article/00002-eng.htm.

⁴ Williams, David. “Pay and Productivity in Canada: Growing Together, Only Slower than Ever.” *International Productivity Monitor*, no. 40, Spring 2021, csls.ca/ipm/40/IPM_40_Williams.pdf.

⁵ Guillemette, Y. and D. Turner (2021), “The long game: Fiscal outlooks to 2060 underline need for structural reform,” ; OECD Economic Policy Papers, No. 29, OECD Publishing, Paris, <https://doi.org/10.1787/a112307e-en>.

⁶ Freeland, Chrystia. *Budget 2022: Address by the Deputy Prime Minister and Minister of Finance*. <https://www.canada.ca/en/departement-finance/news/2022/04/budget-2022-address-by-the-deputy-prime-minister-and-minister-of-finance.html>.

⁷ We excluded government and non-profit industries as they are not subject to the same competitive pressures as the business sector, causing comparability challenges. We also excluded the real estate industry as real estate includes the effects of imputed rental gains from owner-occupied dwellings, which are not actual market transactions that utilize labour and have accounted for significant GDP gains in B.C., thus also causing comparability challenges.

⁸ Statistics Canada. Table: 36-10-0480-01. *Labour productivity and related measures by business sector industry and by non-commercial activity consistent with the industry accounts*.

⁹ Ibid.

¹⁰ Statistics Canada, and Weimin Wang.

¹¹ Statistics Canada. Table: 36-10-0480-01. *Labour productivity and related measures by business sector industry and by non-commercial activity consistent with the industry accounts*.

¹² Labour Market Outlook. *Employment by Industry for BC and Regions*.

<https://catalogue.data.gov.bc.ca/dataset/f9566991-eb97-49a9-a587-5f0725024985/resource/1a3be0bc-0aa9-4014-a989-c939a70e0145/download/employment-by-industry-for-bc-and-region.xlsx>.

¹³ Statistics Canada. Table: 36-10-0480-01.

¹⁴ Government of Canada, and Huju Liu. “Economic Performance Associated with Digitalization in Canada over the Past Two Decades.” *Statistics Canada*, 24 Feb. 2021, www150.statcan.gc.ca/n1/pub/36-28-0001/2021002/article/00001-eng.htm.

¹⁵ The relative sizes of the sectors are not included in the report.