

The logo for the City of Edmonton, featuring the word "Edmonton" in white text on a dark blue rectangular background.The cover features a large, abstract graphic on the left side composed of various shades of green, yellow, and blue in geometric, overlapping shapes. A dark blue vertical bar on the right contains the title and logo.

**GOVERNMENT CAPITAL  
INVESTMENT IN ALBERTA**  
AN ECONOMIC PERSPECTIVE

## SUMMARY

**Government capital investments in Alberta over the past 30 years were found to be below the 10-province average** when applying more conventional calculations that account for economic factors, and run contrary to the findings in the Blue Ribbon Panel on Alberta's Finances. The per capita calculations used by the Panel mask the fundamental factor driving a government's ability to spend—the size of its economy.

- **Public capital investments respond to the size and demands of a province's economy.** A truer comparison of government spending levels is made when measuring spending as a percent of GDP, as it controls for an economy's size. The average level of public capital investments in Alberta as a percent of GDP from 1990 to 2019 (2.6%) was below the 10-province average (3.0%).

To understand the fuller picture, it is important to place Alberta's public capital spending in context of economic factors.

- **Alberta had the highest rate of population and economic growth of all provinces from 1990 to 2019**, with population growth of 71%, against the 10-province average of 25%, and real GDP growth of 132% against the 10-province average of 85%.
- **The high growth environment placed upward pressure on the costs of providing public infrastructure.** Alberta had the highest construction labour costs of all provinces from 2001 to 2019 (28% higher).
- **Alberta is the second most urban province**, with 92% of Albertans living in census subdivisions with 5,000 or more people. Urban municipalities are typically tasked with providing a greater variety of public capital that is built to a higher service level than rural areas and smaller population centres.
- **The private sector fuelled Alberta's building boom.** Alberta had the highest rate of infrastructure investments of all provinces from 1990 to 2019, with a much larger share of investments originating from the business sector (89%) than the 10-province average (80%). Conversely, Alberta had the smallest share of its infrastructure investments originating from the government sector (11%), at roughly half the share as the 10-province average (20%).

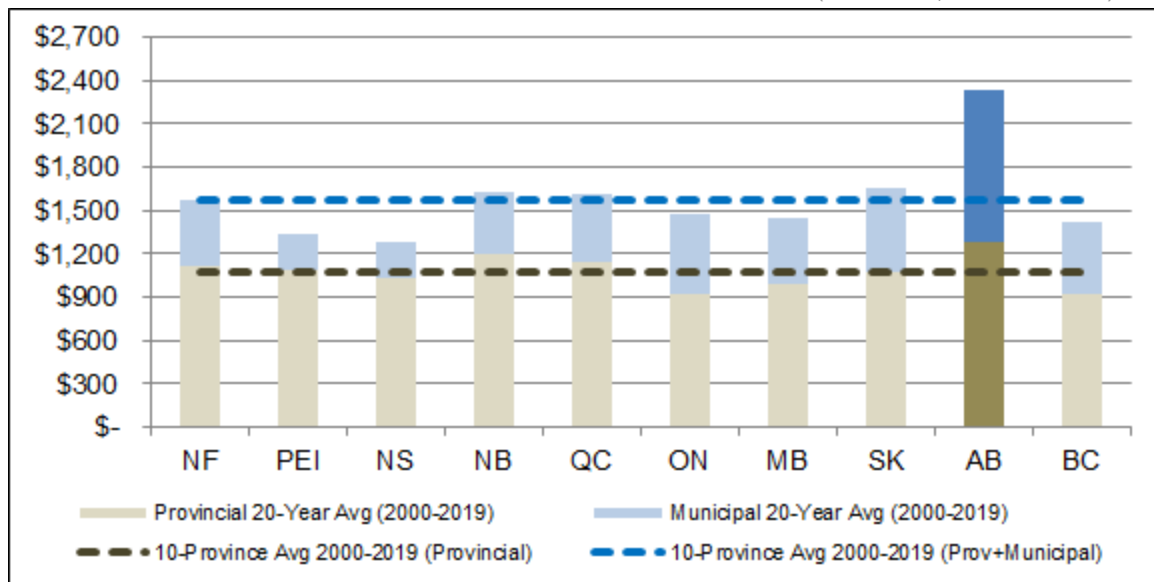
# 1. GOVERNMENT CAPITAL INVESTMENT

## MACKINNON REPORT FINDINGS

### CAPITAL INVESTMENT PER CAPITA IS TOO HIGH

The Blue Ribbon Panel on Alberta’s Finances brought attention to the fact that per-capita government capital investment levels in Alberta have been above the 10-province average over the past 20 years.<sup>1</sup> Figure 1 utilizes this per-capita methodology and indicates that Alberta’s provincial government and municipal governments have invested more capital dollars per capita over the 2000 to 2019 period than any other province.

FIGURE 1: GOVERNMENT CAPITAL INVESTMENT BY PROVINCE - 20 YEAR AVERAGE (PER CAPITA, CHAINED \$2012)



Source: Statistics Canada (Table 36-10-0096-01), Calculations from City of Edmonton

## VIEWING INFRASTRUCTURE SPENDING ANOTHER WAY

### CAPITAL INVESTMENT AS A PERCENT OF GDP HAS BEEN BELOW AVERAGE

Examining public capital investments on a per capita basis is one way to interpret spending data, though a more conventional way is to measure them as a percentage of gross domestic product (GDP). This is because the relative size of economies vary across provinces. Provinces with higher GDP have larger economies, and provinces with higher per capita GDP are more prosperous. The governments of more prosperous economies have a higher fiscal capacity and a greater ability to afford the public capital investment demands of their citizens.

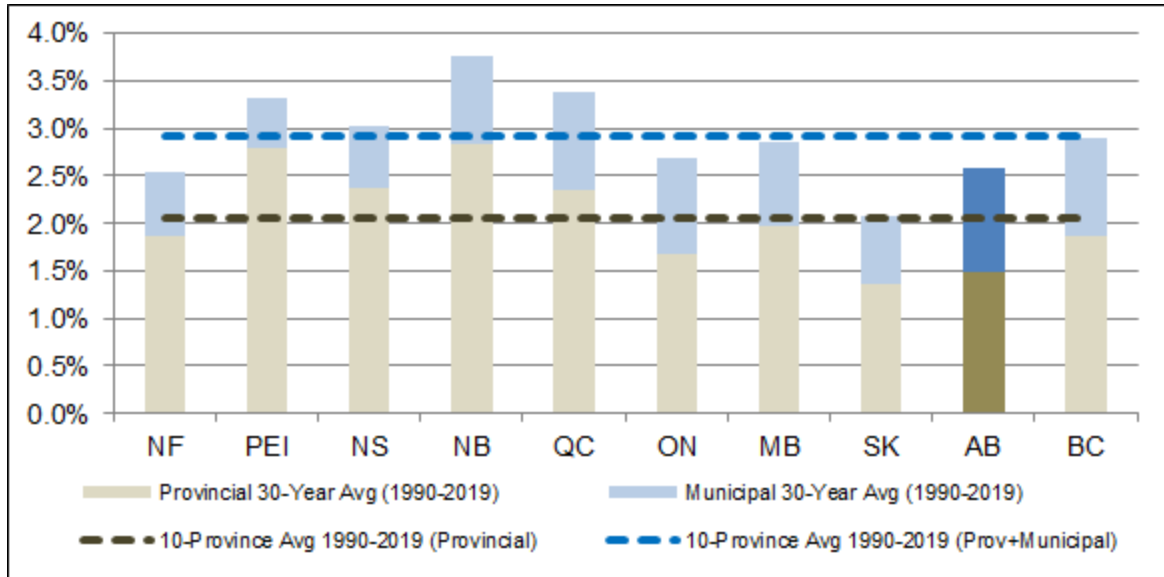
By means of example, compare a rich economy with a poor economy: on a per capita basis, the government of a rich economy will make much larger capital investments than the government of a poor economy that has limited financial means; but when scaled to GDP, the government of the poor economy has the potential to make similar rates of investment. The same concept applies when comparing capital investments across provinces, and is the reason why it is more conventional to scale government spending levels to GDP when comparing across economies. Scaling to GDP controls for an economy’s size, which is the fundamental factor driving a government’s fiscal capacity, and thus their ability to spend. A

<sup>1</sup> Report and Recommendations: Blue Ribbon Panel on Alberta’s Finances, 2019.

truer comparison of government spending levels is made when measuring spending as a percent of GDP.

Figure 2 illustrates Alberta’s provincial and municipal governments’ capital investments as a percent of GDP over the longer 30-year period were below average: Alberta’s provincial capital investments (1.5%) were significantly below average (2.1%), while Alberta’s municipal capital investments (1.1%) were above average (0.9%). The sum of Alberta’s provincial and municipal capital investments (2.6%) were below average (3.0%)

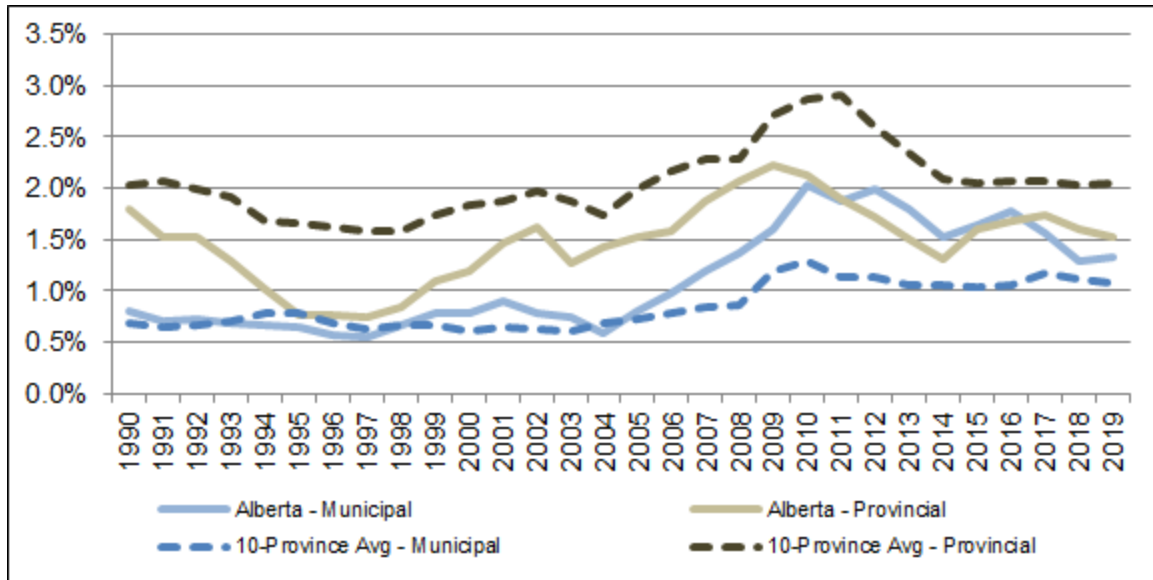
FIGURE 2: GOVERNMENT CAPITAL INVESTMENT BY PROVINCE - 30 YEAR AVERAGE (AS % OF GDP)



Source: Statistics Canada (Tables 36-10-0096-01, 36-10-0222-01), Calculations from City of Edmonton

Figure 3 breaks down capital investments as a percent of GDP for each of the years within the 1990 to 2019 period. The Alberta provincial government’s rate of capital investments remained below average for the entire 30-year period, with a sharp reduction from 1993 to 2000. Alberta municipal governments’ rate of capital investments remained near the average from 1990 to 2006, then increased above the average until 2018, at which point it converged back near the average. This period of higher than average municipal capital investments corresponds to high population and economic growth.

FIGURE 3: ALBERTA CAPITAL INVESTMENT COMPARED TO THE 10-PROVINCE AVERAGE - 1990-2019 (AS % OF GDP)

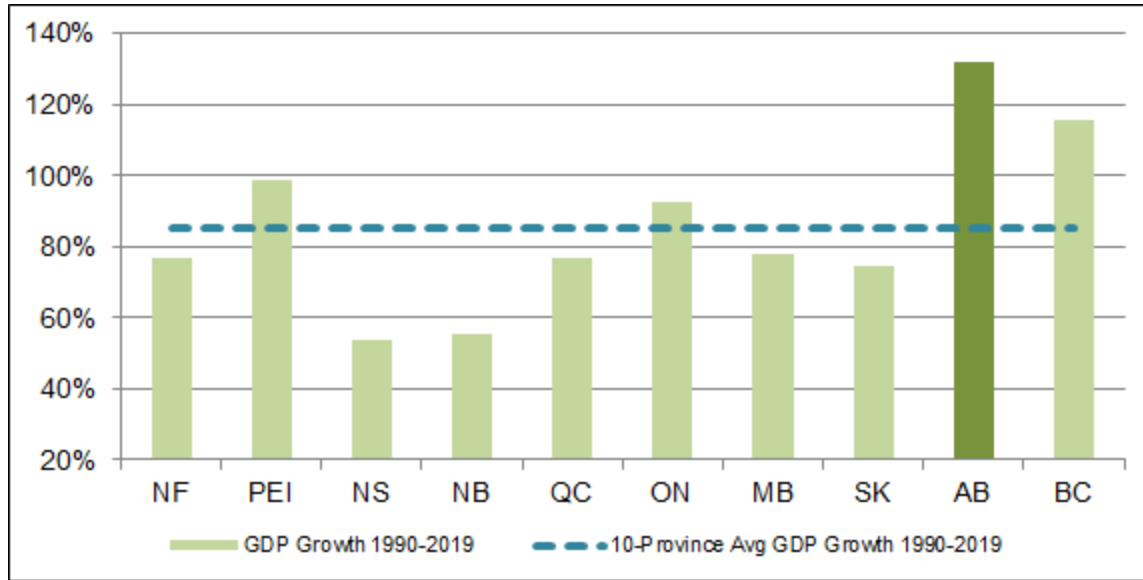


Source: Statistics Canada (Tables 36-10-0096-01, 36-10-0222-01), Calculations from City of Edmonton

### ALBERTA HAS BEEN THE FASTEST GROWING PROVINCE

Alberta’s economic growth outpaced all other provinces over the 30-year period from 1990-2019. From 1990 to 2019, Alberta’s real GDP grew by 132%, while the 10-province average had a growth rate of 85% (Figure 4). With accelerated economic growth comes growth pressures, including demands on governments to invest in public capital to both accommodate economic growth and facilitate more growth.

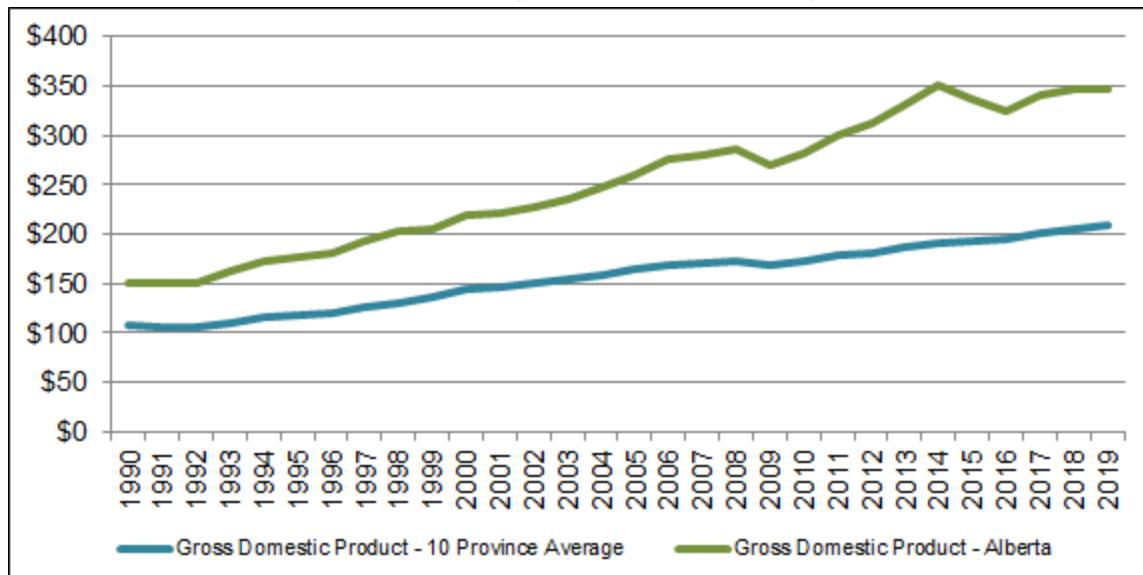
FIGURE 4: REAL GROSS DOMESTIC PRODUCT GROWTH BY PROVINCE FROM 1990-2019



Source: Statistics Canada (Table 36-10-0222-01), Calculations from City of Edmonton

Figure 5 illustrates the real growth trend of Alberta’s GDP compared to the 10-province average over the 30-year period from 1990-2019. Alberta’s growth rate remained higher than average for most of this period, as is shown by the Alberta trendline diverging from the 10-province average. Alberta’s economy also experienced a sharper contraction in 2009, followed by a second contraction in 2015-16.

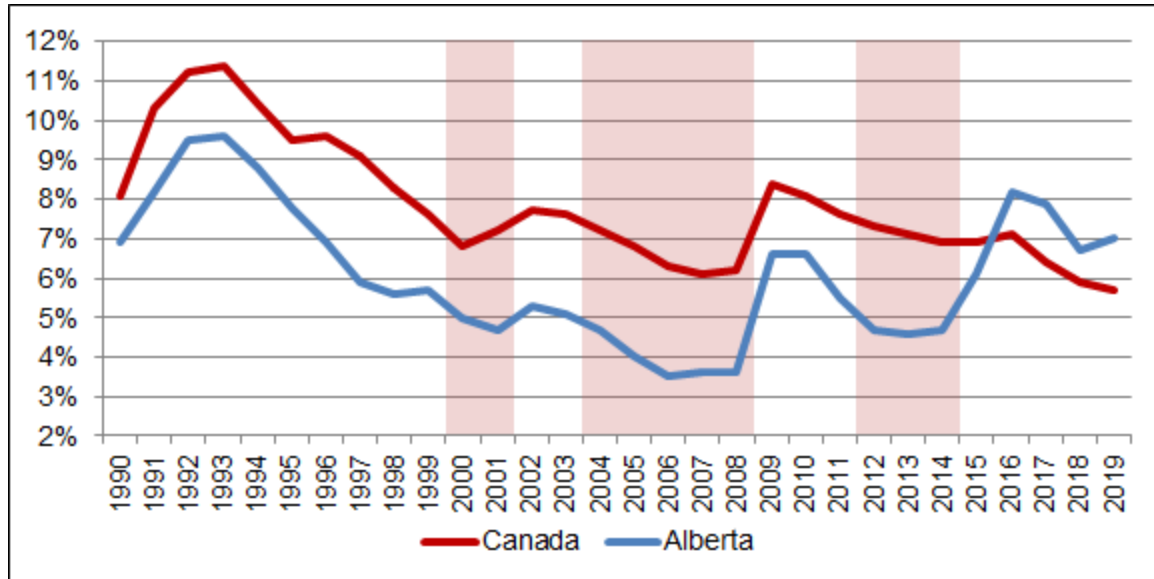
FIGURE 5: GROSS DOMESTIC PRODUCT 1990-2019 (IN BILLIONS, CHAINED \$2012)



Source: Statistics Canada (Table 36-10-0222-01), Calculations from City of Edmonton

The accelerated economic growth in Alberta resulted in very low unemployment rates over multiple years, producing tight labour market conditions (as shown by the highlighted years in Figure 6). Alberta’s natural rate of unemployment is generally assumed to be around 5%. An unemployment rate below this level indicates more competition for workers and more upward pressure on labour costs.

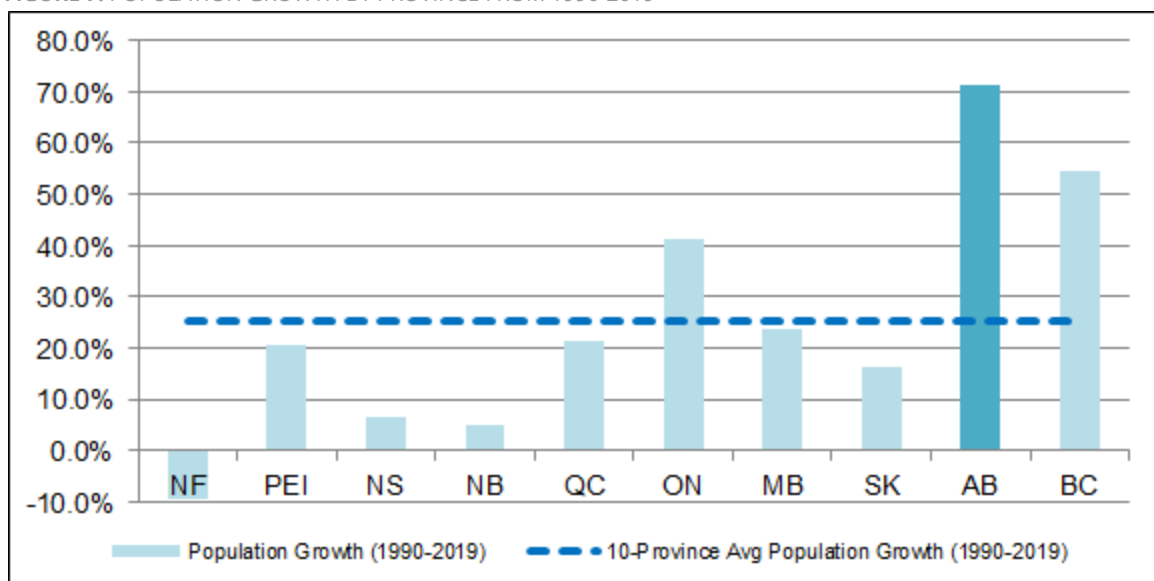
FIGURE 6: UNEMPLOYMENT RATE FROM 1990-2019



Source: Statistics Canada (Table 14-10-0023-01), Calculations from City of Edmonton

The low unemployment rates also increased provincial in-migration flows, contributing to higher population growth in Alberta than other provinces. Over the 30-year period from 1990 to 2019, Alberta saw its population grow by 71%, while the average growth rate across all 10 provinces was 25%—Alberta’s growth rate was 2.8 times the average provincial growth rate in Canada (Figure 7). Alberta thus had to provide greater amounts of infrastructure to support its rapidly growing population, while infrastructure costs faced upward pressure under tight labour market conditions, resulting in higher per-capita government capital investment levels.

FIGURE 7: POPULATION GROWTH BY PROVINCE FROM 1990-2019

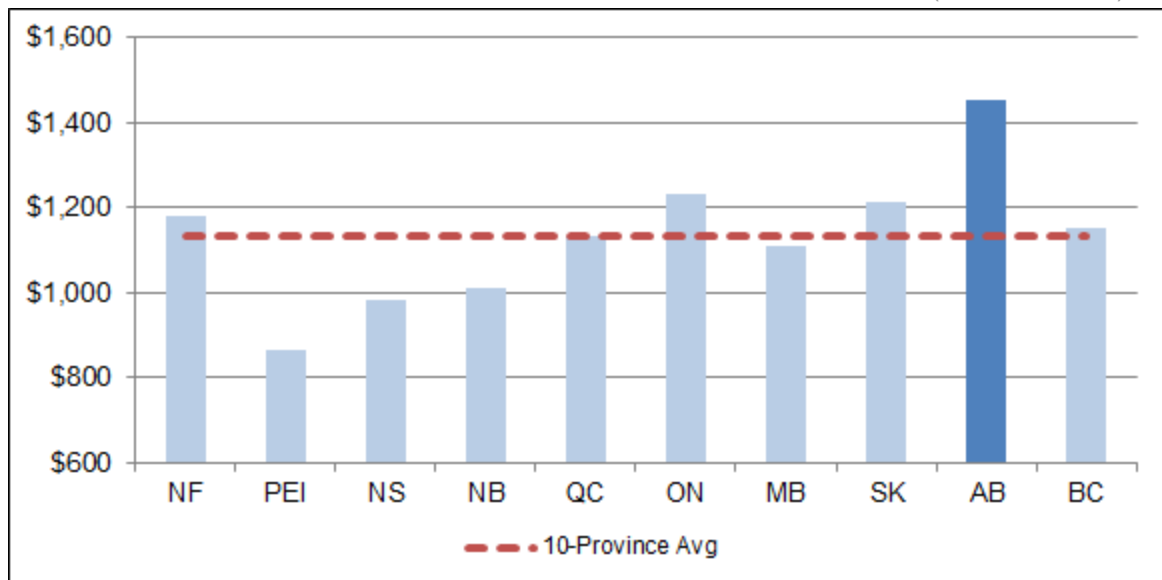


Source: Statistics Canada (Table 17-10-0005-01), Calculations from City of Edmonton

## CONSTRUCTION LABOUR AND MATERIALS COST MORE IN ALBERTA

Figure 8 indicates that construction sector labour costs have been greater in Alberta than all other provinces.<sup>2</sup> Average weekly earnings in the construction sector were 28% higher in Alberta (\$1,451) than the 10-province average (\$1,133) from 2001-2019. Alberta's high rate of economic growth for much of this period created a tight labour market, driving labour costs up. This resulted in reduced purchasing power for government capital investments in Alberta, with higher capital construction costs than other provinces.

**FIGURE 8: AVERAGE WEEKLY EARNINGS IN THE CONSTRUCTION SECTOR 2001-2019 AVERAGE (CONSTANT \$2020)<sup>3</sup>**



Source: Statistics Canada (Tables 14-10-0204-01, 18-10-0005-01), Calculations from City of Edmonton

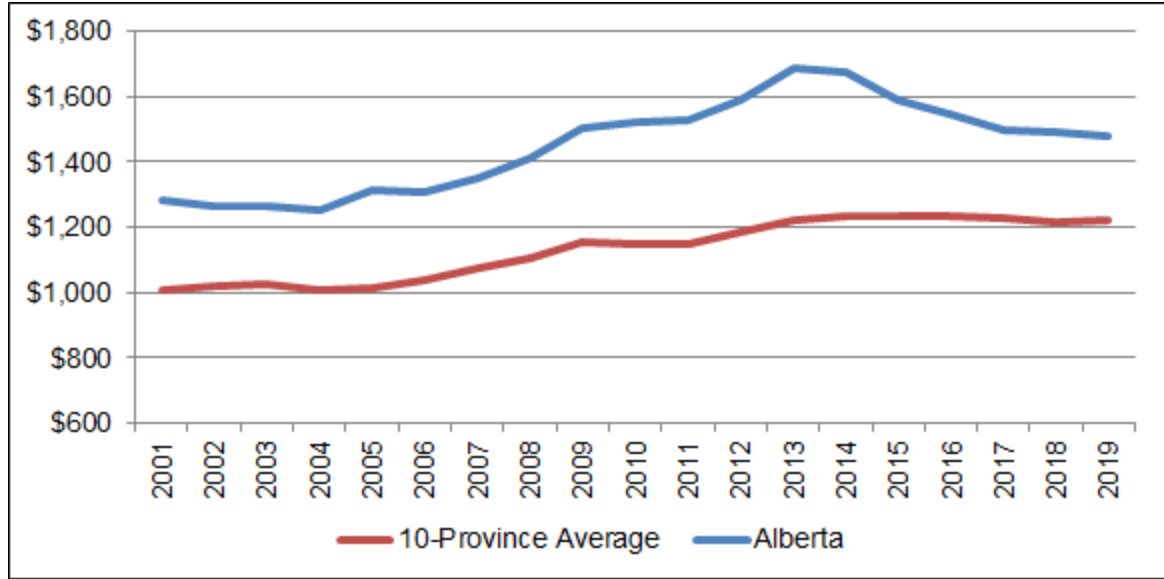
<sup>2</sup> Because construction building activities throughout Canada are largely market-based, labour earnings are used as a proxy for the market price of construction labour.

<sup>3</sup> Including overtime.



Figure 9 illustrates how construction labour costs in Alberta have been above average for each year of the 2001 to 2019 period. Construction labour costs in Alberta peaked in 2013, where it was 38% higher than the 10-province average. Since the 2015-16 economic contraction in Alberta from collapsed oil prices, construction labour earnings have been easing in the province, gradually moving toward the 10-province average.

FIGURE 9: AVERAGE WEEKLY EARNINGS IN THE CONSTRUCTION SECTOR (CONSTANT \$2020)<sup>4</sup>

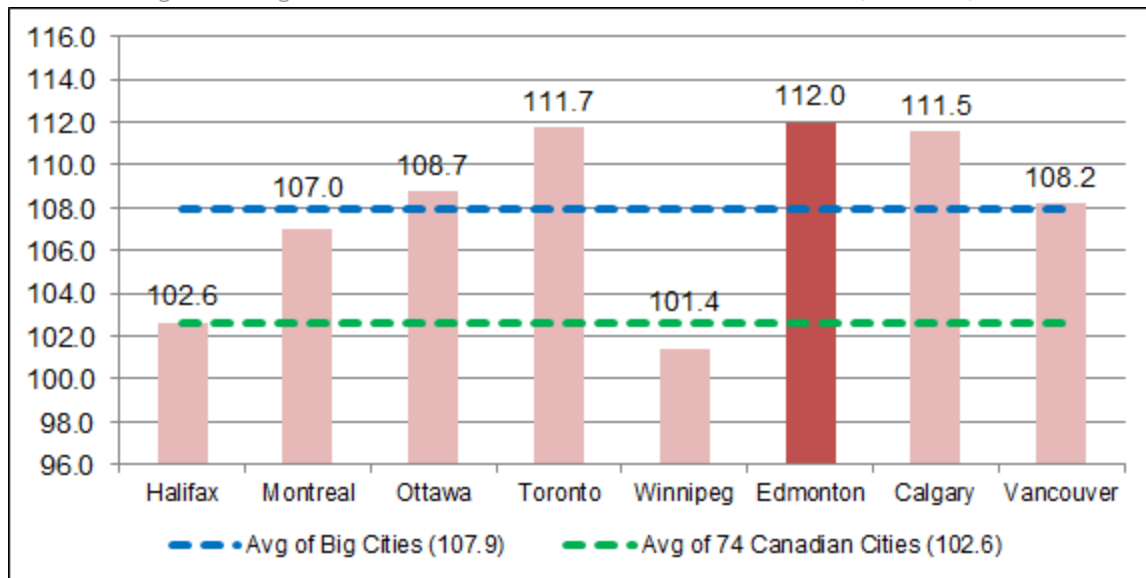


Source: Statistics Canada (Tables 14-10-0204-01, 18-10-0005-01), Calculations from City of Edmonton

<sup>4</sup> Including overtime.

At the city level, construction costs have been highest in Edmonton compared to other Canadian cities. Figure 10 shows the 15-year average of the weighted average index of construction material and installation costs from 2007 to 2021.<sup>5</sup> Construction material and installation costs were highest in Edmonton (112.0), followed closely by Toronto (111.7) and Calgary (111.5). Construction costs in Edmonton were on average 4% higher than the Canadian big city average, and 9% higher than the 74-Canadian-city average from 2007 to 2021.

FIGURE 10: Weighted Average Cost Indexes For Construction Material and Installation (2007-2021)<sup>6,7</sup>



Source: RSMean's City Cost Indexes (CCI) 2007-2021

<sup>5</sup> Construction material and installation costs include material, labour, and equipment.

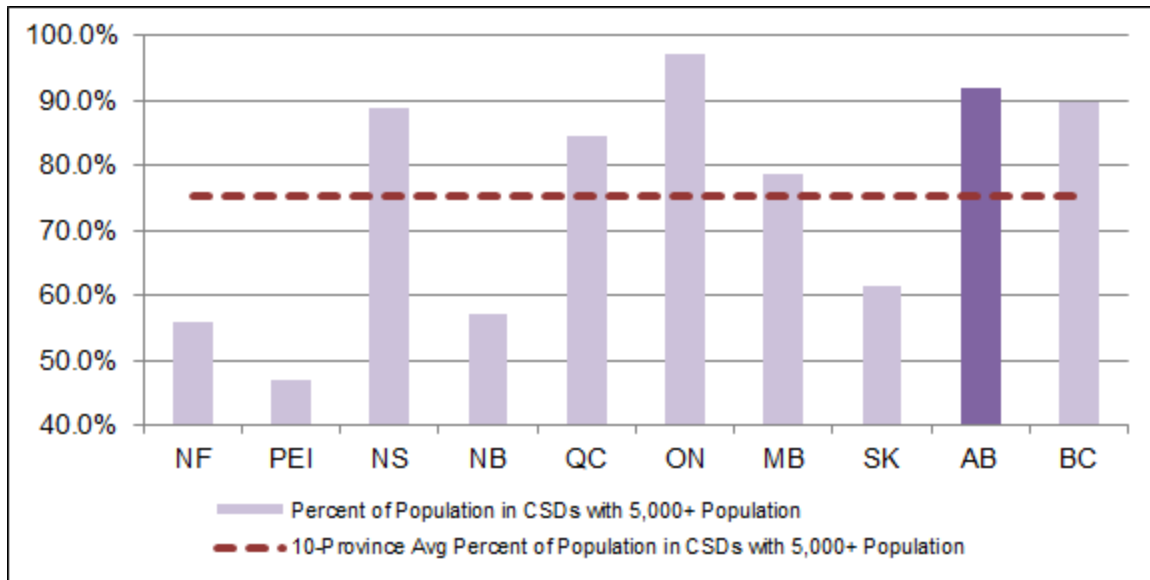
<sup>6</sup> Construction costs are broken down into 19 categories: cast-in place concrete; ceilings and acoustical treatment; concrete; concrete forming and accessories; concrete reinforcing; contractor equipment; covers; electrical, communications and utilities; finishes; fire suppression, plumbing, HVAC; flooring; masonry; metals; openings; plaster and gypsum board; site and infrastructure, demolition; thermal and moisture protection; wall finishes and painting/coating; wood, plastics and composites.

<sup>7</sup> The cost indexes do not include managerial efficiency, competitive conditions, automation, restrictive union practices, local requirements, or regional variations for building codes.

### ALBERTA IS MORE URBAN THAN MOST PROVINCES

Another factor for why above-average per capita municipal capital investments were made in Alberta is that a much higher portion of its population lives in urban places. In 2019, Alberta had 92% of its population living in census subdivisions with 5,000 or more people, second only to Ontario (Figure 11). Alberta’s share of urban population was significantly higher than the 10-province average (75%). Urban municipalities are typically tasked with providing a greater variety of infrastructure built to a higher service level than rural areas and smaller population centres. Urban municipalities often provide arterial roadways, freeways, interchanges, controlled intersections, transit services, spectator sporting facilities, large recreation centres, and public realm improvements, to name a few examples, whereas rural areas and smaller population centres tend not to provide these types of infrastructure.

FIGURE 11: PERCENT OF PROVINCIAL POPULATION IN CENSUS SUBDIVISIONS WITH 5,000+ POPULATION (2019)



Source: Statistics Canada (Table 17-10-0142-01), Calculations from City of Edmonton

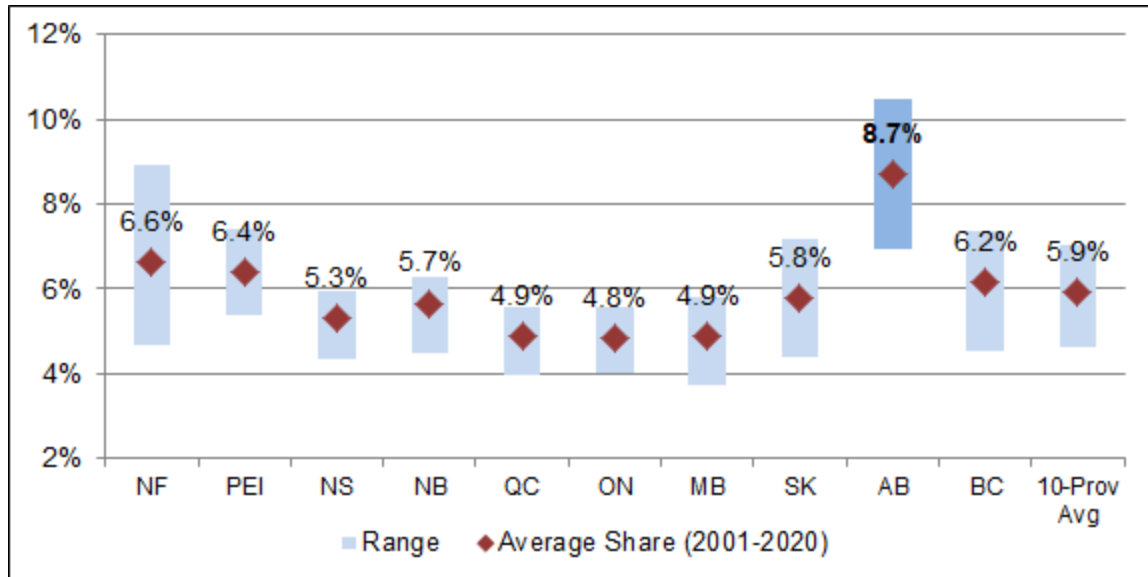
## 2. CONSTRUCTION BUILDING SECTOR

### EMPLOYMENT SHARE

#### ALBERTA'S CONSTRUCTION INDUSTRY HAD THE HIGHEST EMPLOYMENT SHARE

Alberta's construction building sector has been the largest in Canada with respect to relative employment share. Figure 12 shows employment in the construction sector as a share of total employment. From 2001 to 2020, Alberta had a higher employment share in the construction sector (8.7%) compared to the 10-province average (5.9%).

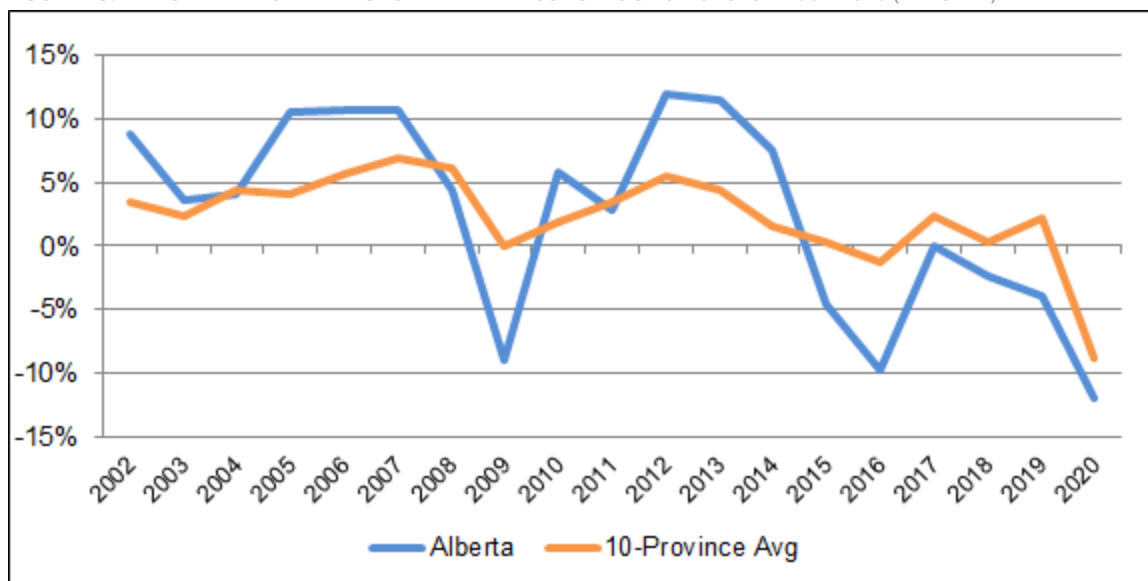
FIGURE 12: EMPLOYMENT IN THE CONSTRUCTION SECTOR AS A SHARE OF TOTAL EMPLOYMENT (2001-2020)



Source: Statistics Canada (Table 14-10-0202-01), Calculations from City of Edmonton

Figure 13 shows annual employment growth in Alberta's construction sector compared to the 10-province average. Alberta's construction sector experienced higher growth rates and sharper declines, largely owing to economic swings brought on by resource commodity price volatility.

FIGURE 13: ANNUAL EMPLOYMENT GROWTH IN THE CONSTRUCTION SECTOR 2001-2020 (PERCENT)



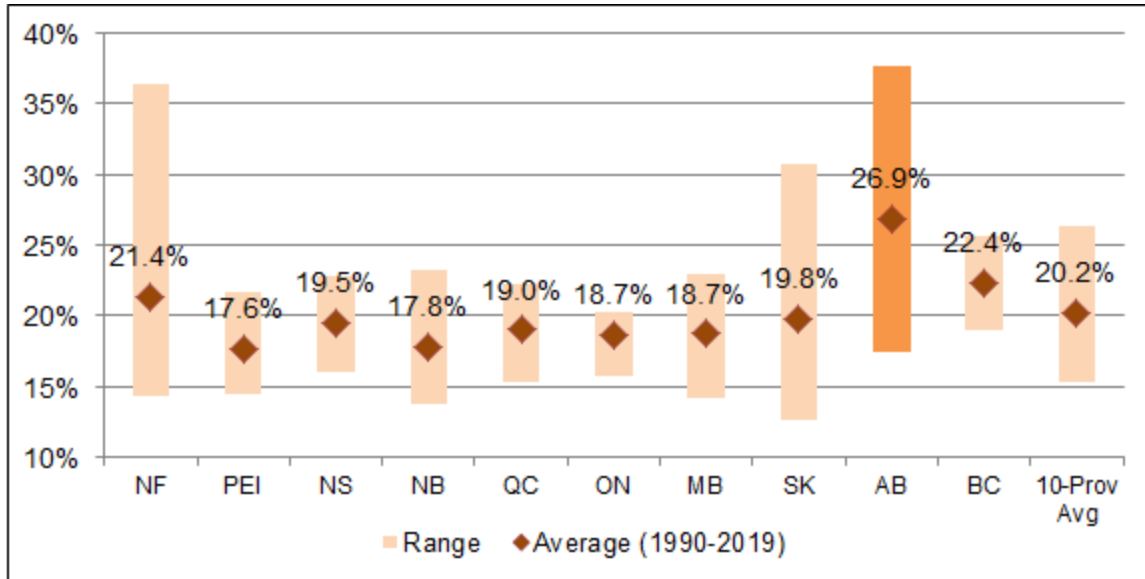
Source: Statistics Canada (Table 14-10-0202-01), Calculations from City of Edmonton

## INFRASTRUCTURE INVESTMENT

### ALBERTA HAD THE HIGHEST RATE OF PRIVATE-SECTOR CAPITAL INVESTMENT

Figure 14 illustrates the 30-year average of gross fixed capital formation as a percent of GDP for all 10 provinces, from 1990 to 2019. Gross fixed capital formation measures the acquisition of fixed capital assets, essentially measuring investments in infrastructure. Over this 30-year period, Alberta’s fixed capital investment (26.9%) was 33% higher than the 10-province average (20.2%).

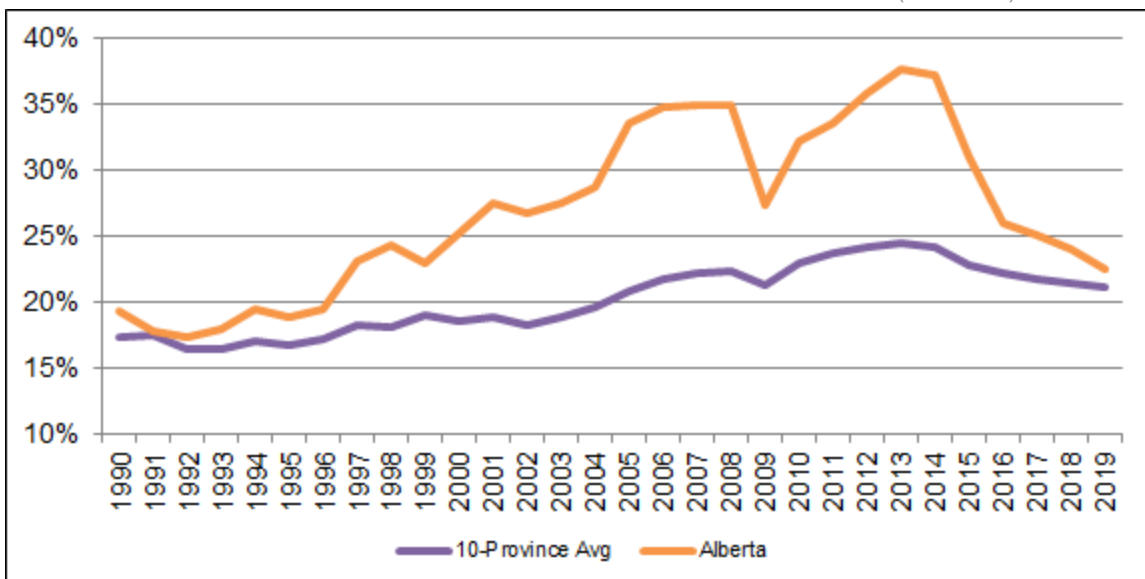
FIGURE 14: GROSS FIXED CAPITAL FORMATION AS A PERCENT OF GDP - 30-YEAR AVERAGE (1990-2019)



Source: Statistics Canada (Table 36-10-0222-01), Calculations from City of Edmonton

Figure 15 presents the same data on an annual basis. Alberta’s rate of fixed capital investment had significantly outperformed the average of other provinces from 1997 to 2015, largely owing to accelerated growth in the province’s energy sector. However, since the collapse of oil prices, Alberta’s rate has converged back to the 10-province average.

FIGURE 15: GROSS FIXED CAPITAL FORMATION AS A PERCENT OF GDP - 30-YEAR AVERAGE (1990-2019)

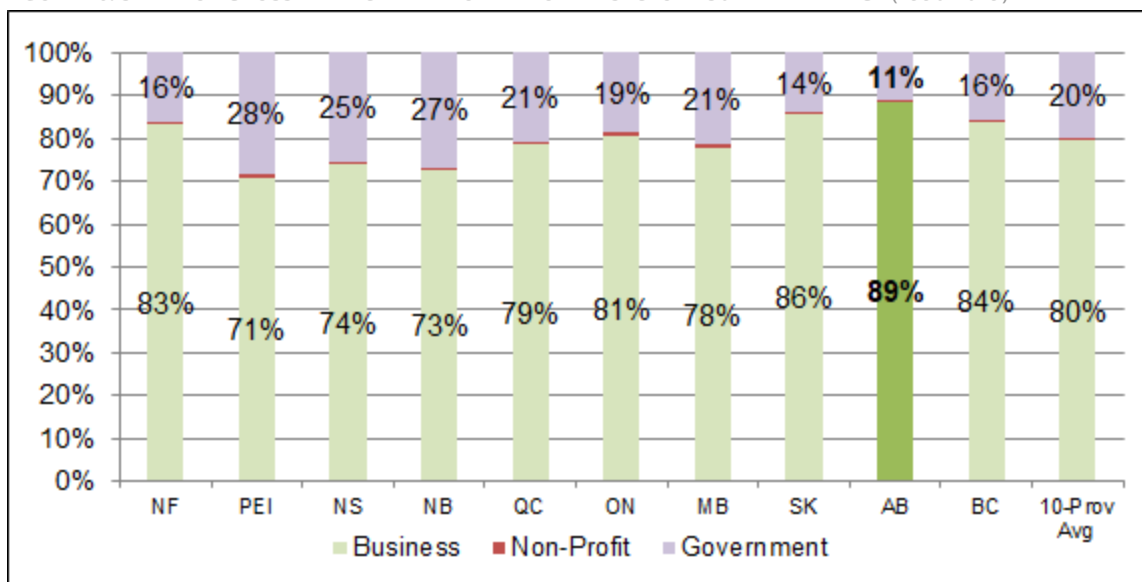


Source: Statistics Canada (Table 36-10-0222-01), Calculations from City of Edmonton

Figure 16 illustrates the share of fixed capital investments in each province from 1990 to 2019 by sector. Alberta had the largest share of its investments come from the business sector (89%), significantly higher than the 10-province average (80%). Conversely, Alberta had the smallest share of its fixed capital investments coming from the government sector (11%), at roughly half the share as the 10-province average (20%).

These data suggest that the high share of construction sector employment in Alberta was a byproduct of high private-sector fixed capital investment. With a high relative rate of business investment in fixed capital, it is expected that the construction sector would see high relative employment given that a significant portion of fixed capital formation requires construction. The data does not suggest that government capital investments were the driving force behind Alberta's high construction sector employment share.

FIGURE 16: SHARE OF GROSS FIXED CAPITAL FORMATION BY SECTOR - 30-YEAR AVERAGE (1990-2019)



Source: Statistics Canada (Table 36-10-0222-01), Calculations from City of Edmonton