

Analysis of Changes in Median Employment Income in Canada's Census Metropolitan Areas, 2008–2019

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SUMMARY

- This bulletin compares Canada's 41 Census Metropolitan Areas (CMAs) in terms of growth in median employment income from 2008-2019.
- From 2008-19, median employment income growth across the 41 CMAs averaged 5.4 per cent.
- Many of the worst growth performers for this indicator were found in Ontario. Of the 6 CMAs that saw a decline in median employment income, 5 are in Ontario. The 6th is Calgary.
- An examination of the time-series shows that Ontario's poor results are due to a severe shock during the 2008/09 recession and then a tepid recovery in subsequent years.
- The performance of the CMAs in resource-intensive regions and particularly those with large oil and gas industries is sensitive to the base year chosen.
- For example, over the 2008-19 period, median employment income growth in Alberta and Saskatchewan's CMAs are clustered towards the bottom of the pack, but the growth rate was still above zero. An analysis focused on a more recent period, starting at the time of the 2015 decline in oil prices, for instance, would show much worse results in those CMAs.

INTRODUCTION

The Fraser Institute recently conducted studies comparing various jurisdictions' median employment income, including analyses between provinces (Eisen and Li, 2023) and between provinces and nearby US states (Whalen and Emes, 2022).

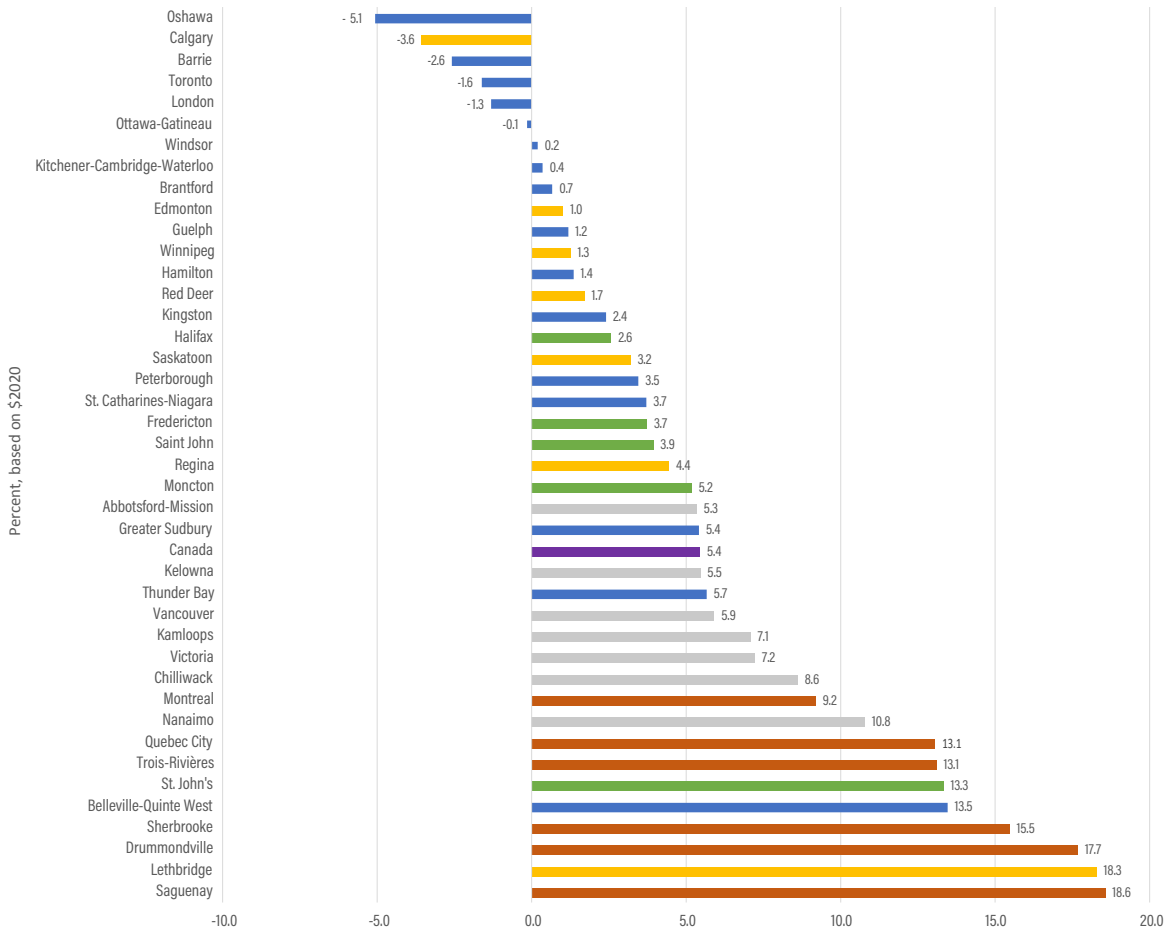
In a recently published research bulletin, the Fraser Institute compares Canada's Census Metropolitan Areas (CMAs) in terms of their median employment income in 2019. This bulletin ranks Canada's 41 CMAs by their rate of median employment income growth, using data from 2008 to 2019, the last year before the COVID-19 pandemic.

The bulletin uses 2008 as the base year for the analysis because it represents the first year for which data are available for all 41 CMAs and it was the peak of the previous business cycle. Thus, it is a useful comparator year for the endpoint year of 2019, immediately before the COVID pandemic and recession.

COMPARING CANADA'S CMAs IN TERMS OF MEDIAN EMPLOYMENT INCOME GROWTH

The bulletin focuses on median¹ employment income to compare Canada's CMAs because that measure represents all income received as wages, salaries, commissions

Figure 1: Percent change in median employment income, by Census Metropolitan Area, 2008–2019, inflation adjusted, 2020=100 (2002 base)



Sources: Statistics Canada (2022c, 2023).

¹ The median is the value in the middle of a dataset, meaning that 50 percent of data points have a value smaller than or equal to the median and 50 percent of data points have a value higher than or equal to the median (Statistics Canada, 2021: 114).

ANALYSIS OF CHANGES IN MEDIAN EMPLOYMENT INCOME IN CANADA'S CENSUS METROPOLITAN AREAS, 2008–2019

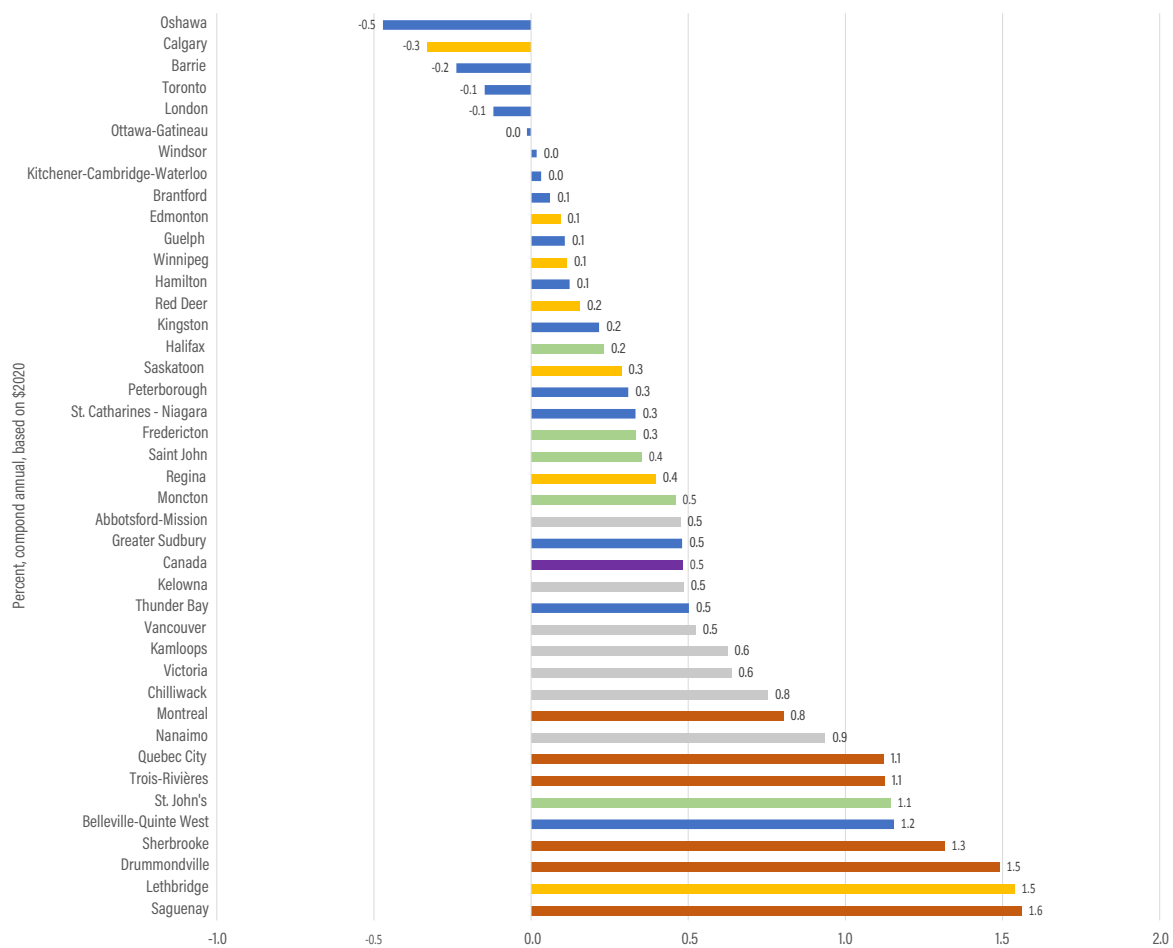
from paid employment, and net self-employment income from farm or non-farm unincorporated business and/or professional practice (Statistics Canada, 2022b). It excludes various other forms of income such as government transfers and investment and pension income to focus on what people currently earn in the labour market, stripping away the effects of bequests or previous behaviour and government policy attempts to smooth income distribution.

Figure 1 shows that, from 2008 to 2019, median employment income growth rate in Canada was 5.4 percent. The fastest growth rate occurred in the Saguenay

CMA, while six CMAs had negative employment income growth rates. One of these was Calgary, and the other five were all in Ontario, including Toronto CMA. Oshawa's CMA had the largest negative employment income change in this period, at -5.1 percent.

Figure 2 presents the same data as in Figure 1, but as the compound annualized growth rate. Across Canada, the median annual employment income growth rate over this period was 0.5 percent. The fastest growth rate was in the Saguenay at 1.6 percent annually, while the largest decline was in Oshawa, at -0.5 percent per year.

Figure 2: Annual percent change in median employment income, 2008–2019



Sources: Statistics Canada (2022c, 2023).

RESULTS ARE PARTICULARLY SENSITIVE TO START DATE IN ENERGY-INTENSIVE REGIONS

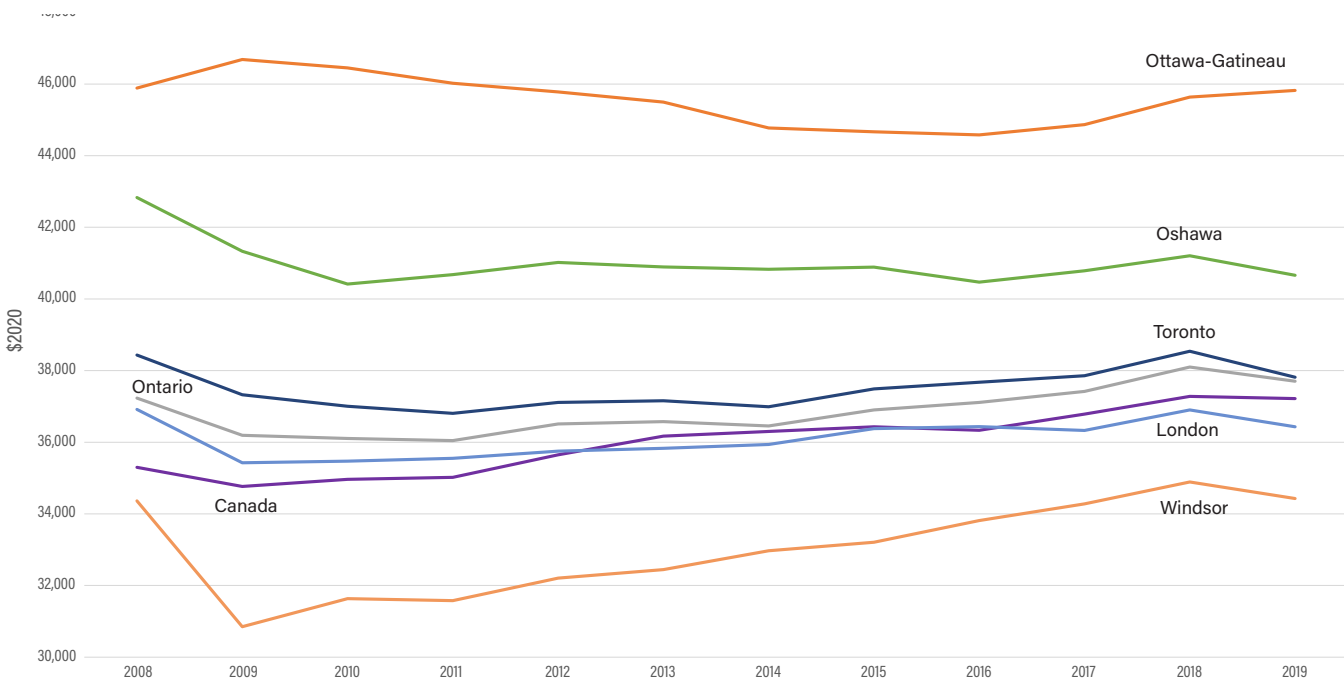
The bulletin does not present an overarching argument or narrative about the data it presents. It is essential to note, however, that the choice of the start year has a significant effect on the results of the analysis. To illustrate this, consider that Ontario's CMAs generally experienced some of the most severe economic shocks in Canada during the 2008–09 recession.

Using 2008 as the base year thus produces the results shown in Figures 1 and 2, with Ontario CMAs clustered with the lowest growth rates in Canada and, in several instances, negative growth rates. As shown in Figure 3, most Ontario CMAs experienced a significantly steeper decline in median household income from 2008 to 2009 than did Canada as a whole, and did exhibit significant “catch-up” growth following the 2008–09 shock. The exceptions were either similar to Canada's decline (Thunder Bay, Peterborough, and Belleville-Quinte West) or the

small increase in Kingston or the substantial increase in Ottawa-Gatineau. Analysis over a shorter period, however, would produce different results, with Ontario CMAs more closely aligned with developments in the rest of the country.

Additional analysis for CMAs in Alberta and Saskatchewan is also useful because economic developments in those resource-rich provinces do not often track the same business cycle as the rest of Canada. Specifically, as Figure 4 shows, median employment income fell—sharply in many instances—in all CMAs in the two provinces during the late 2010s, while there was low but positive median employment income growth in the rest of the country. Figures 1 and 2 show that major Alberta and Saskatchewan CMAs generally were near the bottom of the national rankings over the 2008–19 period, but still positive, with the exception of Calgary, where aggregate growth was negative. An analysis focused on more recent growth rates—for example, since the oil price collapse of late 2014, which might be useful for comparisons with other

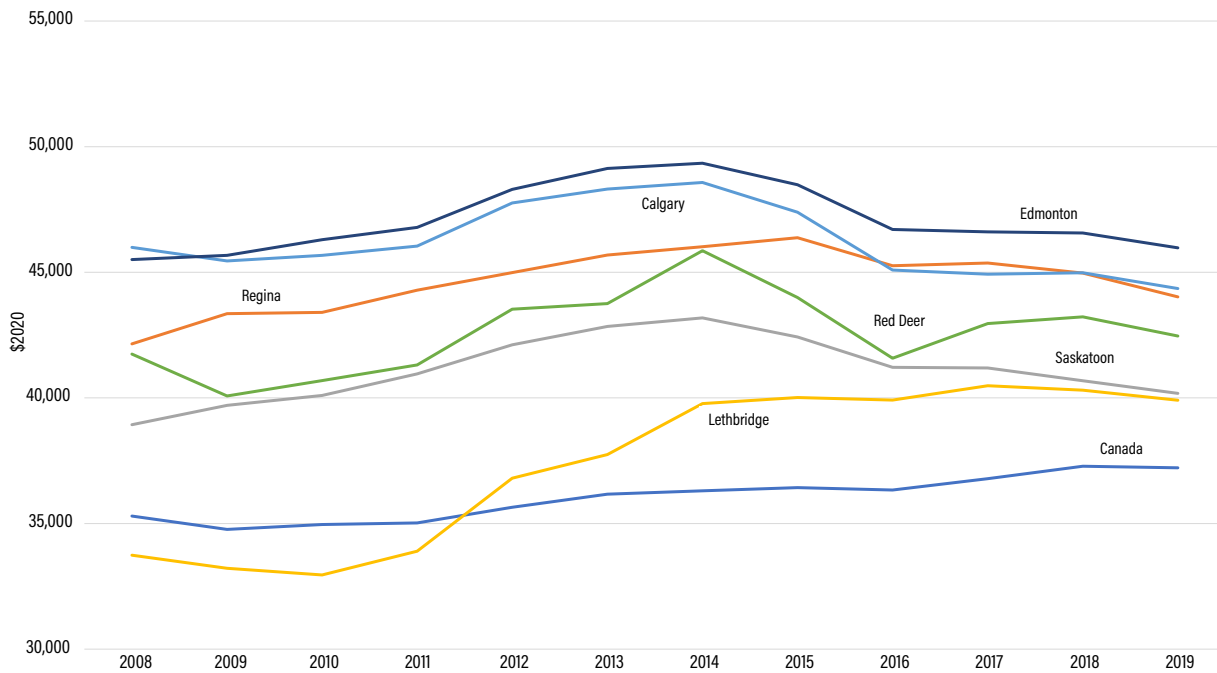
Figure 3: Median employment income, selected Census Metropolitan Areas, Ontario, 2008–2019



Sources: Statistics Canada (2022c, 2023).

ANALYSIS OF CHANGES IN MEDIAN EMPLOYMENT INCOME IN CANADA'S CENSUS METROPOLITAN AREAS, 2008–2019

Figure 4: Median employment income, selected Census Metropolitan Areas, Alberta and Saskatchewan, 2008–2019



Sources: Statistics Canada (2022c, 2023).

energy-rich jurisdictions in North America—would show much worse results still for these western CMAAs.

CONCLUSION

Past analyses from the Fraser Institute compared Canadian provinces with one another and Canadian provinces to nearby US states with respect to median employment income. Building on this analysis and comparing median employment income growth in Canada's 41 CMAAs from 2008 to 2019, we find that CMAAs in Ontario are clustered at the bottom of this ranking, with several large CMAAs in Alberta and Saskatchewan also found in the bottom half of the table.

Using data from 2008 as the starting point is helpful in that it starts the analysis at the peak of the business cycle in most of Canada prior to the global financial crisis and ends it at another peak prior to the COVID-19 pandemic. Several CMAAs in energy-rich western provinces, however, did not follow a similar business cycle trajectory as did the rest of the country, with substantial

declines in median employment income in the late 2010s that did not occur in the rest of the country.

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