

Our Incomes Are Falling Behind

Earnings in the Canadian Provinces and US States, 2010–2022

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ECONOMIC POLICY

MAIN CONCLUSIONS

- Canadians are concerned about their income and their ability to purchase essential goods and services. Real (that is, inflation-adjusted) income determines their purchasing power, and directly affects their standard of living.
- This research bulletin compares incomes in Canada's 10 provinces to those in the 50 US states. It finds that, in general, Canadian provinces are getting poorer relative to their US peers.
- Between 2010 and 2022, only one Canadian jurisdiction was in the top half of growth in earnings: British Columbia led Canadian provinces with a \$7,732 increase in earnings per person yet it ranked 19th overall for the value of the increase. Following is Prince Edward Island with a \$5,824 increase (38th) and Quebec, with a \$5,611 increase (41st). While earnings increased in Prince Edward Island, it was by a large margin the lowest-earning jurisdiction in 2010, and again in 2022.
- Seven Canadian provinces rank near the bottom of all jurisdictions for earnings growth between 2010 and 2022. Newfoundland & Labrador ranked 47th of the 60 provinces and states, with growth of \$4,850; New Brunswick followed at 52nd with \$4,399, Ontario at 56th with \$3,278, Nova Scotia at 57th with \$3,089, Manitoba at 58th with \$1,193, and Saskatchewan at 59th at \$961. Alberta was last with a decline in earnings growth of \$1,555, the only jurisdiction to experience a decline.
- Nova Scotia, New Brunswick, and Newfoundland & Labrador started the period with comparatively low levels of median earnings and also recorded comparatively low levels of growth in their median earnings over the period from 2010 to 2022.
- By 2022, all ten Canadian provinces ranked in the bottom ten positions for earnings per person. The four Atlantic Provinces remain in the bottom four positions; Manitoba (5th lowest) and Quebec (7th lowest) also had relatively low ranks. British Columbia improved from 5th lowest in 2010 to 9th lowest in 2022. Alberta remains the highest-earning Canadian jurisdiction, but as of 2022 was surpassed by all US states—in 2010, only 12 US states reported earnings higher than Alberta.

1. Introduction

Canadians are concerned about their levels of income and their ability to purchase essential goods and services. Real (that is, inflation-adjusted) income determines their purchasing power, and directly affects their standards of living. Recent studies (e.g., Whalen, Schembri, and Palacios, 2024) have compared Canadian incomes with their peers in other countries in an effort to help Canadians understand how we are faring compared with similarly situated residents in other industrialized countries, and how this has changed over time.

This study builds on that research by comparing incomes in Canada’s 10 provinces to those in the 50 US states. A comparison to US states is appropriate because of geographic proximity, the fact that the United States is Canada’s largest trading partner, and because people and capital can generally move freely across the Canada-US border. Measuring sub-national differences in incomes in these two countries is important so that Canadians can better understand their relative financial position as well as the policies that would help improve their relative incomes in their respective jurisdictions.

The study proceeds as follows. In the first part, we present data on earnings per capita in 2010 (the earliest year of available comparable data) in order to get a sense of each jurisdiction’s initial level of income, followed by a discussion of the absolute change in earnings per capita as well as the change in rankings among jurisdictions. Following that, the study compares data for earnings per person among all jurisdictions in 2022, the latest year of available comparable

data. In the second part of the study, we analyze earnings per capita and how they have changed in selected Canadian provinces relative to comparable US states.

Looking closer at the measures used in this study: earnings are measured by median earnings in Canadian provinces and US states, expressed in constant Canadian dollars using purchasing price parities in 2017 as the base year for the comparison.¹ Except where noted otherwise, these data are provided by Statistics Canada (2024a, 2024c), the Census Bureau (2024a) and the Bureau of Economic Analysis (2024b) from 2010 to 2022. This twelve-year period allows for the analysis of a full business cycle following the 2008 recession through to 2022 when the economic effects of the global COVID pandemic began to subside.

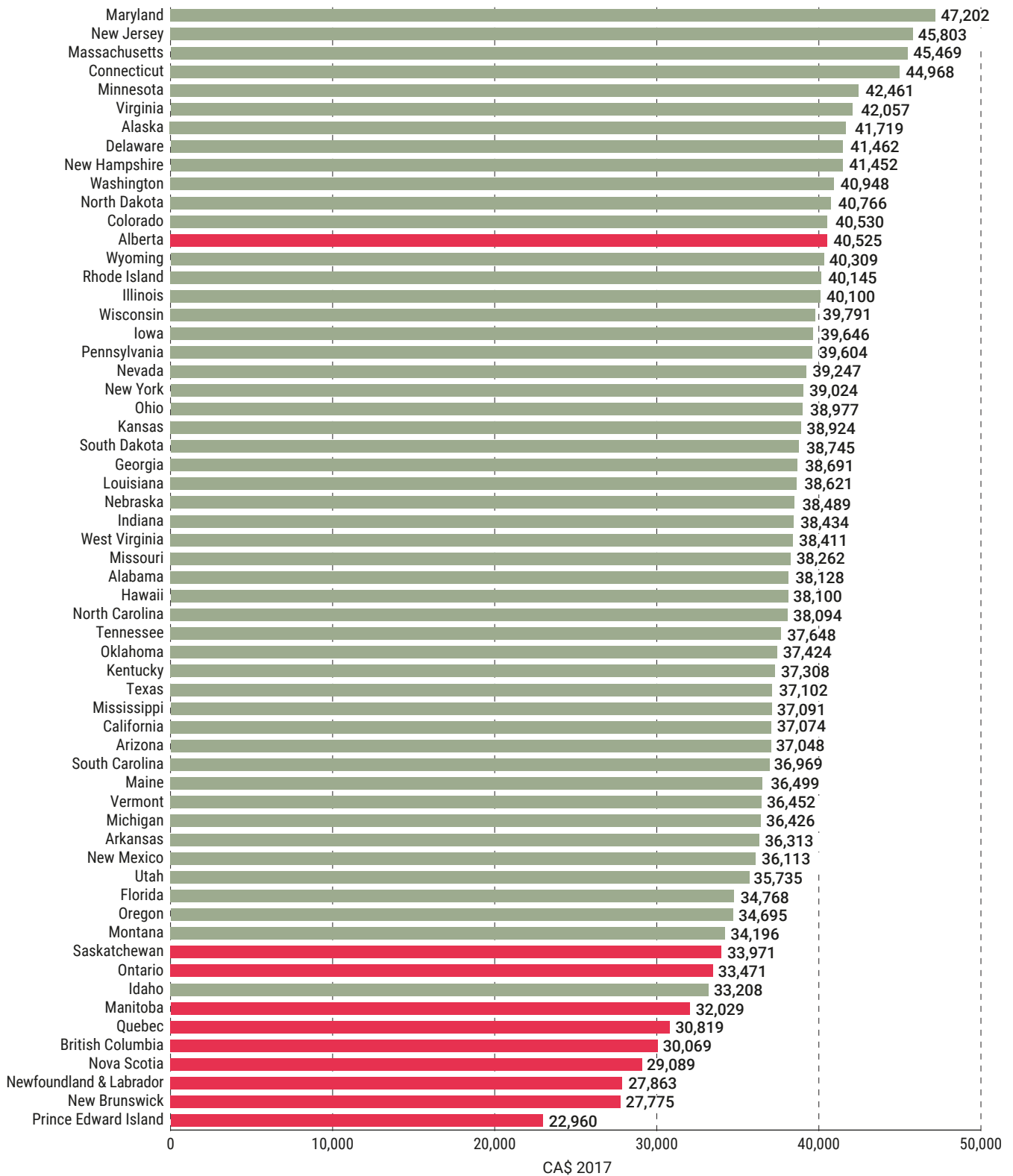
2. Earnings-based comparisons

In the first part of the study, we present data on median earnings per person for all Canadian provinces and US states. Median earnings include the earnings of workers in both the government and private sectors, as well as those who are self-employed. The measure excludes non-wage income such as dividends and capital gains. We begin with a discussion of the relative positions—ranking—of all jurisdictions in the year 2010.

Figure 1 presents data on earnings per person in 2010 for all jurisdictions in Canada and the United States, expressed in 2017 Canadian dollars. Several themes emerge from these data. First, at a broad level, residents in most US states out-earn residents in most Canadian

1 Additional details on the methodology used to ensure comparability across provinces and states is as follows: earnings data are adjusted to be comparable across provinces and states. Constant 2017 Canadian dollars are chosen because this method requires the fewest adjustments. For earnings data in Canada, provincial employment income (earnings) is in 2022 constant dollars, rebased to 2017 constant dollars using the all-items consumer price index (by province). For earnings data in the United States, state earnings are provided in nominal dollars then adjusted to 2017 constant dollars using the Bureau of Economic Analysis Implicit Regional Price Deflators by state. The populations selected for the comparison are those 16 and over earning income in each province and state.

Figure 1: Median earnings (CA\$ 2017) per person, Canadian provinces and US states, 2010



Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

provinces. Only one Canadian province—Alberta—appears in the top half of all 60 jurisdictions,² with the other Canadian provinces accounting for nine of the ten jurisdictions ranked at the bottom. The four Atlantic Canadian provinces rank last among the 60 jurisdictions. The earnings gap between a middle-of-the-pack jurisdiction such as West Virginia, at \$38,411, and the nine lowest-ranked Canadian jurisdictions varied from \$4,440 (Saskatchewan) per person to \$15,452 per person (Prince Edward Island). Even Canada’s top-earning province, Alberta, had per-person earnings that trailed 12 US states in 2010.

Having established a starting point for the provinces and states in figure 1, figure 2 and figure 3 present data on what has changed in these jurisdictions between 2010 and 2022 in order to determine which are getting richer or poorer. Specifically, **figure 2** measures the absolute change in earnings in each jurisdiction during the time period, while **figure 3** presents the change in rank to provide information on how jurisdictions compare relative to peers over the time period.

Only one Canadian jurisdiction is in the top half of growth in earnings after 2010. British Columbia leads Canadian provinces with a \$7,732 increase in earnings per person between 2010 and 2022, yet it is ranked 19th overall in terms of the value of the increase. It is followed by Prince Edward Island with a \$5,824 increase, ranked 38th, and Quebec, with a \$5,611 increase, ranked 41st. While Prince Edward Island experienced an increase, it was by a large margin the lowest-earning jurisdiction in 2010, so the increase did not change its position as the lowest-earning jurisdiction.

The seven remaining Canadian provinces all rank near the bottom of all jurisdictions for growth in earnings during the 2010-to-2022 period. Newfoundland & Labrador ranked 47th out of the 60 provinces and states with growth of \$4,850, followed by New Brunswick at 52nd with \$4,399, Ontario at 56th with \$3,278, Nova Scotia in 57th place with \$3,089, Manitoba at 58th with \$1,193, and Saskatchewan in 59th place with \$961. Put differently, the provinces Nova Scotia, New Brunswick, and Newfoundland & Labrador started the period with comparatively low levels of median earnings and also recorded comparatively low levels of growth in their median earnings over the period from 2010 to 2022. Alberta was last with a decline in earnings growth of \$1,555, the only jurisdiction to experience a decline.³ Three of the bottom 15 jurisdictions measured for earnings growth were in Atlantic Canada—Nova Scotia, New Brunswick, and Newfoundland & Labrador.

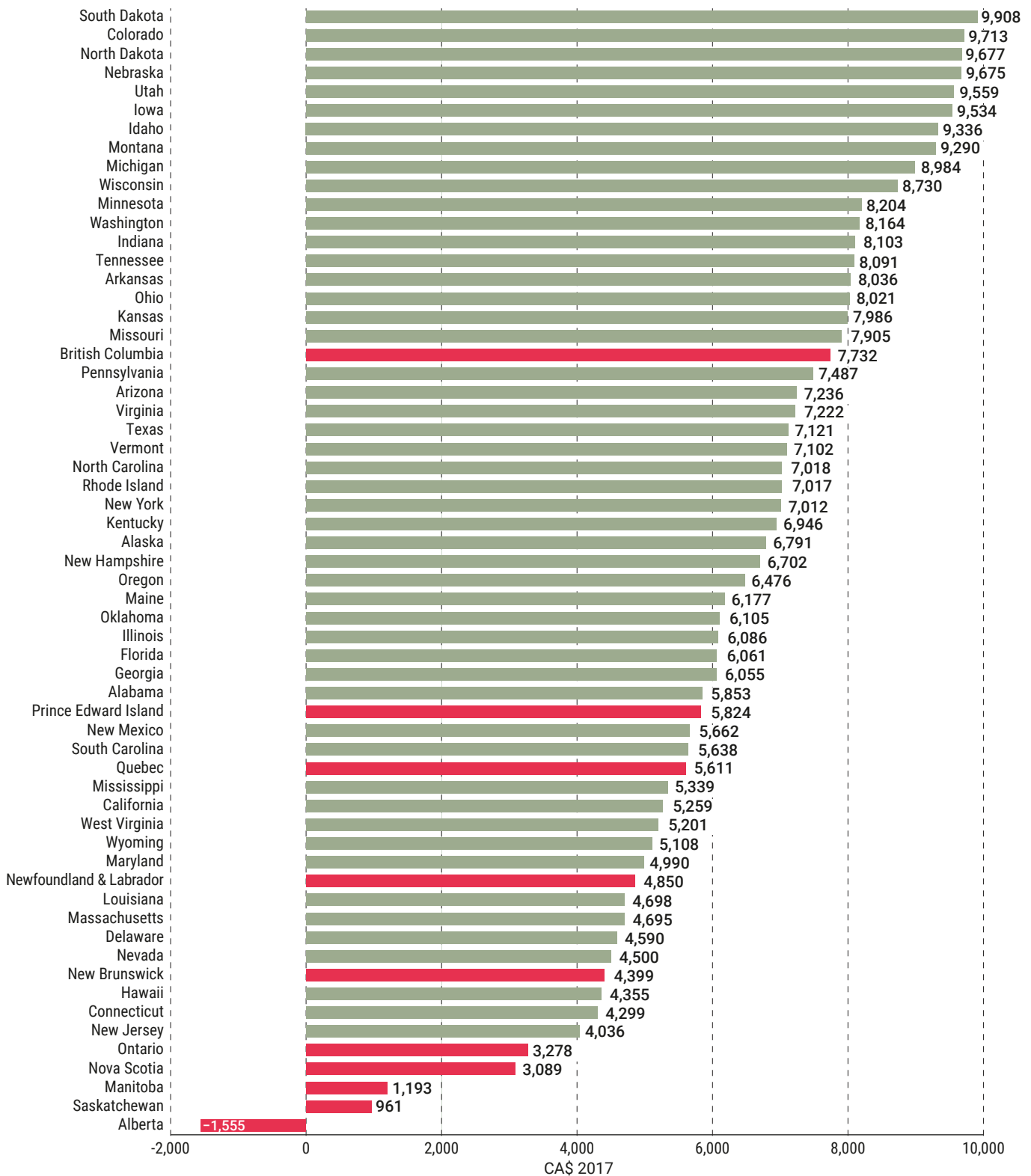
Changes in the ranking of individual jurisdictions provide another perspective on relative performance (**figure 3**). The only Canadian provinces to improve their ranks after 2010 were British Columbia, moving up four places, and Quebec and Newfoundland & Labrador, which each went up one place. New Brunswick and Prince Edward Island maintained their respective positions.

Five Canadian jurisdictions saw their ranking decline during the period from 2010 to 2022, beginning with Nova Scotia and Ontario (–1), followed by Manitoba (–2), and Saskatchewan (–4). Alberta’s decline in ranking stands out, falling 38 places, the most of all jurisdictions by a substantial margin. In 2010, Alberta ranked 13th, declining to 51st by 2022.

2 Unless otherwise noted, this study excludes data from the District of Columbia. Owing to its relatively small size and commuter population, the District of Columbia represents a misleading outlier for the purpose of this study.

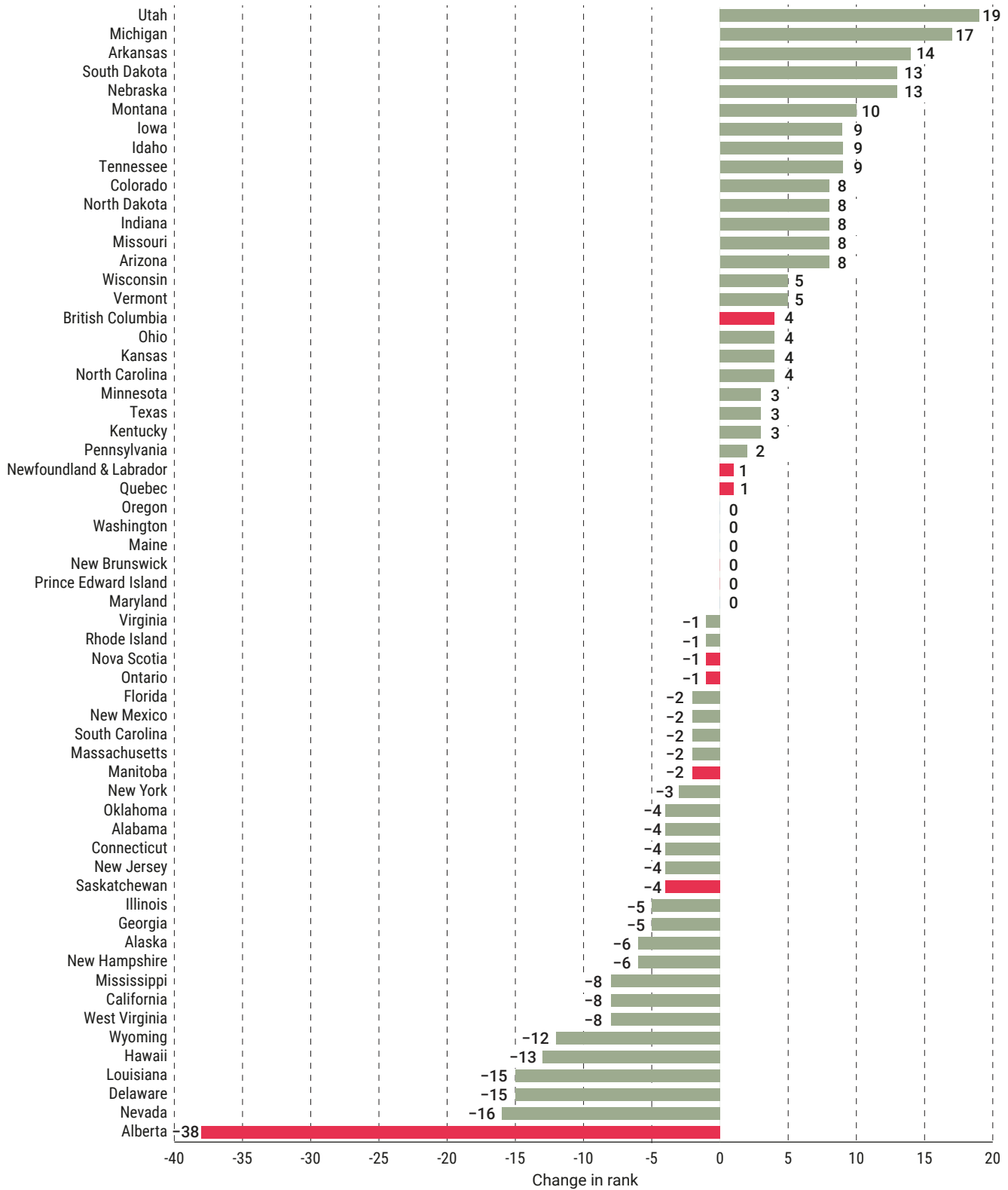
3 Alberta and Saskatchewan’s relatively weak performance in earnings growth compared to other states and provinces is perhaps not surprising given how heavily their economies rely on oil production and that oil prices declined sharply after 2014. However, earnings growth in Alberta and Saskatchewan is well below that of other oil-producing jurisdictions such as North Dakota, Texas, New Mexico, and Newfoundland & Labrador, all of which experienced stronger earnings growth as their oil production (especially shale oil in US states) expanded despite the lower prices.

Figure 2: Change in median earnings per person, Canadian provinces and US states, 2010–2022



Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

Figure 3: Change in rank for median earnings per person, provinces and states, 2010–2022



Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

Many of the low-ranking US states substantially improved their standings after 2010. For example, among our 60-jurisdiction panel, Utah, ranked 47th in 2010, improved 19 places to 28th by 2022, while 44th-ranked Michigan improved to 27th, 45th-ranked Arkansas improved to 31st, and 50th-ranked Montana improved to 40th. Conversely, none of the lower-ranking Canadian provinces improved their relative positions by more than one position over the period from 2010 to 2022. The improvement made in many poorer US states stands in contrast to the lack of improvement in the poorest Canadian provinces over this time period.

Figure 4 presents data on the position of all jurisdictions in 2022. In contrast to the 2010 data presented in figure 1, by 2022 all 10 Canadian provinces ranked in the bottom 10 positions for earnings per person. The four Atlantic Provinces remain in the bottom four positions, with Manitoba (5th lowest) and Quebec (7th lowest) also remaining in relatively low ranks. British Columbia improved from 5th lowest in 2010 to 9th lowest in 2022. Alberta remains Canada’s highest-earning jurisdiction but as of 2022 was surpassed by all US states whereas in 2010 only 12 US states reported earnings higher than Alberta.

3. Results for selected jurisdictions

Returning to the comparison of employment earnings in comparable Canadian and US jurisdictions deepens our overall understanding of the growing gap in incomes between the Canadian provinces and US states. This section presents five comparisons where either geographic situation, economic structure, or the population of US states and Canadian provinces is similar but Canadian incomes nevertheless are falling further behind. The comparisons in this section are: Alberta and Texas, the two largest oil-producing jurisdictions

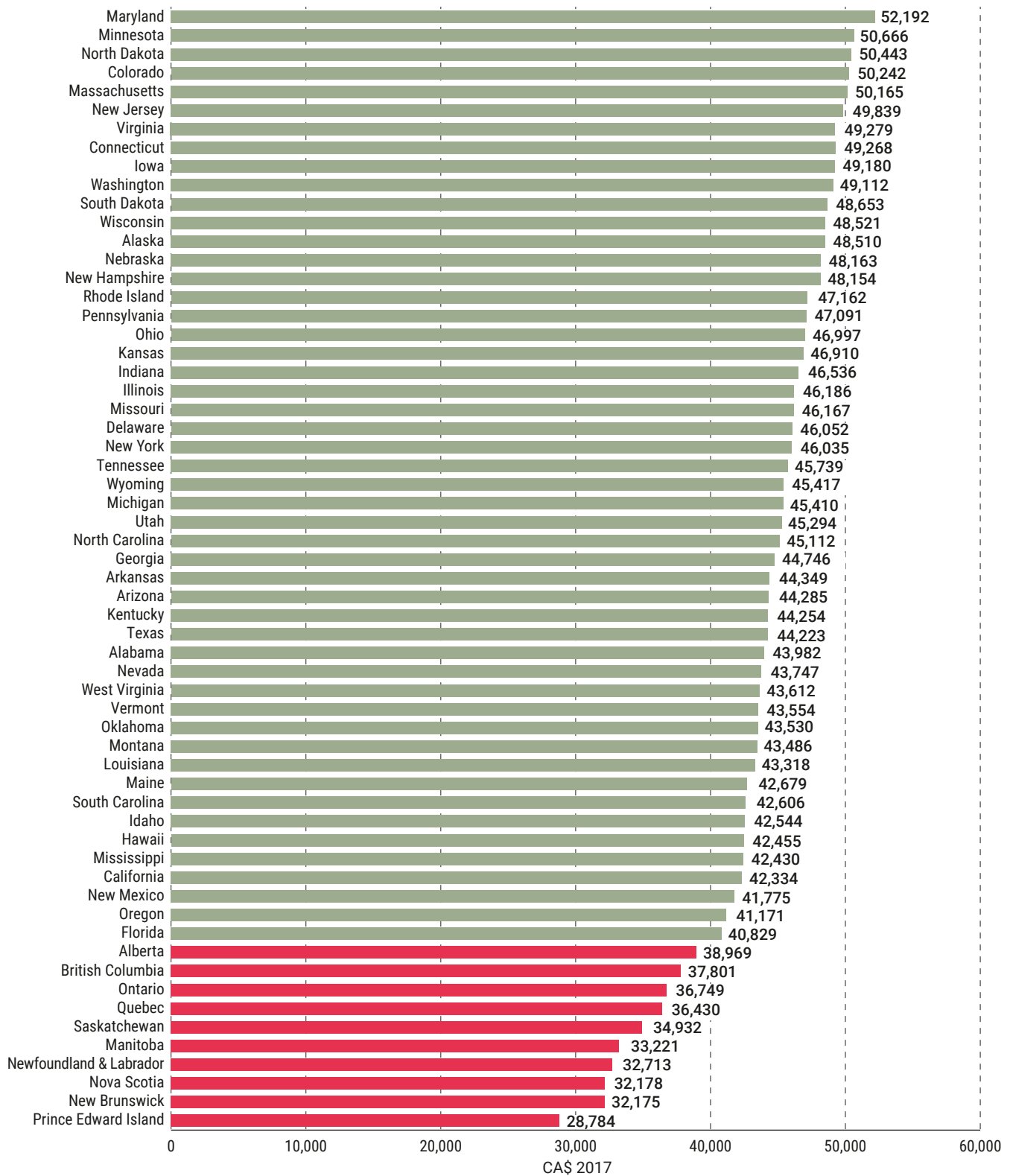
in their respective countries; Saskatchewan and North Dakota, two jurisdictions that are geographically proximate, produce oil, and have populations of similar size; British Columbia and Washington State, which are geographically proximate and have populations of similar size; Ontario and Michigan which are geographically proximate, have have populations of similar size, and share a large automotive manufacturing sector. Finally, we compare the Atlantic provinces in Canada and the New England states, given their shared geography, history, and somewhat similar economies (in terms of dominant industries).

Figure 5 and figure 6 present data on both the level of earnings in 2010 and 2022, as well as the change in earnings, for the selected comparisons described in the paragraph above.

Figure 5 provides data on four of the comparisons:

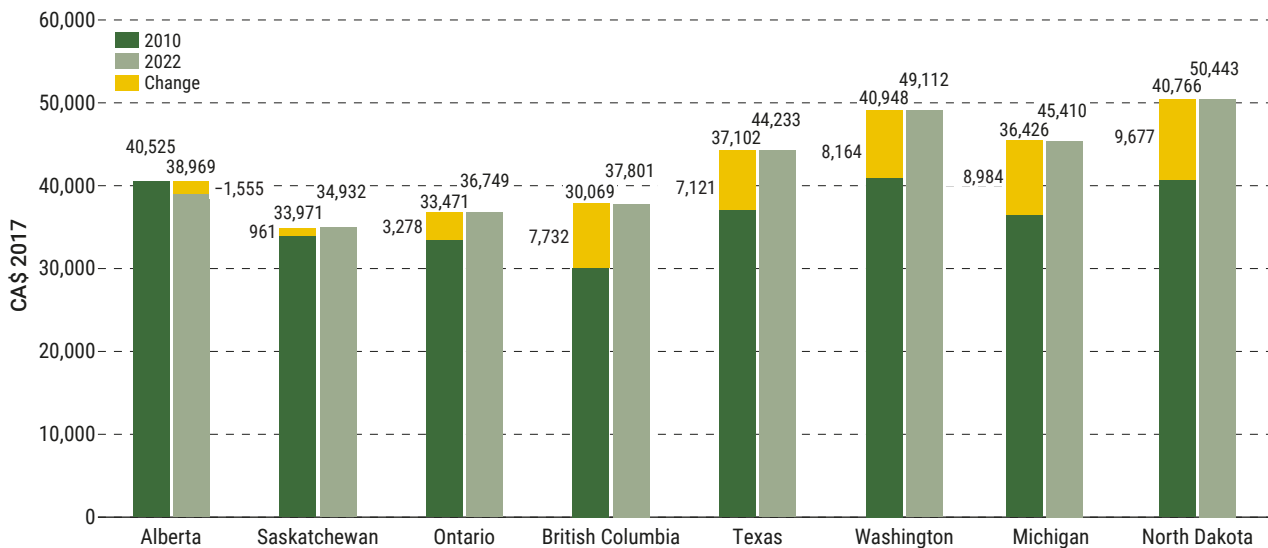
- Albertans, who out-earned Texans in 2010, fell behind by 2022. as a result of negative income growth in Alberta combined with strong growth in Texas, Alberta’s lead of \$3,423 per person became a deficit with Texas of \$5,254 by 2022.
- Saskatchewan trailed North Dakota in earnings in 2010 and the gap widened by 2022. North Dakotans earned \$6,795 more than residents of Saskatchewan in 2010, a gap that grew to \$15,511 in 2022, driven by both robust growth in North Dakota and relatively weak growth in Saskatchewan.
- While British Columbia had strong growth, the province lost ground relative to Washington state. The gap stood at \$10,879 in 2010 and widened to \$11,311 by 2022.
- Michigan led Ontario in median employment earnings in 2010 at \$2,955 per person, which increased to \$8,661 by 2022.

Figure 4: Median earnings (CA\$ 2017) per person, Canadian provinces and US states, 2022



Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

Figure 5: Median earnings (CA\$ 2017) per person, selected jurisdictions, and change 2010–2022



Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

Figure 6 provides data comparing earnings per person in the four Atlantic Provinces and the nearby six New England states, while figure 7 shows average earnings per person for the regions of Atlantic Canada and New England. The key regional findings from these comparisons are as follows:

- The difference in earnings between Maine and its bordering Canadian province of New Brunswick was \$8,724 per person in 2010, which increased to \$10,501 by 2022.

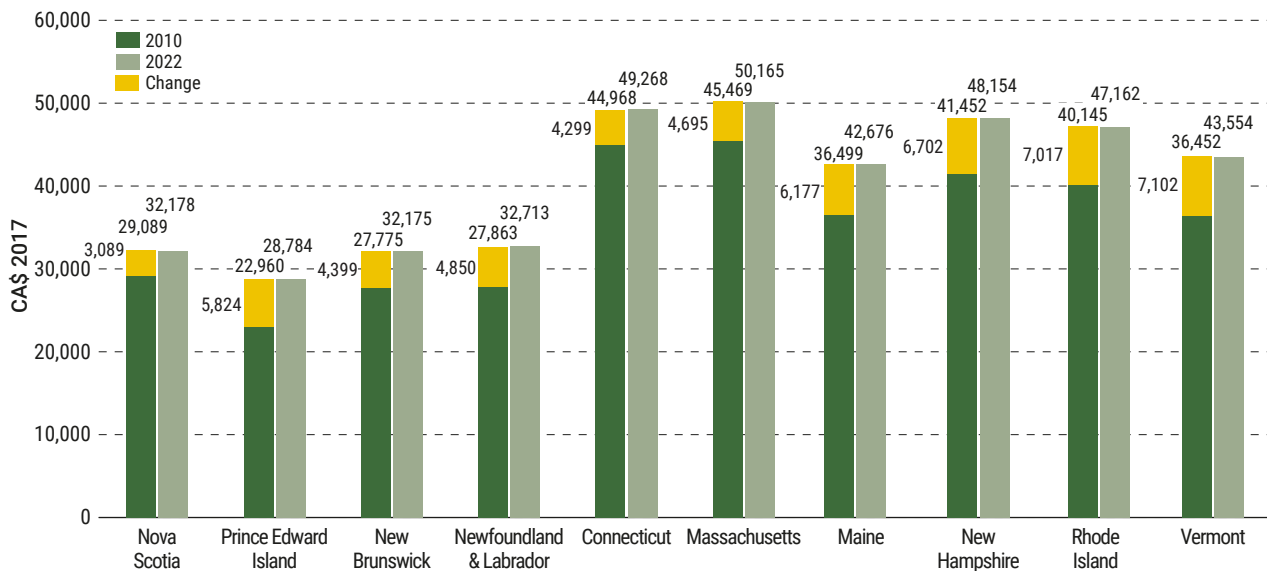
- The top five jurisdictions in the region by earnings in 2022 were all from New England: Massachusetts, Connecticut, New Hampshire, Rhode Island, and Vermont.
- Four of the top five jurisdictions for growth in earnings were in New England: Vermont, Rhode Island, New Hampshire, and Maine.
- In general, New Englanders out-earn Atlantic Canadians, and this gap has grown over time.

4. Conclusion

The data on earnings in this study show that, in general, Canadian provinces are getting poorer relative to their US peers. Further, Canada’s poorest provinces are the poorest in both countries, and fell even further behind their US peers between 2010 and 2022. Both

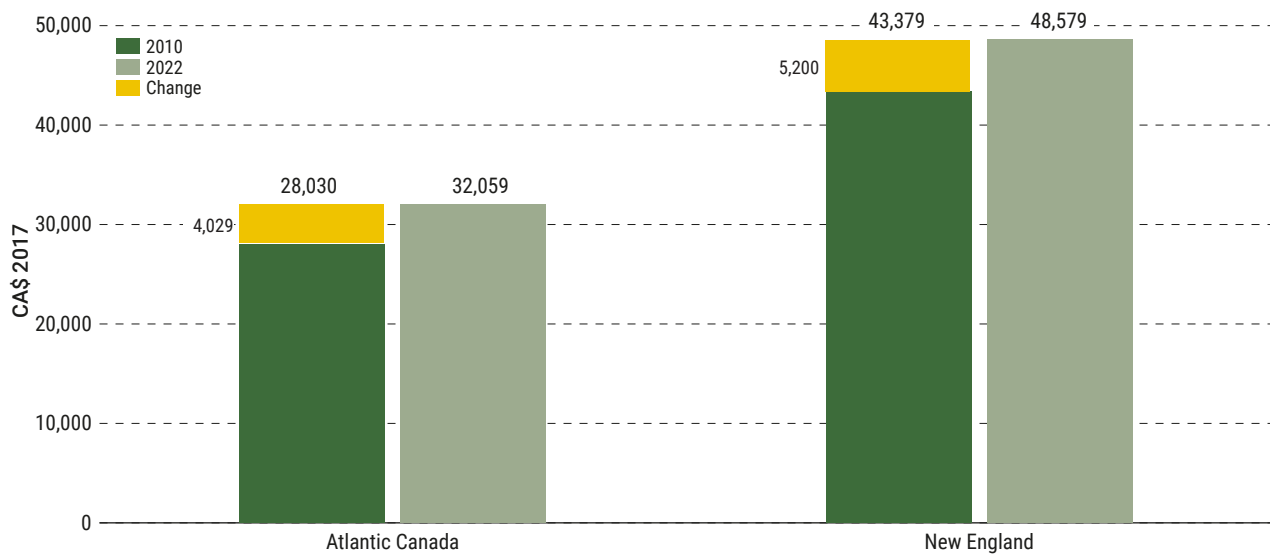
the relatively low rankings of Canadian provinces as well as the relative lack of growth in Canada should be a cause for concern for Canadians and policy makers alike, given the close connection between incomes and living standards.

Figure 6: Median earnings (CA\$ 2017) per person, Atlantic Canada and New England, and change from 2010 to 2022



Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

Figure 7: Median earnings* (CA\$ 2017) per person, Atlantic Canada and New England, and change from 2010 to 2022



Note: *Regional averages are weighted by population.

Sources: Bureau of Economic Analysis, 2024b; Census Bureau, 2024a; Statistics Canada, 2024a, 2024c; OECD, 2024.

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director in 2005. In 2010, he was appointed advisor to the governor, with responsibilities for financial stability analysis and coordinating the Bank's contribution to the Financial Stability Board. While at the Bank, Mr. Schembri was an active researcher, publishing research on exchange rate and monetary theory and policy in open economies, the international monetary system, and financial stability. A champion of efforts to promote economic literacy and Indigenous economic opportunity, he sponsored the Bank's Governor's Challenge undergraduate student competition and was a founding member of the Central Bank Network for Indigenous Inclusion. He currently serves on the board of the Tulo Centre of Indigenous Economics. Mr. Schembri received a Bachelor of Commerce degree from the University of Toronto, an MSc in Economics from the London School of Economics and Political Science, and a PhD in Economics from the Massachusetts Institute of Technology. Prior to joining the Bank of Canada, Mr. Schembri was an assistant professor and, later, associate professor of economics at Carleton University

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