

Comparing Median Employment Incomes in Atlantic Canada and New England Metropolitan Areas

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Summary

- A recent Fraser Institute study compared the economies of the Atlantic Canadian provinces to those of nearby New England states. It found that the Atlantic provinces generally lag New England states on key measures of income including gross domestic product per person and median employment income.
- This bulletin further analyzes these indicators by examining median employment income in 20 large metropolitan areas in Atlantic Canada (CMAs) and the New England states (MSAs).
- We find that for this important indicator of the strength of the labour market and each region's overall economic health, Atlantic Canada's five metro areas are clustered near the bottom of the rankings. Atlantic Canadian CMAs hold five out of the six bottom places.
- This study also measures growth in median employment income during the 2010s. Just one Atlantic CMA (St. John's) was in the top half of the rankings for growth; it ranked 9th out of 20 metro areas. Maritime Canada's four CMAs (Halifax, Fredericton, Saint John, and Moncton) occupied four out of the seven bottom positions for growth.
- Taken together, these analyses show that Atlantic Canada's CMAs in 2019 generally had substantially lower median levels of employment income than MSAs in nearby New England States. Further, it shows that in most cases the prosperity gap between New England MSAs and Canadian CMAs grew over the course of the 2010s.

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Introduction

In November 2022, the Fraser Institute published a study comparing two measures of income in the Atlantic Canadian provinces and the New England region of the United States (Whalen and Emes, 2022).

Whalen and Emes used two different measures of income for their analysis. The first was a broad measure of income: Gross Domestic Product (GDP per person). The second was a narrower indicator that focused on median employment income. The study found that on both indicators all of the Atlantic provinces substantially lagged all of the New England States.

This bulletin expands that analysis by zooming in to examine economic performance in large metropolitan areas in these same jurisdictions. Specifically, we compare median employment income in Census Metropolitan Areas (CMAs) in Atlantic Canada to that in large American metro areas known as Metropolitan Statistical Areas (MSAs) in those same comparator New England states.

Specifically, this paper seeks to measure one important dimension of the prosperity gap between large metropolitan areas in Atlantic Canada and those in New England by comparing median employment income and by considering the change in this important measure of labour market health and prosperity. We are limiting our analysis to employment incomes because there is no comparable GDP data at the metro level.

Identifying New England as Atlantic Canada's comparator group

This bulletin measures the performance of median employment income in Atlantic Canada's CMAs compared to that in large metro areas (MSAs) in the nearby New England states (Massachusetts, Connecticut, New Hampshire, Rhode Island, Vermont, and Maine).

Using the New England states as a comparator group for Atlantic Canada is useful for several reasons. The six states that comprise New England are geographically proximate but also share important similarities in their history, industrial structure, and various demographic aspects.¹ While Newfoundland & Labrador's large oil and gas industry is unique among all the jurisdictions in New England or Atlantic Canada, it nonetheless has many other historical, demographic, and sectoral similarities with both regions. Several New England jurisdictions have extensive supply chain links to the provincial economies of Atlantic Canada. Further, Atlantic Canada competes with nearby New England states for capital investment.

The indicator and methodological notes

This bulletin compares the median employment income of major metropolitan areas in Atlantic Canada to that in the New England states. The urban areas discussed here could be compared on many possible variables. But employment income differs from other measures because it excludes some forms of income such as government transfers and investment and pension income. We use it to focus on what people earn in the labour market after stripping away the effects of passive income and government transfers. For economy of words and clarity we sometimes use the word "income" to refer to "median employment income" reported in Canada and "median earnings" reported in the United States.

The choice to focus on median employment income is borne out of the objective to analyze the health of labour markets for middle income residents. Other indicators would shed light on other important dimensions of labour market performance. A focus on average

¹ These issues are discussed in Whalen and Emes (2022), cited above.

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incomes, or on average incomes within the top 10 percent, for instance, would shed more light on outcomes for high earners, which is important for attracting mobile human capital. While this bulletin focuses on labour market performance for middle income individuals, there are clearly many other measurables that offer interesting options for future research.

We present data for the year 2019 and data on the rate of change up to 2019 because this is the last year of comparable data in both jurisdictions that is not distorted by the potentially short-term effects of the COVID-19 pandemic and recession. Our analysis of the rate of change can therefore be understood as a comparison of the growth rate in median employment income in the decade from 2010 to 2019.

We focus on large metropolitan areas, which are defined similarly in the United States and Canada. A Canadian CMA must have a population of at least 100,000 people with at least 50,000 residents in its core. Similarly, in the United States, an MSA is a core area containing a large population nucleus plus adjacent communities that have a high degree of economic and social integration with that core (US Census Bureau, 2023).

The terminology differs slightly between countries and there are small definitional differences, but the focus is the same for these areas. More information about the minor differences in definitions as well as our approach to currency comparability (we rely on a Purchasing Power Parity (PPP) exchange rate) is available in (Eisen and Emes, 2023), where much of this data is first presented and a more detailed methodological section is included.

Results

Reviewing provincial- and state-level findings

As noted, an earlier Fraser Institute analysis compared provincial- and state-level GDP per person and median employment income for New England and Atlantic Canada. That study found that for both indicators Atlantic Canada lagged the New England region considerably. This subsection briefly reviews the results of that study.

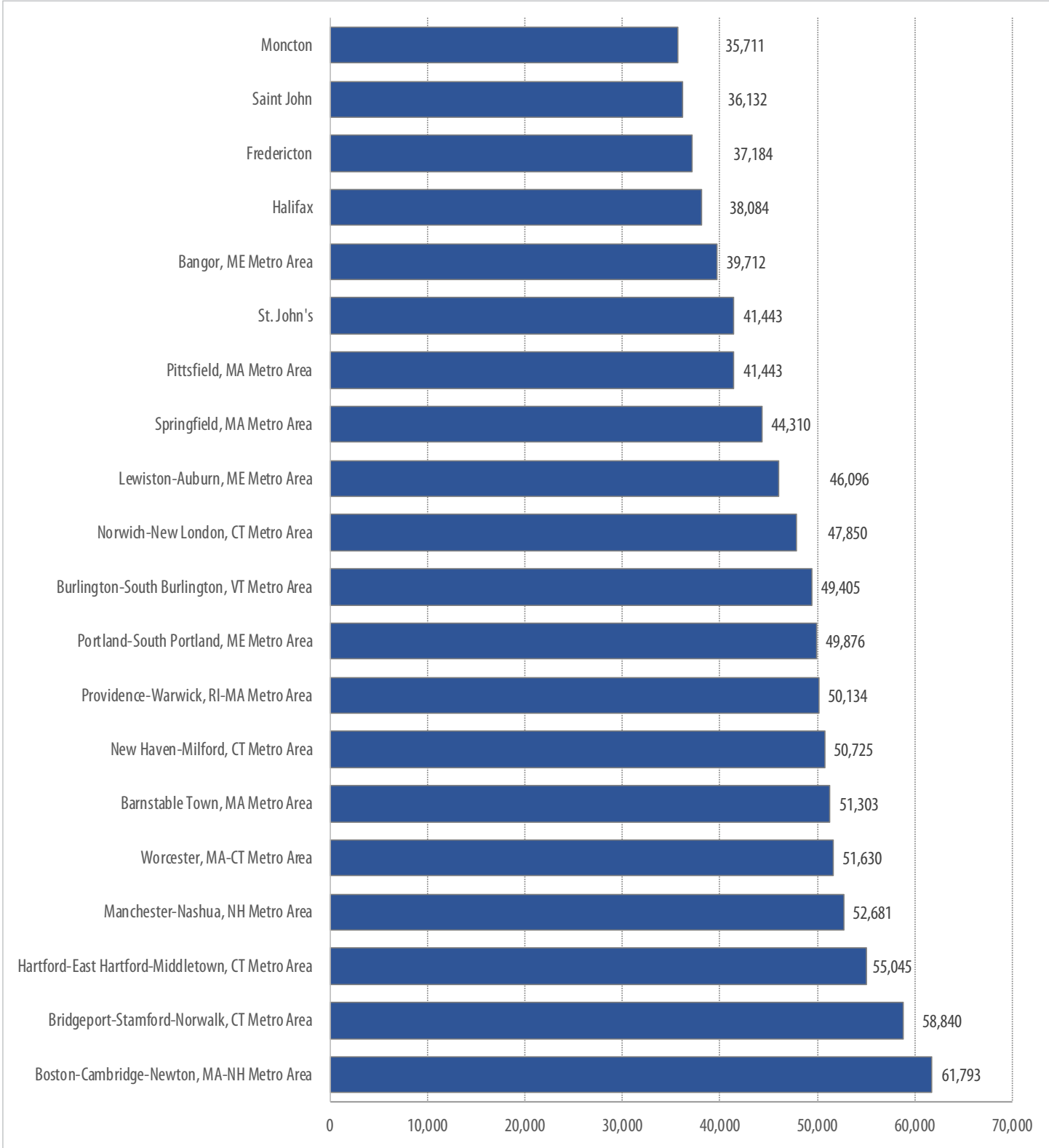
Starting with GDP per capita, Whalen and Emes (2022) showed that out of the 10 jurisdictions in the two regions, the three worst performers were New Brunswick, Nova Scotia, and Prince Edward Island. The gap between these Maritime provinces and the New England states was large. The state with the lowest GDP per capita, Maine, outperformed New Brunswick by 25.1 percent, Nova Scotia by 26.8 percent, and Prince Edward Island by 30.6 percent. The gap was larger between the three Maritime provinces and all of the other New England states.

Newfoundland & Labrador's performance for this indicator was significantly different from the rest of Atlantic Canada. Largely due to the highly productive oil and gas sector, in 2019 Newfoundland & Labrador's GDP per capita was much higher than the three Maritime provinces and was also higher than three of the New England states. Massachusetts, Connecticut, and New Hampshire had per capita GDP levels higher than Newfoundland & Labrador, but per capita GDP in Rhode Island, Vermont, and Maine was lower.

The results were similar for median employment income. The key difference was that Newfoundland & Labrador's performance was more like the Maritime provinces on this indicator. The four Atlantic Canadian provinces had the four lowest median employment incomes in the 10 jurisdictions under analysis. The gap between the New England states and the Atlantic

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Figure 1: Median Employment Income and Rank, Atlantic Canadian CMAs and New England MSAs



Sources: Statistics Canada, 2023a; 2023b; US Census Bureau, 2020; multiple years; US Bureau of Labor Statistics (2023); OECD, 2023.

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provinces was significant. The clearest illustration of this is the fact that median annual employment earnings were \$7,821 higher in the lowest ranked US State (Vermont) than in the highest ranked Atlantic Canadian Province (Newfoundland & Labrador).

A more comprehensive discussion of these results can be found in Whalen and Emes (2022).

With these substantial differences between New England and Atlantic Canada at the state and provincial levels in mind, we now turn to a more detailed investigation of this indicator by looking at the large urban areas in the region.

Comparing employment income at the CMA/MSA level

This section zooms in from the provincial and state level to compare median employment income in the CMAs and MSAs located in the 10 provinces and states that were included in the Whalen and Emes study and that were described in the preceding section.

Figure 1 presents one of the two main results of the study. It compares median income in the five Atlantic Canadian CMAs (St John's in Newfoundland; Fredericton, Saint John, and Moncton in New Brunswick; and Halifax in Nova Scotia) to that in the 15 New England MSAs.

Figure 1 shows that the state and provincial level results shown in the preceding section largely hold at the metropolitan area level. The CMAs in Atlantic Canada are all clustered at the bottom of the rankings. Moncton has the lowest median employment earnings at \$35,711. The next three spots from the bottom are occupied by Saint John, Fredericton, and Halifax. St. John's is the 15th ranked CMA/MSA (6th from the bottom), ahead of just one US MSA, Bangor, Maine.²

For additional context, the median employment income of the tenth ranked metropolitan area shown here, Burlington, Vermont, was \$49,405—\$7,962 higher than St John's, Newfoundland. Burlington's gap with the three Maritime provinces was even larger, ranging from \$11,321 to \$13,694.

The highest ranked metro areas on this measure were Boston (\$61,793), Bridgeport-Stamford-Norwalk, Connecticut (\$58,840), and Hartford, Connecticut (\$55,045). Top-ranked Boston's median employment income was 49.1 percent higher than the top ranked Atlantic Canadian CMA (St. John's), with a larger gap of between 62.3 percent and 73.0 percent between Boston and the four Maritime CMAs. As figure 1 clearly shows, as of 2019, median employment incomes were generally much higher in New England MSAs than in Atlantic Canadian CMAs.

Figure 2 compares the annualized growth rates for the 20 metro areas examined here between 2010 and 2019. It shows that, once again, on this indicator the Atlantic Canadian CMAs are clustered near the bottom of the rankings and are unrepresented near the top of the league table.

Figure 2 shows that four out of the seven lowest-growth metro areas included here are in Atlantic Canada (Moncton (14th), Saint John (15th), Fredericton (16th), and Halifax (17th)). Their annualized growth rates are nearly identical, ranging from 0.2 to 0.3 percent.

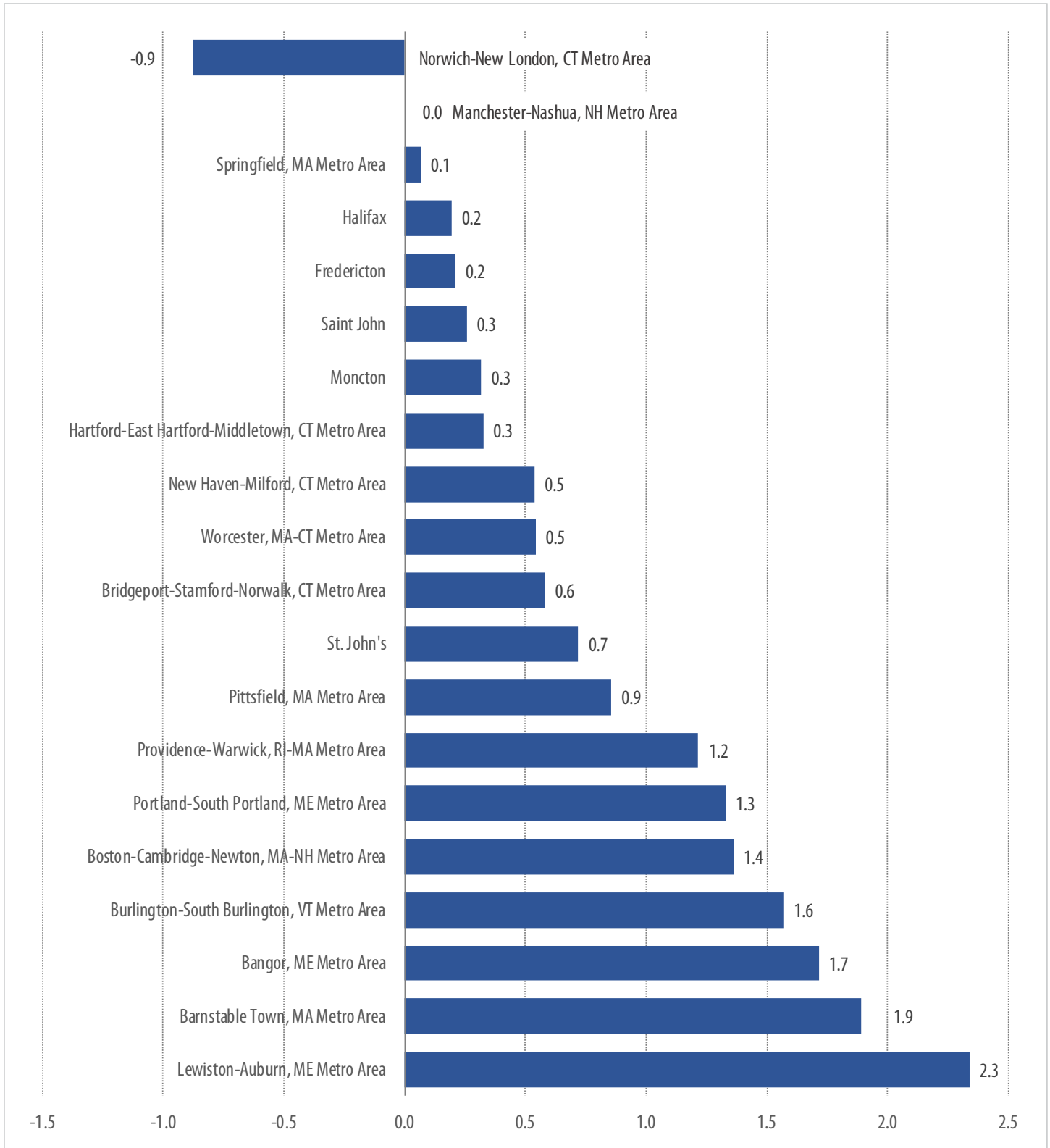
Between 2010 and 2019, St. John's, Newfoundland, which recorded annualized growth of 0.7 percent, performed better on this indicator. At 9th, its ranking placed St. John's in the middle of the league table for the full group of 20 metro areas analyzed.

The top American MSAs in this ranking substantially outperformed all of the Canadian CMAs. The five MSAs with the top annualized growth rates

2 For readability, we frequently refer to the names of the US MSAs by the name of the cities at their core. The tables and figures use the correct and complete MSA names.

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Figure 2: Compound Annual Percent Change in Median Employment Income and Rank, Atlantic Canadian CMAs and New England MSAs, 2010-2019



Sources: Statistics Canada, 2023a; 2023b; US Census Bureau, 2020; multiple years; US Bureau of Labor Statistics (2023); OECD, 2023.

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Table 1: Median employment income (\$2020) in Atlantic Canadian CMAs and New England MSAs, and relative to Halifax

Metropolitan Area	2019	Relative to Halifax
Boston-Cambridge-Newton, MA-NH Metro Area	61,793	162
Bridgeport-Stamford-Norwalk, CT Metro Area	58,840	155
Hartford-East Hartford-Middletown, CT Metro Area	55,045	145
Manchester-Nashua, NH Metro Area	52,681	138
Worcester, MA-CT Metro Area	51,630	136
Barnstable Town, MA Metro Area	51,303	135
New Haven-Milford, CT Metro Area	50,725	133
Providence-Warwick, RI-MA Metro Area	50,134	132
Portland-South Portland, ME Metro Area	49,876	131
Burlington-South Burlington, VT Metro Area	49,405	130
Norwich-New London, CT Metro Area	47,850	126
Lewiston-Auburn, ME Metro Area	46,096	121
Springfield, MA Metro Area	44,310	116
Pittsfield, MA Metro Area	41,443	109
St. John's	41,443	109
Bangor, ME Metro Area	39,712	104
Halifax	38,084	100
Fredericton	37,184	98
Saint John	36,132	95
Moncton	35,711	94

Sources: Statistics Canada, 2023a; 2023b; US Census Bureau, 2020; multiple years; US Bureau of Labor Statistics (2023); OECD, 2023

were Boston, Massachusetts (1.4%), Burlington, Vermont (1.6%), Bangor, Maine (1.7%), Barnstable Town, Massachusetts (1.9%) and Lewiston-Auburn, Maine (2.3%).

It is noteworthy that while the state populations in New England are generally larger than the provincial populations in Atlantic Canada, many of the MSAs in New England are of similar size to the CMAs in Atlantic Canada. Differences in population size are therefore not likely a major driver of the consistent gap between the Canadian CMAs and American MSAs.

These data lead to two conclusions. First, with respect to median employment income, nearly all New England MSAs outperformed the Atlantic Canadian CMAs in 2019. The only exception is St. John's, which had a higher median income that year than Bangor, Maine. In all other cases, the gap favoured New England's large metropolitan areas over Atlantic Canada's.

Second, over the course of the 2010s, New England's MSAs generally enjoyed faster annualized growth rates than Atlantic Canada's CMAs. The Maritime CMAs were clustered near the very bottom of the rankings,

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while St. John's, Newfoundland, was in the middle of the pack. We have shown that in addition to the existence of significant gaps on median employment income between the metro areas, the gaps generally continued to grow between 2010 and 2019.

Additional notes on Halifax and Boston

Halifax is by far the largest urban area in Atlantic Canada and is also the commercial centre of the region. Given the importance of this metropolitan area to the region's economic well-being, a short examination of its specific performance would be useful, as would a comparison to New England's most important regional economic center, Boston.

Table 1 reorganizes the data shown in figure 1 as a table, and also includes the median employment income levels of all the MSAs under analysis as an index; Halifax's median employment income for 2019 is set to 100.

Table 1 makes it easy to see the size of the gap between Halifax and important New England MSAs. The lowest ranked MSA was Bangor, Maine, where in 2019 median employment income was 4 percent higher than in Halifax. The gap with the MSAs in the middle of the table is much larger. The median employment income in 10th-ranked Burlington, Vermont, was 30 percent higher than in Halifax.

The comparison between Halifax and Boston is particularly striking; median employment income in Boston was 62 percent higher than in Halifax in 2019. As figure 2 showed, the gap between these two regional economic hubs grew over the course of the 2010s. From 2010 to 19, median employment earnings in Halifax

grew by just 0.2 percent compared to a 1.4 percent annualized growth rate in Boston over the same period.

It is very apparent that Boston, the largest and most economically important regional hub city in New England, had a much higher median employment income level in 2019 and a faster annualized growth rate from 2010 to 2019 than its Atlantic Canadian counterpart, Halifax.

Conclusion

Past research has shown that on median employment income, the four Atlantic provinces have all lagged nearby New England states. This analysis zooms in on the major urban areas and compares the median employment incomes of Atlantic Canada's CMAs and New England's MSAs.

The data presented in this bulletin show that the key finding of the previous study, that employment income in New England is stronger than in Atlantic Canada, holds with near perfect consistency at the metropolitan area level. Out of the region's 20 large metro areas, five of the six lowest performers for this indicator were in Atlantic Canada, including the four at bottom of the rankings.

Further, this study has shown that the gaps between Atlantic Canadian CMAs and New England MSAs generally grew between 2010 and 2019, particularly for the CMAs in the three Maritime provinces. From 2010 to 2019, growth in median employment income in Halifax, Fredericton, Saint John, and Moncton was minimal; they were also four of the seven worst performers on annualized growth rates.

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