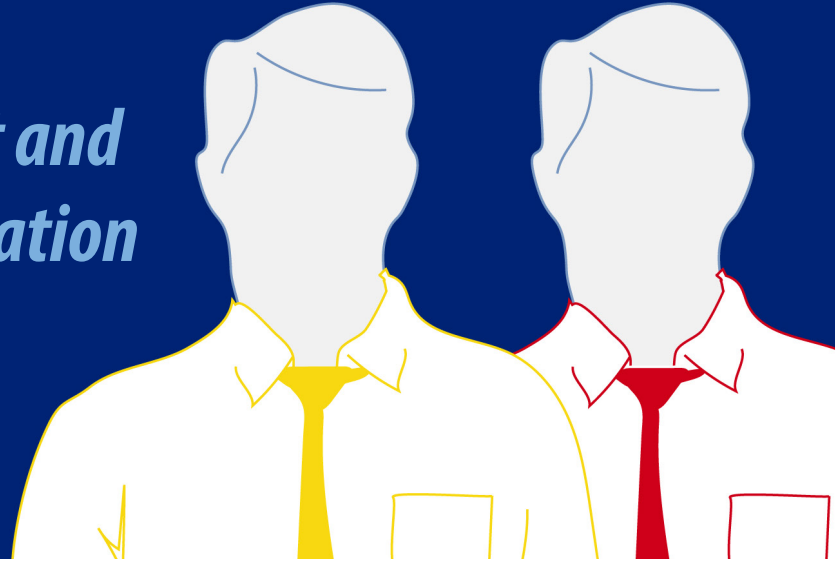


# Comparing Government and Private Sector Compensation in Atlantic Canada

by Milagros Palacios, Nathaniel Li, and Alex Whalen



## MAIN CONCLUSIONS

■ Using data on individual workers from January to December 2018, this report estimates the wage differential between the government and private sectors in the Atlantic provinces. It also evaluates four non-wage benefits for which data are available to quantify differences in the compensation offered by the two sectors in these provinces.

■ After controlling for factors like gender, age, marital status, education, tenure, size of firm, job permanence, immigrant status, province, industry, occupation, and full- or part-time status, the authors found that government-sector workers (federal, provincial, and local) in the Atlantic provinces enjoyed an 11.9% wage premium, on average, over their private-sector counterparts in 2018. When the wage difference between unionized and non-unionized workers is taken into account, the wage premium for the government sector declines to 6.3%.

■ Available data on non-wage benefits suggest that the government sector enjoys an advantage

over the private sector. For example, public-sector workers in all Atlantic provinces are much more likely to be covered by a registered pension plan (RPP): fewer than 3 in 10 private-sector workers were covered by an RPP in 2018 compared to more than 8 in 10 workers in the public sector. Of those covered by an RPP, the share of defined benefit pension is much higher in the public sector than the private sector in all Atlantic provinces except New Brunswick.

■ In addition, government workers retire earlier than those in the private-sector—between 2.3 years (New Brunswick) and 4.2 years (Newfoundland & Labrador) earlier on average—and were 6 to 7 times less likely to lose their jobs in 2018.

■ Moreover, full-time workers in the government sector lost more work time in 2018 for personal reasons (from 12.7 days to 15.6 days on average) than their private-sector counterparts (from 8.2 to 9.4 days).

## Introduction

Atlantic Canada is currently substantially less affluent than the rest of Canada and, for some time, it has been characterized by relatively sluggish growth (Eisen, Palacios, McMahon, and Whalen, 2019). The region maintains a larger-than-average public sector that comes at a significantly high cost to taxpayers. Indeed, Atlantic Canada's per-capita public-sector employment was 17.0% larger than the rest of Canada in 2018 (Statistics Canada, 2019a, 2019g). In order to make the best use of taxpayers' money to enhance economic growth, Atlantic provinces will need to scrutinize the compensation of government employees, which constitutes a sizeable portion of government spending.

With the heightened interest in how wages and non-wage benefits in the government sector compare with those in the private sector, this report builds on previous research by the Fraser Institute comparing government- and private-sector compensation in Canada (Lammam, Palacios, Ren, and Clemens, 2015). Using data on individual workers from January to December of 2018, the report provides estimates of the wage differential between government-sector workers in Atlantic Canada (including federal, provincial, and local government workers) and their private-sector

counterparts. It also evaluates four non-wage benefits for which data are available in an attempt to quantify differences in the compensation of the two sectors in these provinces.

At the outset, it is important to emphasize that wages are only one component of overall compensation. Various non-wage benefits such as pensions, health and dental insurance, vacation time, life and disability insurance, and so forth affect overall compensation levels. In this report, we are unable to estimate the overall total compensation premium in the government sector because of a lack of data on non-wage benefits. However, we do present the data that are available on non-wage benefits to shed some light on the differences between the benefits received in the government and private sectors.

The first section of this report provides some basic statistics on government and private sector employment in the Atlantic provinces. The second section presents the results of calculations used to determine the wage premium in the government sector. The third section assesses the data available on non-wage benefits to ascertain the likelihood that there is a premium for non-wage benefits in the government sector compared to the private sector.<sup>1</sup>

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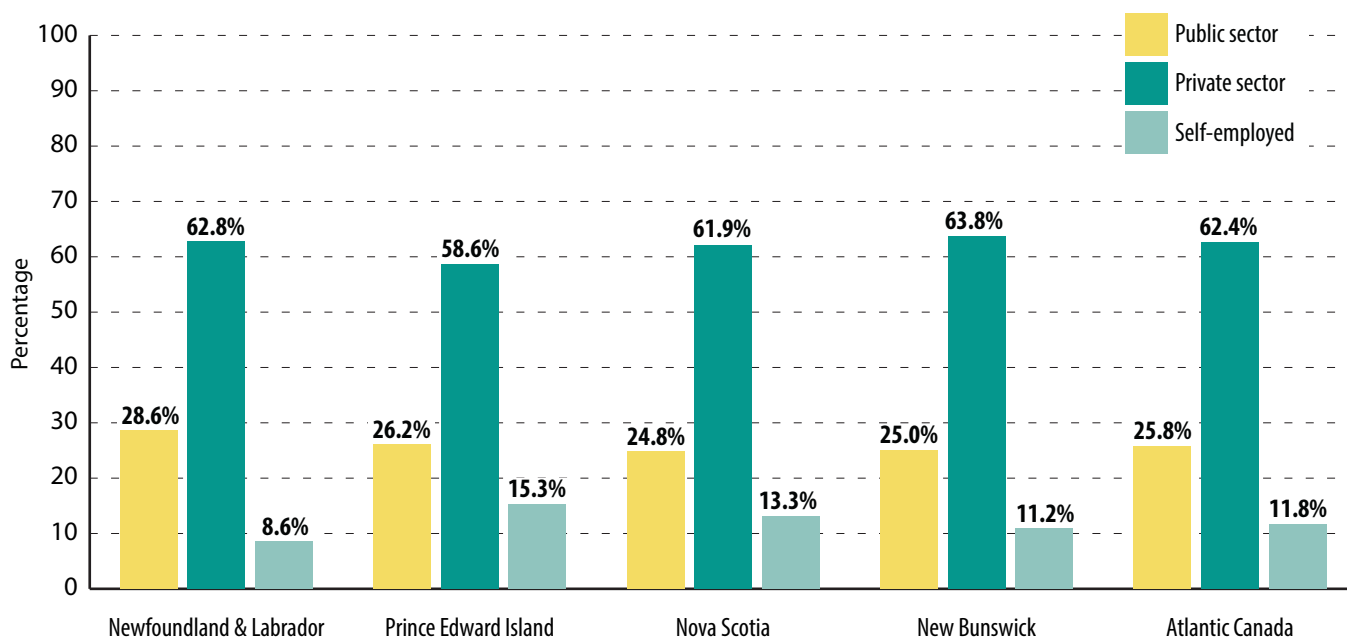
<sup>1</sup> Lammam, Palacios, Ren, and Clemens (2015) provide possible solutions to the disparities in compensation between the government and private sectors. The options they propose include: (1) gathering better data on wage and non-wage benefits for government and private-sector workers; (2) recognizing that total compensation is what matters, not wages alone; (3) ensuring that the information about government-sector wages and benefits is transparent, accessible, and disclosed regularly; and (4) instituting mechanisms, such as wage boards, for setting compensation. For more details, see Lammam, Palacios, Ren, and Clemens, 2015.

## Comparing the size of the government and private sectors

Before analyzing compensation in the government and private sectors, it is useful to compare the two sectors in a more general way. In 2018, about 286,000 workers in Atlantic Canada, representing 25.8% of total employment, were employed in the public sector. This includes the federal, provincial, and local governments, as well as government agencies, crown corporations, and government-funded establishments such as schools (including universities) and hospitals (Statistics Canada, 2018).<sup>2</sup> In contrast, there were 694,000 workers employed in the private sector in 2018, representing 62.4% of total employment

(Statistics Canada, 2019a). The remaining 11.8% (131,000) were self-employed. **Figure 1** displays the composition of total employment across four Atlantic provinces in 2018. Among the four provinces, Newfoundland & Labrador's has the largest rate of public-sector employment relative to total employment (28.6%), followed by Prince Edward Island (26.2%), New Brunswick (25.0%), and Nova Scotia (24.8%). The size of the private sector ranges from 58.6% in Prince Edward Island to 63.8% in New Brunswick. Self-employment represents between 8.6% (Newfoundland & Labrador) and 15.3% (Prince Edward Island).

**Figure 1: Components (%) of total employment in Atlantic Canada, 2018**



Sources: Statistics Canada, 2019a; calculations by the authors.

<sup>2</sup> Unless otherwise stated, data used in this section come from Statistics Canada's Labour Force Survey. This is a household survey completed by a representative sample of the civilian population 15 years of age or older. Excluded from the survey's coverage are persons living on reserves and other Aboriginal settlements in the provinces, full-time members of the Canadian Forces, and the institutionalized population (for example, inmates of penal institutions and patients in hospitals or nursing homes who have resided in the institution for more than six months). These groups together represent an exclusion of approximately 2.0% of the population aged 15 and over (Statistics Canada, 2018).

## Comparing wages in Atlantic Canada's government and private sectors

A number of studies have empirically quantified wage differences between similar occupations in the private and public sectors. Nearly all of these studies measure just the wage differences between the public and private sectors; this is because there is a lack of data on non-wage benefits. The Canadian research examining wage differences between the two sectors over the past three decades consistently indicates a premium for government-sector workers.<sup>3</sup> The wage premiums vary depending on the data source and time period. What is clear, however, is that a premium exists.<sup>4</sup>

### *Methodology and data sources*

This report provides calculations for the government-sector wage premium in Atlantic Canada. It uses aggregated monthly data on individual workers from the Labour Force Survey from January to December of 2018 (Statistics

Canada, 2019b).<sup>5</sup> The major advantage of data from the Labour Force Survey is that public-sector workers are explicitly identified, whereas they are not in the National Household Survey data.<sup>6</sup> The Labour Force Survey sample for Atlantic Canada consists of 96,347 individuals for whom their hourly wage rate, age, gender, education, marital status, type of work, and other characteristics are available. The analysis covers paid government- and private-sector employees only (persons 15 years of age and over with employment income). It excludes the self-employed, unemployed persons, and persons not in the labour force. The Labour Force Survey breaks down the data by sector (public and private) but does not provide data for different levels of government. Therefore, the public-sector wage premium in this section contains workers from the federal, provincial, and local governments in Atlantic Canada.<sup>7</sup>

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**3** For a thorough review on wage differentials in the public and private sector in Canada, see Lammam, Palacios, Ren, and Clemens, 2015.

**4** The reason for the premium in the government sector is twofold. The process of determining wages in the public sector is markedly different from that in the private sector. The process of setting wages in the government sector is largely determined by political factors, while in the private sector it is largely guided by market forces and profit constraints. These differences are amplified by the monopoly environment in which the government sector operates while the private sector faces a competitive environment. For a more detailed explanation of the causes for the compensation premium observed in the public sector, see Lammam, Palacios, Ren, and Clemens, 2015.

**5** The Labour Force Survey is a monthly survey. However, the data used for the empirical analysis in this report is aggregated data over the 12-month period from January to December 2018.

**6** The Labour Force Survey has a “class of worker” variable that designates whether the employer is a government or privately owned enterprise, whereas the National Household Survey does not have a variable to distinguish government from private employers.

**7** Specifically, the Labour Force Survey considers the public sector as those working for federal general government (that is, federal public administration), federal government business enterprises, provincial general government, provincial health and social service institutions, universities, colleges, vocational and trade institutions, provincial government business enterprises, local general government, local school boards, and local government business enterprises. Those in the military forces are excluded from the survey.

### *The public-sector wage premium— results from empirical analysis*

The analysis in this section follows earlier academic work by Gunderson, Hyatt, and Riddell (2000). An ordinary least squares (OLS) model was employed to determine if there was a wage premium for the government sector compared to the private sector and how much it might be. For details on the methodology used to compute the public-sector wage premium in this section, please see Lammam, Palacios, Ren, and Clemens, 2015.

**Table 1** summarizes the results of the analysis of the public-sector wage premium in Atlantic Canada. This analysis was conducted using all four Atlantic provinces together to ensure the number of observations for all relevant variables was enough to produce reliable estimates. Because of the relatively small size of the Atlantic provinces, calculations for single provinces would not always be as statistically reliable, so the wage premium results presented speak to the region as a whole.

The column labelled “Model 1” provides the public-sector wage premium calculation without controlling for any factors. In other words, Model 1 represents a calculation that does not account for variables like age, experience, education, and so forth, which we know influence wages. The Model 1 estimate indicates that wages in Atlantic Canada’s public sector (including federal, provincial, and local public-sector workers) are 40.7% higher, on average, than in the private sector.

A more appropriate way to determine if there is a wage premium in the public sector is to control for different factors such as gender, age, level of education, tenure, type of employment (seasonal, contractual, part-time or full-time work, establishment size, immigrant status, province, industry, and occupation, which affect individual wage levels. Model 2 in table 1 controls for these personal characteristics. Controlling for these factors reduces the public-sector wage premium in Atlantic Canada to 11.9%, on average. When unionization is included in Model 2, the premium falls to 6.3%, which is nevertheless a significant gap.

Model 2 also provides details on the differences in hourly wages across various personal and job characteristics. For instance, after controlling for other wage-determining factors, men, on average, earn 8.4% more than women. As expected, higher education levels (particularly with postsecondary certificate or higher) lead to higher wages. In fact, those who graduate from high school earn 4.2% more than those with elementary education or less. A university graduate earns 15.9% more than those with only elementary schooling, on average, whereas those with a graduate degree earn 21.4% more. Moreover, those with full-time, permanent jobs, and longer tenure, earn, on average, higher wages than those with temporary, part-time jobs, and shorter tenure. On average, those with seasonal, contract, and casual work earn between 3.2% and 6.9% less than those with permanent jobs. The hourly wage of those who work part time is 5.6% less than those with full-time jobs.

# Comparing Government and Private Sector Compensation in Atlantic Canada

**Table 1: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Atlantic Canada, 2018**

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<b>Sector of worker</b>			
(Private employee)	Reference	Reference	Reference
Public employee	40.7 (0.3)***	11.9 (0.4)***	6.3 (0.4)***
<b>Sex</b>			
(Female)		Reference	Reference
Male		8.4 (0.2)***	8.2 (0.2)***
<b>Age group</b>			
(15–19 years)		Reference	Reference
20–24 years		–2.7 (0.6)***	–2.7 (0.6)***
25–29 years		6.5 (0.6)***	5.9 (0.6)***
30–34 years		10.9 (0.6)***	10.2 (0.6)***
35–39 years		13.5 (0.6)***	13.0 (0.6)***
40–44 years		14.7 (0.6)***	14.0 (0.6)***
45–49 years		12.9 (0.6)***	12.4 (0.6)***
50–54 years		12.5 (0.6)***	12.1 (0.6)***
55–59 years		11.6 (0.6)***	11.1 (0.6)***
60–64 years		9.3 (0.7)***	8.9 (0.7)***
65–69 years		1.1 (0.8)	0.9 (0.8)
70 and over		–2.0 (1.0)*	–2.1 (1.0)**
<b>Marital status</b>			
(Married)		Reference	Reference
Living in common-law		–1.9 (0.3)***	–2.0 (0.3)***
Widowed		–2.0 (0.9)**	–2.5 (0.9)***
Separated		–1.2 (0.5)**	–1.2 (0.5)**
Divorced		–1.7 (0.5)***	–1.9 (0.5)***
Single, never married		–6.3 (0.3)***	–6.2 (0.3)***
<b>Highest level of education</b>			
(0–8 years)		Reference	Reference
Some high school		2.6 (0.8)***	2.4 (0.8)***
High school graduate		4.2 (0.8)***	4.1 (0.8)***
Some postsecondary		6.3 (0.9)***	6.2 (0.8)***
Postsecondary certificate or diploma		9.6 (0.8)***	9.0 (0.8)***
Bachelor's degree		15.9 (0.8)***	15.5 (0.8)***
Above bachelor's degree		21.4 (0.9)***	21.2 (0.9)***

# Comparing Government and Private Sector Compensation in Atlantic Canada

**Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Atlantic Canada, 2018**

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<b>Tenure of job</b>			
<i>(Tenure 1–5 months)</i>		Reference	Reference
<i>Tenure 6–11 months</i>		–0.1 (0.4)	–0.3 (0.4)
<i>Tenure 1–5 years</i>		2.4 (0.3)***	2.0 (0.3)***
<i>Tenure 6–10 years</i>		6.4 (0.4)***	5.7 (0.4)***
<i>Tenure 11–20 years</i>		12.6 (0.4)***	11.2 (0.4)***
<b>Permanent or temporary job status</b>			
<i>(Permanent)</i>		Reference	Reference
<i>Temporary, seasonal job</i>		–6.9 (0.4)***	–6.6 (0.4)***
<i>Temporary, term or contract job</i>		–4.6 (0.4)***	–4.6 (0.4)***
<i>Temporary, casual or other temporary jobs</i>		–3.2 (0.5)***	–3.1 (0.5)***
<b>Full-time or part-time work schedule</b>			
<i>(Full-time)</i>		Reference	Reference
<i>Part-time</i>		–5.6 (0.3)***	–5.3 (0.3)***
<b>Number of employees at the location of employment</b>			
<i>(Less than 20 employees)</i>		Reference	Reference
<i>20–99 employees</i>		5.0 (0.2)***	4.1 (0.2)***
<i>100–500 employees</i>		8.9 (0.3)***	7.3 (0.3)***
<i>More than 500 employees</i>		11.1 (0.4)***	9.2 (0.4)***
<b>Industry (2012 version of North American Industry Classification System [NAICS])</b>			
<i>(Agriculture)</i>		Reference	Reference
<i>Forestry and logging and support activities for forestry</i>		13.2 (1.6)***	12.1 (1.6)***
<i>Fishing, hunting and trapping</i>		11.2 (1.5)***	9.6 (1.5)***
<i>Mining, quarrying, and oil and gas extraction</i>		31.6 (1.4)***	30.7 (1.4)***
<i>Utilities</i>		26.8 (1.6)***	27.3 (1.6)***
<i>Construction</i>		18.5 (1.3)***	18.3 (1.3)***
<i>Manufacturing - durable goods</i>		17.0 (1.4)***	16.8 (1.4)***
<i>Manufacturing - non-durable goods</i>		11.9 (1.4)***	11.4 (1.3)***
<i>Wholesale trade</i>		13.7 (1.4)***	14.3 (1.4)***
<i>Retail trade</i>		–3.2 (1.3)**	–2.8 (1.3)**
<i>Transportation and warehousing</i>		13.2 (1.3)***	11.9 (1.3)***
<i>Finance and insurance</i>		15.3 (1.4)***	15.3 (1.4)***
<i>Real estate and rental and leasing</i>		6.2 (1.6)***	6.2 (1.6)***
<i>Professional, scientific and technical services</i>		14.3 (1.4)***	14.3 (1.3)***

# Comparing Government and Private Sector Compensation in Atlantic Canada

**Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Atlantic Canada, 2018**

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>Business, building and other support services</i>		-0.3 (1.3)	-0.2 (1.3)
<i>Educational services</i>		7.1 (1.4)***	6.0 (1.4)***
<i>Health care and social assistance</i>		3.7 (1.3)***	1.9 (1.3)
<i>Information, culture and recreation</i>		5.9 (1.4)***	5.0 (1.4)***
<i>Accommodation and food services</i>		-1.4 (1.3)	-1.5 (1.3)
<i>Other services (except public administration)</i>		1.6 (1.4)	1.6 (1.4)
<i>Public administration</i>		15.8 (1.4)***	14.8 (1.3)***
<b>Occupation (2016 version of National Occupational Classification (NOC))</b>			
<i>(Senior management occupations)</i>		Reference	Reference
<i>Specialized middle management occupations</i>		2.8 (2.3)	0.7 (2.3)
<i>Middle management occupations in retail and wholesale trade and customer services</i>		-10.6 (2.4)***	-14.7 (2.4)***
<i>Middle management occupations in trades, transportation, production and utilities</i>		-6.7 (2.4)***	-9.9 (2.4)***
<i>Professional occupations in business and finance</i>		-15.8 (2.3)***	-19.4 (2.3)***
<i>Administrative and financial supervisors and administrative occupations</i>		-38.3 (2.3)***	-43.0 (2.2)***
<i>Finance, insurance and related business administrative occupations</i>		-40.1 (2.4)***	-44.2 (2.4)***
<i>Office support occupations</i>		-47.2 (2.3)***	-52.0 (2.3)***
<i>Distribution, tracking and scheduling co-ordination occupations</i>		-51.8 (2.4)***	-57.8 (2.3)***
<i>Professional occupations in natural and applied sciences</i>		-6.2 (2.3)***	-10.2 (2.3)***
<i>Technical occupations related to natural and applied sciences</i>		-24.1 (2.3)***	-29.3 (2.3)***
<i>Professional occupations in nursing</i>		0.6 (2.3)	-6.2 (2.3)***
<i>Professional occupations in health (except nursing)</i>		3.6 (2.4)	-0.9 (2.4)
<i>Technical occupations in health</i>		-24.5 (2.3)***	-30.9 (2.3)***
<i>Assisting occupations in support of health services</i>		-44.1 (2.3)***	-50.4 (2.3)***
<i>Professional occupations in education services</i>		-13.7 (2.3)***	-20.4 (2.3)***
<i>Professional occupations in law and social, community and government services</i>		-16.9 (2.3)***	-21.3 (2.3)***
<i>Paraprofessional occupations in legal, social, community and education services</i>		-40.8 (2.4)***	-45.4 (2.3)***
<i>Occupations in front-line public protection services</i>		-13.6 (2.5)***	-17.0 (2.5)***
<i>Care providers and educational, legal and public protection support occupations</i>		-45.3 (2.3)***	-52.2 (2.3)***
<i>Professional occupations in art and culture</i>		-33.0 (2.7)***	-39.1 (2.6)***
<i>Technical occupations in art, culture, recreation and sport</i>		-46.6 (2.4)***	-50.7 (2.4)***
<i>Retail sales supervisors and specialized sales occupations</i>		-47.5 (2.3)***	-52.0 (2.3)***
<i>Service supervisors and specialized service occupations</i>		-57.8 (2.3)***	-62.6 (2.3)***
<i>Sales representatives and salespersons - wholesale and retail trade</i>		-54.9 (2.3)***	-60.2 (2.3)***
<i>Service representatives and other customer and personal services occupations</i>		-57.8 (2.3)***	-63.0 (2.3)***



# Comparing Government and Private Sector Compensation in Atlantic Canada

**Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Atlantic Canada, 2018**

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>Sales support occupations</i>		-62.3 (2.3)***	-67.9 (2.3)***
<i>Service support and other service occupations not elsewhere classified</i>		-62.4 (2.3)***	-68.1 (2.3)***
<i>Industrial, electrical and construction trades</i>		-32.7 (2.3)***	-40.2 (2.3)***
<i>Maintenance and equipment operation trades</i>		-32.5 (2.3)***	-38.6 (2.3)***
<i>Other installers, repairers and servicers and material handlers</i>		-49.0 (2.4)***	-55.4 (2.4)***
<i>Transport and heavy equipment operation and related maintenance occupations</i>		-48.3 (2.3)***	-53.8 (2.3)***
<i>Trades helpers, construction labourers and related occupations</i>		-55.6 (2.4)***	-61.5 (2.4)***
<i>Supervisors and technical occupations in natural resources, agriculture and related production</i>		-39.6 (2.5)***	-44.8 (2.5)***
<i>Workers in natural resources, agriculture and related production</i>		-42.8 (2.6)***	-47.9 (2.6)***
<i>Harvesting, landscaping and natural resources labourers</i>		-48.8 (2.5)***	-54.2 (2.5)***
<i>Processing, manufacturing and utilities supervisors and central control operators</i>		-33.2 (2.5)***	-38.7 (2.4)***
<i>Processing and manufacturing machine operators and related production workers</i>		-60.2 (2.4)***	-66.8 (2.4)***
<i>Assemblers in manufacturing</i>		-55.3 (2.6)***	-60.6 (2.6)***
<i>Labourers in processing, manufacturing and utilities</i>		-62.4 (2.5)***	-69.6 (2.4)***
<b>Immigrant status</b>			
<i>(Non-immigrant)</i>		Reference	Reference
<i>Immigrant, landed 10 or less years earlier</i>		-1.2 (0.6)*	-1.2 (0.6)*
<i>Immigrant, landed more than 10 years earlier</i>		-0.8 (0.6)	-0.8 (0.6)
<b>Province</b>			
<i>(Nova Scotia)</i>		Reference	Reference
<i>Newfoundland &amp; Labrador</i>		5.8 (0.3)***	5.2 (0.3)***
<i>Prince Edward Island</i>		-1.9 (0.3)***	-2.1 (0.3)***
<i>New Brunswick</i>		-1.8 (0.2)***	-1.6 (0.2)***
<b>Union status</b>			
<i>(Union member)</i>			Reference
<i>Not a member but covered by a union contract or collective agreement</i>			-4.8 (0.8)***
<i>Non-unionized</i>			-11.6 (0.3)***
Constant	292.7 (0.2)***	302.0 (2.8)***	320.0 (2.8)***
N	96,347	96,347	96,347
Adjusted R Square	0.16	0.60	0.60

Notes: (a) The control variables used in the regressions include sex, age, marital status, education, tenure, type of employment (seasonal, contractual), part-time or full-time work, establishment size, immigrant status, province, industry and occupation. (b) Self-employment is not included. (c) The numbers in parentheses are the standard errors of the regression coefficients. (d) \*, \*\* and \*\*\* denote statistical significance at the 10%, 5% and 1% levels, respectively.

Sources: Statistics Canada, 2019b; calculations by the authors.

## Comparing non-wage benefits in Atlantic Canada's public and private sectors

Although public-sector workers in Atlantic Canada enjoy a wage premium, this does not tell us whether their overall compensation is higher than, comparable to, or lower than that of workers in the private sector. That is because wages are only a part of total employee compensation. Unfortunately, individual-level data on non-wage benefits, such as pensions, vacation time, and health benefits, are not readily available in Canada, which explains the lack of research on this aspect of employee compensation. It is critical that Canada's statistical agency, Statistics Canada, augment its current survey in order to begin collecting and analyzing data on non-wage benefits.

Fortunately, there are some aggregated data about non-wage benefits that can be examined to roughly compare how Atlantic Canada's public-sector non-wage benefits compare to those of the region's private sector. Four types of non-wage benefits data are examined: registered pensions, average age of retirement, job loss (as a proxy of job security), and the absence rate of full-time employees. These data will be presented for each Atlantic province.

### **Registered pensions**

The pension benefit is the first non-wage benefit to consider. The benefit has two important dimensions. The first is the percentage of workers in both sectors who have a registered pension. The second dimension is the type of pension plan in each sector. [Table 2](#) summarizes the pension data for each Atlantic province.

There is a dramatic difference between the registered pension coverage in the public and private sectors across all Atlantic provinces. For instance, in 2018, 22.4% and 22.8% of private-sector workers were covered by a registered pension plan

in Nova Scotia and New Brunswick, respectively, compared to coverage rates of 91.7% and 91.9% among their public-sector counterparts. In other words, while a little over one of every 5 private-sector workers in these two provinces has a registered pension plan, more than 9 of every 10 public-sector workers do. In Newfoundland & Labrador, 28.3% of private-sector workers were covered by a registered pension plan in 2018, while the pension coverage rate for public-sector workers was 93.8%.

Among the Atlantic provinces, Prince Edward Island recorded the lowest pension coverage rates in both the private and public sectors. In fact, while one of every 6 (16.7%) private-sector workers has a registered pension plan, 8 of every 10 (80.4%) public-sector workers do.

The gap between the public and private sectors is also evident when we consider the second dimension, the type of pension plan in each sector. A *defined benefit plan* provides workers with a guaranteed benefit in retirement. A *defined contribution plan*, on the other hand, provides employees with a benefit that is based on their contributions, their employer's contributions, and earnings on the pension savings over time. A defined benefit plan is increasingly scarce in the private sector because of its high costs and risks for employers. Specifically, in a defined benefit pension plan, the employer bears all the financial risk since the employee is guaranteed the benefit. If returns on the pension's investment fund do not match expectations, the employer must increase the contributions to the plan to fully fund the guaranteed benefit.

The comparative data presented in [table 2](#) illustrate the increasing scarcity of defined benefit

**Table 2: Registered pension plan (RPP) members in Atlantic Canada, by type of plan and sector, January 1, 2018**

	Newfoundland & Labrador			Prince Edward Island			Nova Scotia			New Brunswick		
	Total	Private sector	Public sector	Total	Private sector	Public sector	Total	Private sector	Public sector	Total	Private sector	Public sector
Total number of members who have RPPs:	102,644	42,129	60,515	23,403	8,134	15,269	172,803	68,982	103,821	136,522	55,078	81,444
<i>Defined benefit plans</i>	62,259	17,362	44,897	16,007	1,061	14,946	116,433	20,848	95,585	36,005	14,510	21,495
<i>Defined contribution plans</i>	25,873	n/a	n/a	4,507	n/a	n/a	35,023	28,631	6,392	26,141	22,241	3,900
<i>Other pension plans</i>	n/a	n/a	n/a	n/a	n/a	n/a	21,347	19,503	1,844	74,376	18,327	56,049
Total Employment, 2018	213,600	149,100	64,500	67,800	48,800	19,000	421,200	308,000	113,200	330,600	242,000	88,600
<b>Percentage of employees covered by pension plans</b>	<b>48.1</b>	<b>28.3</b>	<b>93.8</b>	<b>34.5</b>	<b>16.7</b>	<b>80.4</b>	<b>41.0</b>	<b>22.4</b>	<b>91.7</b>	<b>41.3</b>	<b>22.8</b>	<b>91.9</b>
As a % of total number of members												
<i>Defined benefit plans</i>	60.7	41.2	74.2	68.4	13.0	97.9	67.4	30.2	92.1	26.4	26.3	26.4
<i>Defined contribution plans</i>	25.2	n/a	n/a	19.3	n/a	n/a	20.3	41.5	6.2	19.1	40.4	4.8
<i>Other pension plans</i>	n/a	n/a	n/a	n/a	n/a	n/a	12.4	28.3	1.8	54.5	33.3	68.8

Notes: [a] Total employment includes workers in the public and private sector as well as self-employed workers in incorporated businesses (with and without paid help). Self-employed incorporated businesses are included in the private sector because, like their public- and private-sector counterparts, they are able to have a registered pension plan (RPP). [b] The registered pension plan data comes from the annual Pension Plans in Canada Survey (PPIC). Meanwhile, total employment data comes from Statistics Canada's Labour Force Survey (LFS). Although these two data sets (PPIC and LFS) are comparable, there are some conceptual differences that should be pointed out. First, members of Canadian Registered Pension Plans (RPP) living on Indian reserves (in any province or territory) as well as those working outside Canada (less than 1% of total RPP membership) are included in the pension plan membership but these groups are excluded from Labour Force Survey estimates. Second, estimates in the Labour Force Survey are annual averages while pension plan membership refers to the number of active, employed participants as of January 1, 2018. Finally, the Labour Force Survey does not cover full-time members of the Armed Forces. [c] Because of some conceptual differences between the PPIC and LFS, the percentage of employees covered by a pension plan might be lower than the numbers shown in this table. [d] Numbers may not add up to the total because of rounding. [e] Data that have been suppressed because of confidentiality are marked "n/a".

Sources: Statistics Canada, 2019a, 2019c; calculations by the authors.

pensions in the private sector compared to the prevalence of these pension plans in the public sector. The most striking difference happened in Prince Edward Island. In 2018, of the workers in this province who were covered by a pension plan, 97.9% of those in the public sector enjoyed a defined benefit pension compared to 13.0% of those in the private sector. While around one out of 8 private-sector workers covered with a pension has a pension with a guaranteed benefit in retirement, a guaranteed benefit is the norm in the public sector in Prince Edward Island.

Defined benefit plans also account for more than 9 out of 10 (92.1%) pension plan members in the public sector in Nova Scotia, while 3 out of 10 (30.2%) pension plan members in the private sector have a pension with a guaranteed benefit upon retirement.

In Newfoundland & Labrador, nearly three-quarters (74.2%) of pension-plan members in the public have a guaranteed retirement benefit in 2018, while the share of defined benefit plans among private-sector pension-plan members is just a little over four in ten (41.2%).

New Brunswick is the exception. It introduced a new *Shared Risk Pension Model* in 2012.<sup>8</sup> The shared-risk plans represent a hybrid of defined benefit plans and defined contribution plans: should contribution levels need to be raised or benefits adjusted, both employers and employees will share the responsibility. As a result, the province had a small, and virtually the same, share of defined benefit plans among pension-plan members in the public (26.4%) and private sectors (26.3%) in 2018.

### Average age of retirement

Public-sector employees in Atlantic Canada not only earn more and are more likely to be covered by pension plans, but also tend to retire earlier. **Table 3** presents data on the average age of retirement for public- and private-sector workers between 2014 and 2018, for Canada as a whole and for individual provinces.<sup>9</sup> On average, Newfoundland & Labrador's public-sector employees tend to retire 4.2 years earlier than their private-sector peers. This is the largest difference in retirement age between the two sectors among Canadian provinces. In Prince Edward Island and Nova Scotia, the figures are 3.3 years and 2.9 years, respectively. The smallest difference in the region is found in New Brunswick where public-sector employees tend to retire 2.3 years earlier than their private-sector counterparts.<sup>10</sup>

**Table 3: Average retirement age (years), 2014–2018**

	Total	Public-sector employees	Private-sector employees	Difference (years)
Canada	63.5	61.5	64.0	2.4
<b>NL</b>	<b>62.2</b>	<b>59.7</b>	<b>63.9</b>	<b>4.2</b>
<b>PEI</b>	<b>64.1</b>	<b>62.4</b>	<b>65.7</b>	<b>3.3</b>
<b>NS</b>	<b>63.0</b>	<b>61.1</b>	<b>64.0</b>	<b>2.9</b>
<b>NB</b>	<b>63.0</b>	<b>61.3</b>	<b>63.6</b>	<b>2.3</b>
QC	62.7	60.5	63.5	3.0
ON	63.5	61.8	63.8	2.0
MB	63.5	61.8	64.3	2.6
SK	64.1	62.0	63.9	1.9
AB	64.5	62.8	64.5	1.8
BC	64.0	62.3	64.2	1.9

Notes: [a] Total includes workers in the public and private sector, and self-employed individuals (including unpaid family workers). [b] The difference in years may not equal the difference as displayed by the data because the retirement age years for both the public and private sectors are rounded.

Sources: Statistics Canada, 2019d; calculations by the authors.

### Job loss as a proxy for job security

Another way to compare government- and private-sector employees is to consider how likely each group is to experience job losses. **Table 4** presents data on job losses in 2018 (excluding workers with temporary employment) for Canada as a whole and for the provinces. There are several reasons for job loss, including firms moving

**8** For more information about the Shared Risk Pension Model introduced by the Government of New Brunswick, please see New/Nouveau Brunswick, 2012.

**9** Statistics Canada notes that the data on age of retirement should be used with caution because of small sample sizes, especially for the provinces. Five-year averages were used (2014–2018) in an attempt to mitigate this problem.

**10** The authors also examined median retirement age. Whether the average or median age of retirement is used, public-sector workers in the Atlantic provinces are found to retire at an earlier age than their private-sector counterparts. If the median retirement age is used, the difference in years is slightly larger. For instance, public-sector workers in Newfoundland & Labrador, Prince Edward Island, Nova Scotia, and New Brunswick, retire 5.3, 3.9, 3.2, 3.5 years earlier, respectively, than the private-sector employees if the median rather than the average is used.

**Table 4: Job loss by sector, 2018**

	JOB LOSSES (thousands)			JOB LOSSES (% of employment)			
	Total	Public sector	Private sector	Total	Public sector	Private sector	Difference (percentage points)
Canada	310.3	16.3	294.0	2.0	0.4	2.4	2.0
<b>NL</b>	<b>10.8</b>	<b>0.7</b>	<b>10.1</b>	<b>5.2</b>	<b>1.1</b>	<b>7.1</b>	<b>6.1</b>
<b>PEI</b>	<b>1.5</b>	<b>n/a</b>	<b>1.4</b>	<b>2.3</b>	<b>n/a</b>	<b>3.1</b>	<b>n/a</b>
<b>NS</b>	<b>7.9</b>	<b>n/a</b>	<b>7.5</b>	<b>2.0</b>	<b>n/a</b>	<b>2.7</b>	<b>n/a</b>
<b>NB</b>	<b>9.8</b>	<b>0.5</b>	<b>9.3</b>	<b>3.1</b>	<b>0.6</b>	<b>4.1</b>	<b>3.6</b>
QC	65.3	2.1	63.2	1.8	0.2	2.3	2.1
ON	115.1	7.0	108.1	1.9	0.5	2.3	1.8
MB	9.1	0.9	8.2	1.6	0.6	2.1	1.5
SK	10.3	0.7	9.6	2.2	0.5	2.9	2.4
AB	49.9	2.8	47.1	2.6	0.6	3.2	2.5
BC	30.6	n/a	29.6	1.5	n/a	1.8	n/a

Notes: [a] Total employment includes workers in the public and private sectors. Self-employment is not included. [b] Reasons for losing a job include (1) company moved, (2) company went out of business, (3) business conditions and (4) dismissal by employer. Job losses as a result of an end of temporary, casual, and seasonal job are not included. [c] The difference in years may not equal the difference as displayed by the data because the job loss percentages for both the public and private sectors are rounded. [d] “n/a” denotes estimates that are suppressed (cannot be published) because the data is below the confidentiality threshold. This threshold is 1,500 for Canada, Quebec, Ontario, Alberta, and British Columbia; less than 500 for Newfoundland & Labrador, New Brunswick, Nova Scotia, Manitoba, and Saskatchewan; and less than 200 for Prince Edward Island. For suppression levels within census metropolitan areas (CMAs), census agglomerations (CA), and economic regions (ERs), use the respective provincial suppression levels above.

Sources: Statistics Canada, 2019a, 2019e; calculations by the authors.

location, firms going out of business, changing business conditions, and dismissal. In 2018, 7.1% of those employed in the private sector experienced job loss in Newfoundland & Labrador, compared to only 1.1% of those employed in the public sector. That means the rate of job loss was nearly seven times higher in the private sector. In New Brunswick, private-sector workers were seven times more likely to experience job loss than public-sector workers (4.1% compared to 0.6%). While the rate of private-sector employees experiencing job loss in Prince Edward Island and Nova Scotia are 3.1% and 2.7%, respectively, comparison with the public sector is not directly available as the figures for the public sector were suppressed for confidentiality.

### **Absence rate of full-time employees**

**Table 5** presents a measure of the absence rate in the two sectors: total days lost per worker in 2018. Among full-time employees, an average of 9.0 days was lost for personal reasons in the private sector in Newfoundland & Labrador, compared to 15.6 days in the public sector (6.6 days more). In Nova Scotia and New Brunswick, the differences are 5.7 and 5.2 days, respectively. Prince Edward Island had the least difference in absence days between the two sectors among the Atlantic provinces (and also among all Canadian provinces). In fact, government workers in that province were absent from their jobs for personal reasons 4.5 more days, on average, than its private-sector workers—12.7 days compared to 8.2 days.

**Table 5: Total days lost per full-time employee, by sector, 2018**

	Total	Public sector	Private sector	Difference (days)		Total	Public sector	Private sector	Difference (days)
Canada	10.0	14.6	8.6	6.0	ON	9.1	13.7	7.8	5.9
<b>NL</b>	<b>11.0</b>	<b>15.6</b>	<b>9.0</b>	<b>6.6</b>	MB	10.8	14.5	9.4	5.1
<b>PEI</b>	<b>9.5</b>	<b>12.7</b>	<b>8.2</b>	<b>4.5</b>	SK	10.2	13.6	8.7	4.9
<b>NS</b>	<b>10.9</b>	<b>15.0</b>	<b>9.3</b>	<b>5.7</b>	AB	8.7	12.4	7.6	4.8
<b>NB</b>	<b>10.8</b>	<b>14.6</b>	<b>9.4</b>	<b>5.2</b>	BC	10.3	15.1	9.0	6.1
QC	11.8	16.9	10.2	6.7					

Notes: [a] Absence data are only for personal reasons: that is, illness or disability, and personal or family responsibility. [b] Days lost per worker are calculated by multiplying the inactivity rate (number of hours lost as a proportion of the usual weekly hours worked by full-time workers) by the estimated number of working days in the year (250). The estimated number of working days in the year (250) is in line with other research in the field. This number assumes that the typical full-time employee works a 5-day week and is entitled to all statutory holidays (around 10 days a year). Thus, the potential annual labour supply of a typical worker would be 52 weeks multiplied by 5, less 10 statutory holidays, or 250 days. This allows the days lost per worker in a year to be calculated.

Sources: Statistics Canada, 2019f; calculations by the authors.

## Conclusion

In 2018, Atlantic Canada’s government-sector workers earned a wage premium of 11.9%, on average. When unionization is accounted for, the wage premium declines to 6.3%. These findings are in line with previous research investigating wage differences between the two sectors in other parts of Canada (Palacios and Li, 2019; Palacios, Li, and Lafleur, 2019a, 2019b). While there is insufficient data to calculate

definitively the differences in non-wage benefits between the public and private sectors in Atlantic Canada, the available data suggest that the public sector enjoys more generous non-wage benefits than the private sector, including higher rates of pension coverage, higher rates of defined benefit pensions, earlier ages of retirement, lower rates of job loss, and more days lost per worker.

## References

- Eisen, Ben, Milagros Palacios, Fred McMahon, and Alex Whalen (2019). *Catching Up with Canada: A Prosperity Agenda for Atlantic Canada*. <<https://www.fraserinstitute.org/sites/default/files/catching-up-with-canada-prosperity-agenda-for-atlantic-canada.pdf>>, as of November 28, 2019.
- Gunderson, Morley, Douglas Hyatt, and Craig Riddell (2000). *Pay Differences between the Government and Private Sectors: Labour Force Survey and Census Estimates*. Human Resources in Government Series, CPRN Discussion Paper No. W10. Canadian Policy Research Networks.
- Lammam, Charles, Milagros Palacios, Feixue Ren, and Jason Clemens (2015). *Comparing Public and Private Sector Compensation in Canada*. <<https://www.fraserinstitute.org/sites/default/files/comparing-government-and-private-sector-compensation-in-canada.pdf>>, as of November 28, 2019.

- New/Nouveau Brunswick (2012). *New Pension Model Introduced*. Press release (May 31). <[https://www2.gnb.ca/content/gnb/en/news/news\\_release.2012.05.0477.html](https://www2.gnb.ca/content/gnb/en/news/news_release.2012.05.0477.html)>, as of January 10, 2020.
- Palacios, Milagros, Nathaniel Li (2019). *Comparing Public and Private Sector Compensation in British Columbia, 2019*. <<https://www.fraserinstitute.org/sites/default/files/comparing-govt-and-private-sector-compensation-in-bc-2019.pdf>>, as of November 28, 2019.
- Palacios, Milagros, Nathaniel Li, and Steve Lafleur (2019a). *Comparing Public and Private Sector Compensation in Alberta, 2019*. <<https://www.fraserinstitute.org/sites/default/files/comparing-govt-and-private-sector-compensation-in-ab-2019.pdf>>, as of November 28, 2019.
- Palacios, Milagros, Nathaniel Li, and Steve Lafleur (2019b). *Comparing Public and Private Sector Compensation in Ontario, 2019*. <<https://www.fraserinstitute.org/sites/default/files/comparing-govt-and-private-sector-compensation-in-on-2019.pdf>>, as of November 28, 2019.
- Statistics Canada (2018). *Guide to the Labour Force Survey*. Catalogue No. 71-543-G.
- Statistics Canada (2019a). Table 14-10-0027-01. *Employment by Class of Worker, Annual (x 1,000)*. <<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410002701>>, as of November 28, 2019.
- Statistics Canada (2019b). *Labour Force Survey (monthly). Microdata file (January to December 2019)*. Ordered from, and sent by, Statistics Canada on September 11, 2019.
- Statistics Canada (2019c). *Registered Pension Plans (RPPs) Members, by Type of Plan and Sector, 2018*. Custom tabulation provided by Statistics Canada (received on October 17, 2019).
- Statistics Canada (2019d). *Average and Median Retirement Age by Sex, Class of Worker, Canada and Provinces, Annual Average*. Custom tabulation from the Labour Force Survey provided by Statistics Canada (received on October 1, 2019).
- Statistics Canada (2019e). *Job Loss by Reasons and by Class of Worker for Canada and the Provinces*. Custom tabulation from the Labour Force Survey provided by Statistics Canada (received on October 11, 2019).
- Statistics Canada (2019f). *Absence Rates for Full-Time Employees by Sex and Public and Private Sector, Canada and Provinces*. Custom tabulation from the Labour Force Survey provided by Statistics Canada (received on October 1, 2019).
- Statistics Canada (2019g). Table 17-10-0005-01. *Population Estimates on July 1st, by Age and Sex*. <<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710000501>>, as of November 28, 2019.

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## Milagros Palacios

Milagros Palacios is the Associate Director for the Addington Centre for Measurement at the Fraser Institute. She holds a B.S. in Industrial Engineering from the Pontifical Catholic University of Peru and a M.Sc. in Economics from the University of Concepcion, Chile. Since joining the Institute, Ms. Palacios has authored or coauthored over 150 comprehensive research studies, 100 commentaries and four books. Her recent commentaries have appeared in major Canadian newspapers such as the *National Post*, *Toronto Sun*, *Windsor Star*, and *Vancouver Sun*.



journals, including the *Applied Economic Perspectives and Policy*, *Agricultural Economics*, *Preventive Medicine*, and *Canadian Public Policy*. His current research covers a wide range of issues in fiscal, education, and labour-market policies.

## Alex Whalen

Alex Whalen is a Policy Analyst with the Fraser Institute and coordinator for many of the activities in the recently launched Atlantic Canada division. Prior to joining the Institute, he was the Vice-President of the Atlantic Institute for Market Studies (AIMS), which merged with the Fraser Institute in November 2019. He is a graduate of the Schulich School of Law at Dalhousie University, where he focused on business and tax law, and of the UPEI Business School, where he focused on economics and entrepreneurship. His writing has appeared in the *National Post*, *Chronicle-Herald*, *Telegraph-Journal*, *Prince Arthur Herald*, *Charlottetown Guardian*, *Journal Pioneer*, and *UPEI School of Business Magazine*. A native of Summerside, Prince Edward Island, he writes regularly on public finance, taxation, municipal affairs, and economics.



## Nathaniel Li

Nathaniel Li is an Economist at the Fraser Institute. He holds a B.A. from the Fudan University in China and a Ph.D. in Food, Agricultural and Resource Economics from the University of Guelph. Prior to joining the Fraser Institute, he worked for the University of Toronto as a postdoctoral fellow and the University of Guelph as a research associate. His past research work has been published in many high-quality, peer-reviewed academic

