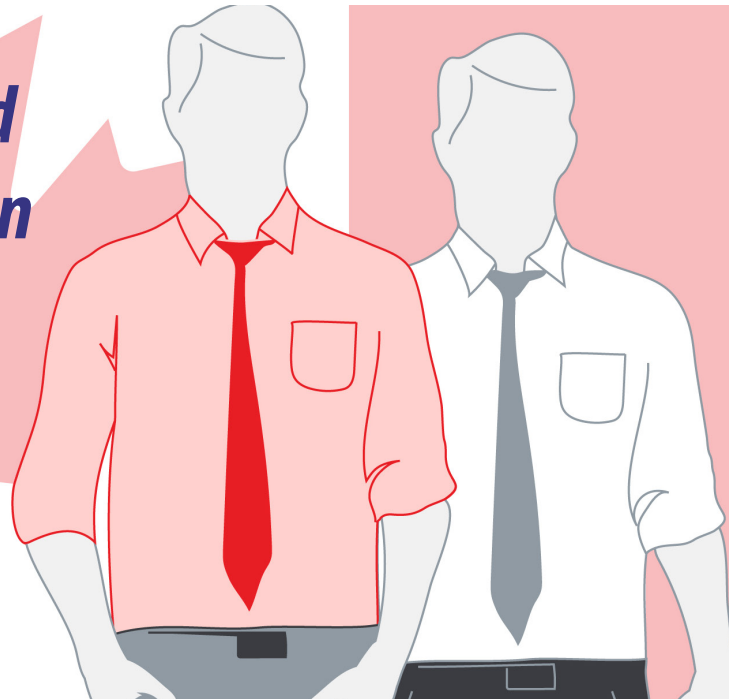


Comparing Government and Private Sector Compensation in Canada, 2023 Edition

by Milagros Palacios, Nathaniel Li, and Ben Eisen



MAIN CONCLUSIONS

■ Using data on individual workers from January to December 2021, this report estimates the wage differential between the government and private sectors in Canada. It also evaluates four non-wage benefits for which data are available to quantify differences in the compensations offered by the two sectors in these provinces.

■ After controlling for factors like sex, age, marital status, education, tenure, size of firm, job permanence, immigrant status, industry, occupation, province, and city, the authors found that Canada's government-sector workers (from federal, provincial, and local governments) enjoyed an 8.5% wage premium, on average, over their private-sector counterparts in 2021. When the wage difference between unionized and non-unionized workers is taken into account, the wage premium for the government sector declines to 5.5%.

■ Available data on non-wage benefits suggest that the government sector enjoys an advantage over the private sector. For example, 86.6% of government workers are covered by a registered pension plan compared to 22.9% of private-sector workers. Of those covered by a registered pension plan, 90.6% of government workers enjoyed a defined-benefit pension compared 39.9% of private-sector workers.

■ In addition, government workers retire earlier than those in the private-sector—about 2.4 years earlier on average—and were much less likely to lose their jobs: 1.0% in the public sector compared to 4.8% in the private sector.

■ Moreover, full-time workers in the government sector lost more work time in 2021 for personal reasons (14.9 days on average) than their private-sector counterparts (9.8 days).

Introduction

As governments of all levels across Canada attempt to achieve sustainable public finances following the 2020 recession and in the face of demographic headwinds, there is 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, 2016; Palacios and Li, 2020). Using data on individual workers from January to December of 2021, the report updates past estimates of the wage differential between government-sector workers in Canada (from federal, provincial, and local governments) and their private-sector counterparts. It also evaluates four non-wage benefits for which data are available to quantify compensation differences between the two sectors.

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 of the government

sector since data on non-wage benefits is lacking. However, we do present the data that are available on non-wage benefits to shed some light on the differences in the benefits gained by workers in the government and private sectors.

The report is divided into four sections. The first provides some basic statistics on government- and private-sector employment in Canada. The second presents the results of calculations used to determine the wage premium in the government sector. The third section compares available data on non-wage benefits to ascertain the likelihood that these benefits are at a premium in the government sector compared to compensation in the private sector. The final section concludes.¹

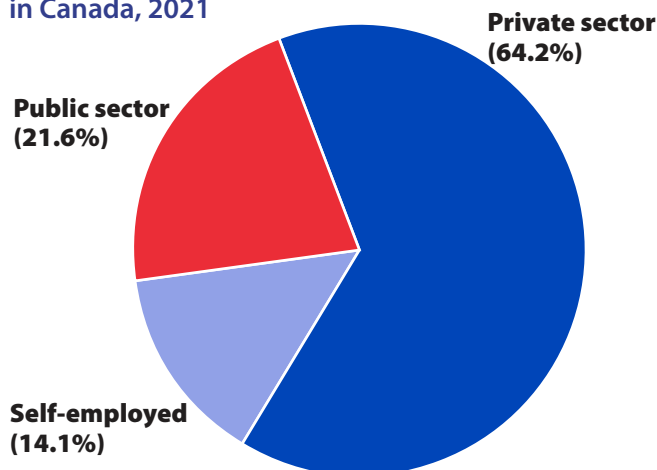
Comparing the size of the government and private sectors

Figure 1 shows the composition of total employment in Canada in 2021. In that year, almost 4.1 million Canadian workers, representing 21.6% 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, 2020).² In

1 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 regarding government-sector wages and benefits is transparent, accessible, and disclosed regularly; and (4) instituting mechanisms for setting compensation such as wage boards.

2 Unless otherwise stated, data used in this section come from Statistics Canada's Labour Force Survey (LFS). This is a household survey of a sample of individuals who are representative 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, 2020).

Figure 1: Components (%) of total employment in Canada, 2021



Sources: Statistics Canada, 2022g; calculations by the authors.

contrast, there were 12.1 million workers employed in the private sector in 2021, representing 64.2% of total employment (Statistics Canada, 2022g). The remaining 14.1% (2.7 million) were self-employed.

Comparing wages in 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 the studies measure just the wage differences

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.³ The specific wage premiums vary depending on the data source and time period.⁴

Methodology and data sources

This report provides new calculations for the government-sector wage premium in Canada. It uses aggregated monthly data on individual workers from the Labour Force Survey from January to December of 2021 (Statistics Canada, 2022d).⁵ The major advantage of the data from the Labour Force Survey is that public-sector workers are explicitly identified, whereas they are not in the National Household Survey data.⁶ The Labour Force Survey sample for Canada consists of 510,043 individuals for whom data on their hourly wage rate, age, sex, education, province, 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

3 For a review of wage differentials in the public and private sectors 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 wage process in the government sector is largely determined by political factors, while the process in the private sector is largely guided by market forces and profit constraints. These differences are amplified because the government sector operates in a monopoly environment 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 2021.

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 such variable to distinguish government from private employers.

data for different levels of government. Therefore, the public-sector wage premium in this section reflects data for workers in the federal, provincial, and local governments in Canada.⁷

The public-sector wage premium— results from empirical analysis

The analysis in this section updates the analysis done by Palacios and Li (2020) and follows earlier academic work by Gunderson, Hyatt, and Riddell (2000). An ordinary least squares (OLS) model was employed to estimate if a wage premium might exist between the government and private sectors, and how much it might be.⁸

Table 1 summarizes the results of the analysis of the public and private wage-sector comparison in Canada. The table's 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 results of Model 1 indicate that wages in Canada's public sector (including federal, provincial, and local public sector workers), are 31.3% 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 factors such as sex, age, level of education, tenure, type of employment (seasonal, contractual), part-time or full-time work, establishment

size, immigrant status, industry, occupation, province, and city, which affect individual wage levels. Model 2 (table 1, 2nd column) controls for these personal characteristics. Controlling for these factors reduces the public-sector wage premium in Canada to 8.5%, on average. When unionization is included in Model 2, the premium is reduced to 5.5%.

Model 2 also provides details on the differences in wages across various personal and job characteristics. For instance, after controlling for other wage-determining factors (unionization excluded), men, on average, earn 8.7% 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 5.8% 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 22.1% more. Recent immigrants, defined as those landed 10 or fewer years ago, and established immigrants (landed more than 10 years ago) earn, respectively, 11.0% and 6.4% less than non-immigrants. 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 4.3% and 6.8% less than those with permanent jobs. The hourly wage of those who work part time is 6.6% less than those with full-time jobs.

⁷ Specifically, the Labour Force Survey considers the public sector as those working for federal general government (i.e., 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 Armed Forces are excluded from the survey.

⁸ 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: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Canada, 2021

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
Sector of worker			
(Private employee)	Reference	Reference	Reference
Public employee	31.3 (0.1)***	8.5 (0.2)***	5.5 (0.2)***
Sex			
(Female)		Reference	Reference
Male		8.7 (0.1)***	8.6 (0.1)***
Age group			
(15–19 years)		Reference	Reference
20–24 years		-2.0 (0.2)***	-2.1 (0.2)***
25–29 years		4.6 (0.3)***	4.3 (0.3)***
30–34 years		10.1 (0.3)***	9.7 (0.3)***
35–39 years		12.8 (0.3)***	12.4 (0.3)***
40–44 years		13.9 (0.3)***	13.5 (0.3)***
45–49 years		14.4 (0.3)***	14.0 (0.3)***
50–54 years		13.9 (0.3)***	13.6 (0.3)***
55–59 years		12.2 (0.3)***	11.9 (0.3)***
60–64 years		10.0 (0.3)***	9.7 (0.3)***
65–69 years		7.0 (0.3)***	7.0 (0.3)***
70 and over		0.5 (0.4)	0.7 (0.4)*
Marital status			
(Married)		Reference	Reference
Living in common-law		-0.5 (0.1)***	-0.6 (0.1)***
Widowed		-3.6 (0.4)***	-3.7 (0.4)***
Separated		-1.4 (0.3)***	-1.5 (0.3)***
Divorced		-1.1 (0.2)***	-1.2 (0.2)***
Single, never married		-5.3 (0.1)***	-5.4 (0.1)***
Highest level of education			
(0–8 years)		Reference	Reference
Some high school		3.4 (0.4)***	3.3 (0.4)***
High school graduate		5.8 (0.4)***	5.6 (0.4)***
Some post-secondary		7.5 (0.4)***	7.4 (0.4)***

Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Canada, 2021

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>Post-secondary certificate or diploma</i>		10.7 (0.4)***	10.4 (0.4)***
<i>Bachelor's degree</i>		15.9 (0.4)***	15.7 (0.4)***
<i>Above bachelor's degree</i>		22.1 (0.4)***	22.1 (0.4)***
Tenure of job			
<i>(Tenure 1–5 months)</i>		Reference	Reference
<i>Tenure 6–11 months</i>		–0.2 (0.2)	–0.3 (0.2)
<i>Tenure 1–5 years</i>		1.7 (0.2)***	1.4 (0.2)***
<i>Tenure 6–10 years</i>		7.1 (0.2)***	6.6 (0.2)***
<i>Tenure 11–20 years</i>		13.8 (0.2)***	12.9 (0.2)***
Permanent or temporary job status			
<i>(Permanent)</i>		Reference	Reference
<i>Temporary, seasonal job</i>		–6.8 (0.3)***	–6.5 (0.3)***
<i>Temporary, term or contract job</i>		–5.3 (0.2)***	–5.1 (0.2)***
<i>Temporary, casual or other temporary jobs</i>		–4.3 (0.2)***	–4.1 (0.2)***
Full-time or part-time work schedule			
<i>(Full-time)</i>		Reference	Reference
<i>Part-time</i>		–6.6 (0.1)***	–6.5 (0.1)***
Number of employees at the location of employment			
<i>(Fewer than 20 employees)</i>		Reference	Reference
<i>20–99 employees</i>		5.4 (0.1)***	4.8 (0.1)***
<i>100–500 employees</i>		9.8 (0.1)***	8.8 (0.1)***
<i>More than 500 employees</i>		13.8 (0.1)***	12.8 (0.1)***
Industry (2017 version of North American Industry Classification System [NAICS])			
<i>(Agriculture)</i>		Reference	Reference
<i>Forestry and logging and support activities for forestry</i>		21.4 (0.9)***	20.7 (0.8)***
<i>Fishing, hunting and trapping</i>		12.5 (1.2)***	11.7 (1.2)***
<i>Mining, quarrying, and oil and gas extraction</i>		39.9 (0.7)***	39.4 (0.7)***
<i>Utilities</i>		34.7 (0.8)***	34.2 (0.8)***
<i>Construction</i>		26.3 (0.7)***	25.6 (0.7)***
<i>Manufacturing—durable goods</i>		19.2 (0.7)***	19.1 (0.7)***
<i>Manufacturing—non-durable goods</i>		17.0 (0.7)***	16.6 (0.7)***

Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Canada, 2021

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>Wholesale trade</i>		21.2 (0.7)***	21.2 (0.7)***
<i>Retail trade</i>		3.4 (0.7)***	3.1 (0.7)***
<i>Transportation and warehousing</i>		20.2 (0.7)***	19.3 (0.7)***
<i>Finance and insurance</i>		23.2 (0.7)***	23.0 (0.7)***
<i>Real estate and rental and leasing</i>		16.1 (0.8)***	15.9 (0.8)***
<i>Professional, scientific, and technical services</i>		19.6 (0.7)***	19.4 (0.7)***
<i>Business, building, and other support services</i>		10.5 (0.7)***	10.1 (0.7)***
<i>Educational services</i>		11.3 (0.7)***	10.4 (0.7)***
<i>Health care and social assistance</i>		8.8 (0.7)***	7.8 (0.7)***
<i>Information, culture, and recreation</i>		13.8 (0.7)***	13.0 (0.7)***
<i>Accommodation and food services</i>		4.8 (0.7)***	4.8 (0.7)***
<i>Other services (except public administration)</i>		9.1 (0.7)***	8.8 (0.7)***
<i>Public administration</i>		21.8 (0.7)***	20.6 (0.7)***
Occupation (2016 version of National Occupational Classification (NOC))			
<i>(Senior management occupations)</i>		Reference	Reference
<i>Specialized middle management occupations</i>		3.1 (0.8)***	2.4 (0.8)***
<i>Middle management occupations in retail and wholesale trade and customer services</i>		-15.3 (0.9)***	-16.8 (0.8)***
<i>Middle management occupations in trades, transportation, production, and utilities</i>		-9.9 (0.8)***	-11.1 (0.8)***
<i>Professional occupations in business and finance</i>		-19.3 (0.8)***	-20.9 (0.8)***
<i>Administrative and financial supervisors and administrative occupations</i>		-43.2 (0.8)***	-45.2 (0.8)***
<i>Finance, insurance, and related business administrative occupations</i>		-41.6 (0.8)***	-43.5 (0.8)***
<i>Office support occupations</i>		-54.6 (0.8)***	-56.7 (0.8)***
<i>Distribution, tracking, and scheduling co-ordination occupations</i>		-59.3 (0.8)***	-62.2 (0.8)***
<i>Professional occupations in natural and applied sciences</i>		-12.8 (0.8)***	-14.4 (0.8)***
<i>Technical occupations related to natural and applied sciences</i>		-33.6 (0.8)***	-35.9 (0.8)***
<i>Professional occupations in nursing</i>		-6.0 (0.8)***	-9.3 (0.8)***
<i>Professional occupations in health (except nursing)</i>		-3.5 (0.9)***	-5.8 (0.9)***
<i>Technical occupations in health</i>		-29.4 (0.8)***	-32.4 (0.8)***
<i>Assisting occupations in support of health services</i>		-52.4 (0.8)***	-55.5 (0.8)***
<i>Professional occupations in education services</i>		-16.8 (0.8)***	-20.1 (0.8)***
<i>Professional occupations in law and social, community, and government services</i>		-19.0 (0.8)***	-21.1 (0.8)***

Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Canada, 2021

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>Paraprofessional occupations in legal, social, community, and education services</i>		-46.6 (0.8)***	-49.0 (0.8)***
<i>Occupations in front-line public protection services</i>		-20.0 (0.9)***	-23.0 (0.9)***
<i>Care providers and educational, legal, and public protection support occupations</i>		-52.9 (0.8)***	-55.7 (0.8)***
<i>Professional occupations in art and culture</i>		-32.8 (1.0)***	-35.2 (1.0)***
<i>Technical occupations in art, culture, recreation, and sport</i>		-45.0 (0.9)***	-47.1 (0.9)***
<i>Retail sales supervisors and specialized sales occupations</i>		-48.2 (0.8)***	-50.3 (0.8)***
<i>Service supervisors and specialized service occupations</i>		-59.4 (0.8)***	-61.8 (0.8)***
<i>Sales representatives and salespersons—wholesale and retail trade</i>		-56.1 (0.8)***	-58.4 (0.8)***
<i>Service representatives and other customer and personal services occupations</i>		-61.6 (0.8)***	-64.2 (0.8)***
<i>Sales support occupations</i>		-66.0 (0.8)***	-69.2 (0.8)***
<i>Service support and other service occupations not elsewhere classified</i>		-65.4 (0.8)***	-68.4 (0.8)***
<i>Industrial, electrical, and construction trades</i>		-36.5 (0.8)***	-40.2 (0.8)***
<i>Maintenance and equipment operation trades</i>		-33.1 (0.8)***	-36.0 (0.8)***
<i>Other installers, repairers, and servicers, and material handlers</i>		-60.6 (0.8)***	-63.7 (0.8)***
<i>Transport and heavy equipment operation and related maintenance occupations</i>		-55.1 (0.8)***	-57.7 (0.8)***
<i>Trades helpers, construction labourers, and related occupations</i>		-57.0 (0.9)***	-60.0 (0.9)***
<i>Supervisors and technical occupations in natural resources, agriculture, and related production</i>		-36.3 (0.9)***	-38.7 (0.9)***
<i>Workers in natural resources, agriculture, and related production</i>		-47.9 (1.0)***	-50.4 (1.0)***
<i>Harvesting, landscaping, and natural resources labourers</i>		-55.5 (0.9)***	-57.9 (0.9)***
<i>Processing, manufacturing, and utilities supervisors and central control operators</i>		-34.3 (0.9)***	-36.9 (0.9)***
<i>Processing and manufacturing machine operators and related production workers</i>		-62.5 (0.8)***	-66.1 (0.8)***
<i>Assemblers in manufacturing</i>		-62.1 (0.9)***	-65.2 (0.9)***
<i>Labourers in processing, manufacturing, and utilities</i>		-68.1 (0.9)***	-71.9 (0.9)***
Immigrant status			
<i>(Non-immigrant)</i>		Reference	Reference
<i>Immigrant, landed 10 or less years earlier</i>		-11.0 (0.2)***	-11.0 (0.2)***
<i>Immigrant, landed more than 10 years earlier</i>		-6.4 (0.1)***	-6.4 (0.1)***
Province			
<i>(Newfoundland and Labrador)</i>		Reference	Reference
<i>Prince Edward Island</i>		-4.7 (0.3)***	-4.4 (0.3)***
<i>Nova Scotia</i>		-5.0 (0.3)***	-4.6 (0.3)***

Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Canada, 2021

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>New Brunswick</i>		-7.5 (0.3)***	-7.0 (0.3)***
<i>Quebec</i>		1.9 (0.3)***	1.6 (0.3)***
<i>Ontario</i>		6.8 (0.3)***	7.1 (0.3)***
<i>Manitoba</i>		-0.1 (0.3)	0.1 (0.3)
<i>Saskatchewan</i>		6.9 (0.3)***	7.1 (0.3)***
<i>Alberta</i>		16.5 (0.3)***	17.0 (0.3)***
<i>British Columbia</i>		12.8 (0.3)***	12.8 (0.3)***
Census metropolitan areas (CMA)			
<i>(Other CMA or non-CMA)</i>		Reference	Reference
<i>Québec</i>		2.0 (0.3)***	2.0 (0.3)***
<i>Montréal</i>		2.9 (0.2)***	3.1 (0.2)***
<i>Ottawa</i>		3.8 (0.3)***	3.6 (0.3)***
<i>Toronto</i>		3.3 (0.2)***	3.4 (0.2)***
<i>Hamilton</i>		3.4 (0.3)***	3.3 (0.3)***
<i>Winnipeg</i>		-1.0 (0.3)***	-1.0 (0.3)***
<i>Calgary</i>		-1.8 (0.3)***	-1.8 (0.3)***
<i>Edmonton</i>		-0.4 (0.3)	-0.6 (0.3)**
<i>Vancouver</i>		0.6 (0.3)**	0.6 (0.3)**
Union status			
<i>(Union member)</i>			Reference
<i>Not a member but covered by a union contract or collective agreement</i>			-1.1 (0.3)***
<i>Non-unionized</i>			-6.5 (0.1)***
Constant	318.2 (0.1)***	312.6 (1.1)***	322.3 (1.1)***
N	510,043	510,043	510,043
Adjusted R Square	0.074	0.616	0.618

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, 2022d; calculations by the authors.

The public-sector wage premium by industry

Table 2 summarizes the public-sector wage premium after accounting for the various factors mentioned above for 8 of the 21 industries where both the public- and private-sector's share of employment is large enough to make a comparison between the two sectors reliable.⁹ Among those industries, public-sector workers accounted for more than half (57.0%) of employment in the health-care and social-assistance sector, and enjoyed the largest wage premium in 2021, at 15.2%. The wage premium in each of the 8 sectors for which adequate data was available along with the public sector's share of total employment is shown in table 2.

The public-sector wage premium by occupation

This report also estimates the public-sector wage premium within particular occupations. **Table 3** presents the public-sector wage premium (after accounting for other factors that drive wages) for 30 of the 40 occupations (based on the 2016 version of the National Occupational Classification) (Statistics Canada, 2016).¹⁰ Within these occupations, public-sector workers generally enjoyed a positive wage premium compared with their private-sector counterparts. Senior management occupations and professional occupations in health (except nursing) are two exceptions, where public workers earned less than private workers in the same

Table 2: Public-sector wage premium in Canada, by industry, 2021

Dependant variable = log of hourly wage.

	N	Public sector's share (%) of total employment	Coefficient	R-squared
Forestry and logging, and support activities for forestry	2,033	19.2	10.6 (1.6)***	0.46
Utilities	5,151	92.1	10.6 (1.6)***	0.31
Transportation and warehousing	24,828	21.5	5.3 (0.6)***	0.29
Finance and insurance	21,032	8.5	6.3 (0.9)***	0.34
Real estate and rental and leasing	6,016	7.1	11.5 (2.0)***	0.26
Educational services	46,258	93.2	8.3 (0.7)***	0.41
Health care and social assistance	78,551	57.0	15.2 (0.3)***	0.41
Information, culture, and recreation	16,336	19.3	3.9 (0.7)***	0.49

Notes: [a] The control variables used in the regressions were similar to those used in the earlier regressions. These included controls for sex, age, marital status, education, tenure, type of employment (seasonal, contractual), part-time or full-time work, establishment size, immigrant status, province, and city (CMA). [b] The public-sector wage premium is only estimated for those industries in which the public sector's share of employment is within the range of 5% and 95%. [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, 2022d; calculations by the authors.

9 These 8 industries were selected based on the criterion that the public-sector's share of employment is within the range of 5% and 95%, so that the remaining private-sector's share of employment in the same industry would also surpass 5%. Out of the 21 industries, based on the 2017 version of North American Industry Classification System (NAICS) (Statistics Canada, 2017), 13 industries were excluded from estimation because either the public- or the private-sector share of employment in the industry were deemed too small (below the 5% threshold).

10 These 30 occupations were selected based on the criterion that the public-sector's share of employment is within the range of 5% and 95%, so that the remaining private-sector's share of employment in the same occupation would also surpass 5%. Out of the 40 occupations, based on the National Occupational Classification (NOC), 10 occupations were excluded because either the public- or the private-sector share of employment in the occupation were deemed too small (below the 5% threshold).

Table 3: Public-sector wage premium in Canada, by occupation, 2021

Dependant variable = log of hourly wage.

	N	Public sector's share (%) of total employment	Coefficient	R-squared
Senior management occupations	1,435	43.7	-5.9 (3.2)*	0.35
Specialized middle management occupations	16,592	41.6	5.5 (0.6)***	0.23
Middle management occupations in trades, transportation, production, and utilities	6,851	11.1	11.3 (1.4)***	0.30
Professional occupations in business and finance	18,900	25.3	6.0 (0.6)***	0.32
Administrative and financial supervisors and administrative occupations	32,933	43.5	10.5 (0.4)***	0.30
Finance, insurance, and related business administrative occupations	7,166	13.2	17.1 (1.2)***	0.27
Office support occupations	20,847	35.6	10.4 (0.4)***	0.28
Distribution, tracking, and scheduling co-ordination occupations	8,583	32.8	16.8 (0.7)***	0.35
Professional occupations in natural and applied sciences	22,685	25.1	2.5 (0.5)***	0.25
Technical occupations related to natural and applied sciences	17,736	27.4	10.9 (0.6)***	0.29
Professional occupations in nursing	12,719	86.3	9.5 (0.6)***	0.27
Professional occupations in health (except nursing)	5,671	59.8	-5.7 (1.2)***	0.18
Technical occupations in health	12,247	49.9	13.7 (0.6)***	0.38
Assisting occupations in support of health services	13,587	50.0	5.9 (0.4)***	0.27
Professional occupations in education services	26,422	93.5	13.6 (0.9)***	0.33
Professional occupations in law and social, community, and government services	14,454	61.5	13.5 (0.7)***	0.31
Paraprofessional occupations in legal, social, community, and education services	12,423	28.7	12.7 (0.6)***	0.40
Care providers and educational, legal, and public protection support occupations	8,572	70.7	23.9 (0.8)***	0.44
Professional occupations in art and culture	2,421	32.7	14.6 (1.7)***	0.38
Technical occupations in art, culture, recreation, and sport	5,851	25.7	4.2 (1.0)***	0.47
Service supervisors and specialized service occupations	15,418	9.0	19.4 (0.8)***	0.39
Service representatives and other customer and personal services occupations	18,875	10.1	19.1 (0.6)***	0.32
Service support and other service occupations not elsewhere classified	26,171	23.6	15.8 (0.3)***	0.41
Industrial, electrical, and construction trades	23,720	7.5	8.0 (0.7)***	0.37
Maintenance and equipment operation trades	19,302	8.2	5.2 (0.8)***	0.38
Other installers, repairers, and servicers and material handlers	8,116	5.1	16.9 (1.3)***	0.35
Transport and heavy equipment operation and related maintenance occupations	20,306	15.7	11.6 (0.6)***	0.27
Trades helpers, construction labourers, and related occupations	4,557	18.4	0.8 (1.0)	0.41
Harvesting, landscaping, and natural resources labourers	2,817	16.5	3.8 (1.4)***	0.39
Processing, manufacturing, and utilities supervisors and central control operators	6,329	19.2	10.1 (1.0)***	0.38

Notes: [a] The control variables used in the regressions were similar to those used in the earlier regressions. These included controls for sex, age, marital status, education, tenure, type of employment (seasonal, contractual), part-time or full-time work, establishment size, immigrant status, province, and city (CMA). [b] The public-sector wage premium is only estimated for those industries in which the public sector's share of employment is within the range of 5% and 95%. [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, 2022d; calculations by the authors.

occupation. For the remaining occupations where a positive wage premium was found for public-sector workers, the size of that premium varied substantially. Table 3 shows the public-sector wage premium in each occupation for which data is available, along with the public sector's share of total employment. Table 3 also shows the level of statistical significance for each result.

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

Although public-sector workers in 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. Statistics Canada can improve the ability of researchers to assess the overall compensation of workers in the two sectors by augmenting its current survey in order to begin collecting and analyzing data on non-wage benefits.

Fortunately, there are some aggregated data on non-wage benefits that can be examined to roughly compare how Canada's public-sector non-wage benefits compare to those provided by the nation'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.

Registered pensions

The pension benefit is the first non-wage benefit to consider. It has two important dimensions. The first is the percentage of workers in both sectors who have a registered pension; the second is the type of pension plan in each sector. **Table 4** summarizes the pension data for Canada.

There is a dramatic difference between the registered pension coverage in the public and private sectors. As of January 1, 2021, the latest data available at the time of writing, 22.9% of private-sector workers in Canada were covered by a registered pension plan compared to 86.6% of public-sector workers. This gap between the two 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.

The comparative data presented in table 4 illustrate the increasing scarcity of defined-benefit pensions in the private sector compared to the prevalence of these pension plans in the public sector. As of January 1, 2021, of the workers in Canada who were covered by a pension plan, 90.6% of those in the public sector enjoyed a defined-benefit pension compared to 39.9% of those in the private sector.

This section has shown that public-sector workers in Canada are much more likely to be in a registered pension plan, and are much more likely to receive a defined benefit pension, than their private-sector counterparts.

Table 4: Registered pension plan (RPP) members in Canada, by type of plan and sector, January 1, 2021

	<i>Total (public + private)</i>		<i>Private sector</i>		<i>Public sector</i>	
	Number	Share (%) of total RPP members	Number	Share (%) of total RPP members	Number	Share (%) of total RPP members
Defined benefit plans	4,425,506	67.1	1,219,256	39.9	3,206,250	90.6
Defined contribution plans	1,215,472	18.4	1,052,464	34.4	163,008	4.6
Other pension plans	952,278	14.4	783,697	25.6	168,581	4.8
Total number of RPP members	6,593,256		3,055,417		3,537,839	
Total Employment, 2021	17,414,500		13,331,500		4,083,000	
Percentage of employees covered by RPP		37.9		22.9		86.6

Notes: [a] Total employment includes workers in the public and private sectors 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, 2021. 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.

Sources: Statistics Canada, 2022e, 2022f, 2022g; calculations by the authors.

Average age of retirement

Table 5 presents data on the average age of retirement for public- and private-sector workers between 2017 and 2021, for Canada as a whole and for individual provinces.¹¹ On average, Canada’s public-sector workers retire 2.4 years earlier than do the country’s private-sector workers.¹² The size of the gap ranges across Canada, from a low of 1.0 year in Saskatchewan to a high of 4.4 years in Newfoundland & Labrador.

Job loss as a proxy for job security

Table 6 presents data on job losses in 2021 (excluding workers with temporary employment)

for Canada as a whole and for the provinces. There are several reasons for job loss, including firms moving location, firms going out of business, changing business conditions, and dismissal. In 2021, 4.8% of those employed in the private sector experienced job loss in Canada, compared to only 1.0% of those employed in the public sector. The extent of job loss by sector and the gap between the private and public sectors varies by province, although the rate is higher in the private sector in each. Table 6 shows the rate of job loss as well as the gap in percentage points between the public and private sectors in the ten provinces.

11 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 (2017–2021) were used in an attempt to mitigate the sample size problem.

12 The authors also examined median retirement age. Whether the average or the median age of retirement is used, public-sector workers in Canada retire at an earlier age than their private-sector counterparts. If the median retirement age is used, the difference in years is larger. For instance, Canada’s public-sector workers retire 3.0 years earlier than the private-sector employees if the median rather than the average is used.

Table 5: Average retirement age (years) in Canada, 2017–2021

	Total	Public-sector employees	Private-sector employees	Difference (years)		Total	Public-sector employees	Private-sector employees	Difference (years)
Canada	64.1	62.1	64.5	2.4					
NL	63.0	59.9	64.3	4.4	ON	63.9	61.9	64.4	2.5
PEI	64.9	63.1	66.3	3.3	MB	64.2	62.6	64.7	2.1
NS	64.0	61.7	64.7	3.0	SK	65.2	63.6	64.7	1.0
NB	63.9	61.3	64.5	3.3	AB	65.1	63.4	64.9	1.5
QC	63.2	61.1	63.9	2.8	BC	64.8	63.4	64.8	1.4

Notes: [a] Total includes workers in the public and private sectors, 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, 2022b; calculations by the authors.

Table 6: Job loss by sector in Canada, 2018

	<i>JOB LOSSES (thousands)</i>			<i>JOB LOSSES (% of employment)</i>			
	Total	Public sector	Private sector	Total	Public sector	Private sector	Difference (percentage points)
Canada	617.9	42.4	575.5	3.8	1.0	4.8	3.7
NL	10.9	0.8	10.2	5.4	1.1	7.8	6.6
PEI	2.1	0.2	1.9	3.1	0.9	4.2	3.3
NS	13.2	0.9	12.3	3.3	0.8	4.3	3.6
NB	10.7	0.6	10.1	3.3	0.6	4.5	3.9
QC	121.4	6.7	114.7	3.2	0.7	4.2	3.5
ON	282.5	19.2	263.3	4.5	1.3	5.5	4.2
MB	17.7	1.8	15.9	3.1	1.1	3.9	2.9
SK	13.0	1.5	11.5	2.8	1.0	3.6	2.5
AB	80.8	7.8	73.0	4.3	1.8	5.0	3.3
BC	65.6	3.0	62.6	2.9	0.6	3.7	3.1

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.

Sources: Statistics Canada, 2022c, 2022g; calculations by the authors.

Absence rate of full-time employees

Table 7 presents a measure of the absence rate in the two sectors: total days lost per worker in 2021. Among full-time employees, an average of 9.8 days was lost for personal reasons in the private sector

compared to 14.9 days in the public sector (5.1 more days). Among the provinces in 2021, Newfoundland & Labrador, where the number of days lost for personal reasons was 6.5 days higher in the public sector, showed the largest gap between the two sectors.

Table 7: Total days lost in Canada per full-time employee, by sector, 2018

	Total	Public sector	Private sector	Difference (days)		Total	Public sector	Private sector	Difference (days)
Canada	11.1	14.9	9.8	5.1					
NL	12.2	16.5	10.0	6.5	ON	10.0	14.0	8.8	5.2
PEI	11.4	15.6	9.3	6.3	MB	10.1	12.9	8.9	4.0
NS	12.4	15.2	11.3	3.9	SK	11.2	14.4	9.7	4.7
NB	11.9	15.6	10.2	5.4	AB	10.1	14.4	8.9	5.5
QC	13.1	16.4	12.0	4.4	BC	11.2	15.7	9.8	5.9

Notes: [a] Absence data are for personal reasons only: 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, 2022a; calculations by the authors.

Conclusion

In 2021, Canada's government-sector workers earned a wage premium of 8.5%, on average. When unionization is accounted for, the wage premium declines to 5.5%. We have shown the wage premium varies within particular industries and occupations. While there is insufficient data to calculate or make a definitive statement about the differences in non-wage benefits of the

public and private sectors in Canada, the available data suggest that those working in the public sector enjoy more generous non-wage benefits than workers in the private sector. These benefits include higher rates of pension coverage, higher rates of defined-benefit pensions, earlier ages of retirement, lower rates of job loss, and more days lost than private-sector workers in the country.

References

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.

Lammam, Charles, Milagros Palacios, Feixue Ren, and Jason Clemens (2016). *Comparing Public and Private Sector Compensation in Canada*. <<https://www.fraserinstitute.org/studies/comparing-government-and-private-sector-compensation-in-canada>>, as of January 15, 2020.

Palacios, Milagros and Nathaniel Li (2020). *Comparing Public and Private Sector Compensation in Canada*. <<https://www.fraserinstitute.org/studies/comparing-government-and-private-sector-compensation-in-canada-2020>>, as of December 13, 2022.

Statistics Canada (2016). *National Occupational Classification (NOC): 2016 Version 1.1*. <<https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=424578>>, as of December 13, 2022.

Statistics Canada (2017). *North American Industry Classification System (NAICS): Canada 2017 Version 3.0*. <<https://www.statcan.gc.ca/en/subjects/standard/naics/2017/v3/index>>, as of December 13, 2022.

Statistics Canada (2020). *Guide to the Labour Force Survey*. Catalogue No. 71-543-G. <<https://www150.statcan.gc.ca/n1/en/catalogue/71-543-G>>, as of December 13, 2022.

Statistics Canada (2022a). *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 February 1, 2022).

Statistics Canada (2022b). *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 August 2, 2022).

Statistics Canada (2022c). 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 February 1, 2022).

Statistics Canada (2022d). *Labour Force Survey: Public Use Microdata File (January to December 2021)*. <<https://www150.statcan.gc.ca/n1/en/catalogue/71M0001X>>, as of December 13, 2022.

Statistics Canada (2022e). Registered Pension Plans (RPPs) Members, by Type of Plan and Sector, 2018. Custom tabulation provided by Statistics Canada (received on July 28, 2022).

Statistics Canada (2022f). Table 11-10-0133-01. Registered pension plan (RPP) active members by area of employment. <<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110013301>>, as of December 13, 2022.

Statistics Canada (2022g). 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 December 13, 2022.

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Milagros Palacios

Milagros Palacios is the 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*.



Nathaniel Li

Nathaniel Li is a Senior 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 journals, including



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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.

Ben Eisen

Ben Eisen is a Senior Fellow in Fiscal and Provincial Prosperity Studies and former Director of Provincial Prosperity Studies at the Fraser Institute. He holds a B.A. from the University of Toronto and an M.P.P. from the University of Toronto's School of Public Policy and Governance. Prior to joining the Fraser Institute, Mr. Eisen was the Director of Research and Programmes at the Atlantic Institute for Market Studies in Halifax. He also worked for the Citizens Budget Commission in New York City, and in Winnipeg as the Assistant Research Director for the Frontier Centre for Public Policy. Mr. Eisen has published influential studies on several policy topics, including inter-governmental relations, public finance, and higher education. He has been widely quoted in major newspapers including the *National Post*, *Chronicle Herald*, *Winnipeg Free Press*, and *Calgary Herald*.

