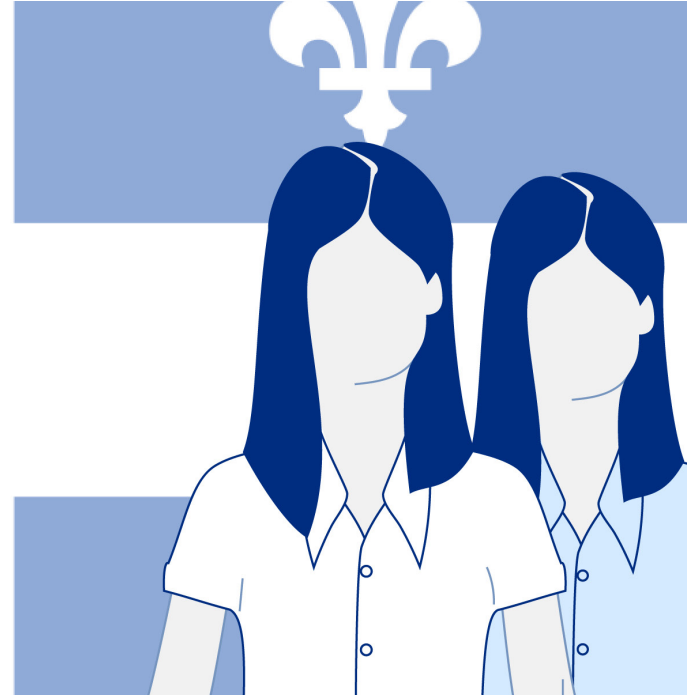




Comparing Government and Private Sector Compensation in Quebec, 2020

by Milagros Palacios and Nathaniel Li



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 Quebec. It also evaluates four non-wage benefits for which data are available to quantify differences in compensation in the two sectors.

■ After controlling for factors like gender, age, marital status, education, tenure, size of firm, job permanence, immigrant status, industry, occupation, and full- or part-time status, the authors found that workers in Quebec's government sector (federal, provincial, and local) enjoyed a 9.2% wage premium, on average, over their private-sector counterparts in 2018. When the wage difference between unionized and non-unionized workers is accounted for, the wage premium for the government sector declines to 5.8%.

■ The available data on non-wage benefits suggest that the government sector enjoys an advantage over the private sector. For example, 95.1% of government workers in Quebec are covered by a registered pension plan, compared to 22.0% of private-sector workers. Of those covered by a registered pension plan, 95.4% of government workers enjoyed a defined benefit pension compared to 53.8% of private-sector workers.

■ In addition, government workers retire earlier than their private-sector counterparts—about 3.0 years on average—and are much less likely to lose their jobs (2.3% in the private sector compared to 0.2% in the public sector).

■ Moreover, full-time workers in the government sector lost more work time in 2018 for personal reasons (16.9 days on average) than their private sector counterparts (10.2 days).

Introduction

Since 2015/16, Quebec has continued to post balanced budgets or surpluses. Nevertheless, Quebec's debt is still high. As the third most indebted province relative to the size of the economy (after Newfoundland & Labrador and Ontario) in 2019/20, Quebec is expected to pay \$7.7 billion, or 6.6% of its revenues on interest servicing its debt (Québec, Ministère des Finances, 2019; Fuss and Palacios, 2020). As the Quebec government continues to make the debt reduction an objective, better control of spending will be key. An important area of spending to scrutinize is the compensation of government employees, which consumes around half of the government's annual program spending.

With 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 Quebec (Lammam, Palacios, Ren, and Clemens, 2015b; Lammam, Palacios, and Ren, 2017). Using data on individual workers from January to December of 2018, the report updates past estimates of the wage differential between government-sector workers in Quebec (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 compensation differences between the two sectors.

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.

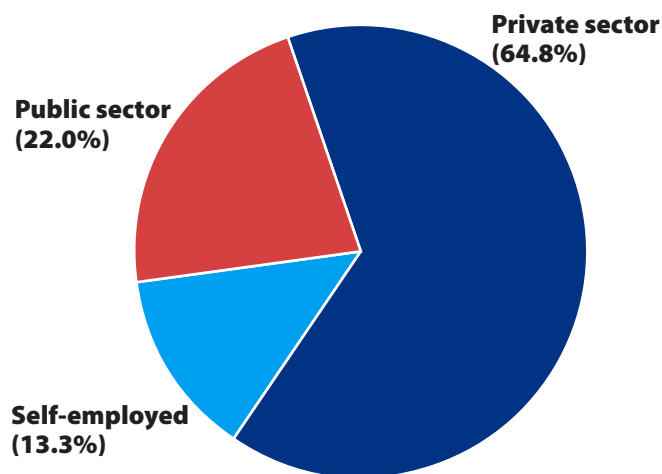
The first section of this report provides some basic statistics on government- and private-sector employment in Quebec. The second section presents the results of calculations used to determine the wage premium in the government sector. The third section assesses the data available on non-wage benefits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

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. **Figure 1** displays the composition of total employment in Quebec in 2018. In that year, about 937,000 Quebec workers, representing 22.0% of total employment, were employed in the public sector.

1 Lammam, Palacios, Ren, and Clemens (2015a) 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.

Figure 1: Components (%) of total employment in Quebec, 2018



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

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).² In contrast, there were 2.8 million workers employed in the private sector in 2018, representing 64.8% of total employment (Statistics Canada, 2019a). The remaining 13.3% (about 565,000) were self-employed.

² 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 Quebec'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.³ The wage premiums vary depending on the data source and time period. What is clear, however, is that a premium exists.⁴

Methodology and data sources

This report provides new calculations for the government-sector wage premium in Quebec. It uses aggregated monthly data on individual workers from the Labour Force Survey from January to December of 2018 (Statistics Canada, 2019b).⁵ The major advantage of data from the

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

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, 2015a.

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.

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 Quebec consists of 108,750 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 Quebec.⁷

The public-sector wage premium— results from empirical analysis

The analysis in this section updates the analysis done by Lammam, Palacios, and Ren (2017) and follows earlier academic work by Gunderson, Hyatt, and Riddell (2000).⁸ 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, 2015b.

Table 1 summarizes the results of the analysis of the public-sector wage premium in Quebec. 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 Quebec’s public sector (including federal, provincial, and local public-sector workers) are 35.6% higher, on average, than in the private sector.

[continued on page 9]

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 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 military armed forces are excluded from the survey.

8 Lammam, Palacios, and Ren (2017) use aggregated data from the monthly Labour Force Survey over the 12-month

period from January to December 2015 and calculate a public-sector wage premium of 37.9%, without controlling for other independent variables, and 9.1% after accounting for gender, age, marital status, level of education, job status, tenure, size of firm, full-time/part-time work, occupation, and industry. When unionization is accounted for, the public-sector wage premium was 5.5%. They do not control for immigrant status in their model. In addition, data from the 2018 Labour Force Survey had different categories of industries and occupations compared with the 2015 survey. The previous analysis (Lammam, Palacios, and Ren, 2017) used the 2001 version of the National Occupational Classification (NOC) that divides occupations into 25 categories and the 2002 versions of the North American Industry Classification (NAICS) that divides industries into 18 categories. The current analysis uses the 2016 version of NOC (Government of Canada, 2016) that divides occupations into 40 and the 2012 version of NAICS (Statistics Canada, 2012) that divides industries into 21. Thus, the results presented in the current study are not directly comparable with Lammam, Palacios, and Ren, 2017.

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

(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	35.6 (0.3)***	9.2 (0.4)***	5.8 (0.4)***
Sex			
(Female)		Reference	Reference
Male		10.8 (0.2)***	10.7 (0.2)***
Age group			
(15–19 years)		Reference	Reference
20–24 years		0.9 (0.5)*	0.7 (0.5)
25–29 years		10.0 (0.5)***	9.6 (0.5)***
30–34 years		15.8 (0.6)***	15.4 (0.5)***
35–39 years		19.6 (0.6)***	19.3 (0.5)***
40–44 years		20.5 (0.6)***	20.2 (0.6)***
45–49 years		20.3 (0.6)***	20.1 (0.6)***
50–54 years		18.4 (0.6)***	18.3 (0.6)***
55–59 years		18.1 (0.6)***	17.8 (0.6)***
60–64 years		13.7 (0.6)***	13.6 (0.6)***
65–69 years		7.2 (0.8)***	7.3 (0.8)***
70 and over		5.5 (1.1)***	5.6 (1.1)***
Marital status			
(Married)		Reference	Reference
Living in common-law		0.1 (0.2)	0 (0.2)
Widowed		–3.8 (1.0)***	–3.9 (1.0)***
Separated		–0.5 (0.6)	–0.5 (0.6)
Divorced		–1.1 (0.5)**	–1.3 (0.5)***
Single, never married		–3.8 (0.3)***	–3.8 (0.3)***
Highest level of education			
(0–8 years)		Reference	Reference
Some high school		0.4 (0.6)	0.4 (0.6)
High school graduate		4.5 (0.6)***	4.4 (0.6)***
Some postsecondary		5.1 (0.6)***	5.0 (0.6)***
Postsecondary certificate or diploma		8.7 (0.6)***	8.4 (0.5)***
Bachelor's degree		17.7 (0.6)***	17.7 (0.6)***
Above bachelor's degree		22.6 (0.7)***	22.9 (0.7)***

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

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
Tenure of job			
(Tenure 1–5 months)		Reference	Reference
Tenure 6–11 months		1.1 (0.4)***	0.7 (0.4)*
Tenure 1–5 years		2.6 (0.3)***	2.0 (0.3)***
Tenure 6–10 years		7.2 (0.3)***	6.3 (0.3)***
Tenure 11–20 years		14.7 (0.3)***	13.3 (0.3)***
Permanent or temporary job status			
(Permanent)		Reference	Reference
Temporary, seasonal job		–4.2 (0.5)***	–3.8 (0.5)***
Temporary, term or contract job		–3.9 (0.4)***	–3.8 (0.4)***
Temporary, casual or other temporary jobs		–1.9 (0.5)***	–1.8 (0.5)***
Full-time or part-time work schedule			
(Full-time)		Reference	Reference
Part-time		–4.6 (0.3)***	–4.5 (0.3)***
Number of employees at the location of employment			
(Less than 20 employees)		Reference	Reference
20–99 employees		5.8 (0.2)***	4.8 (0.2)***
100–500 employees		11.8 (0.3)***	10.1 (0.3)***
More than 500 employees		16.4 (0.3)***	14.7 (0.3)***
Industry (2012 version of North American Industry Classification System [NAICS])			
(Agriculture)		Reference	Reference
Forestry and logging and support activities for forestry		25.0 (1.8)***	23.9 (1.8)***
Fishing, hunting and trapping		27.7 (5.0)***	27.6 (4.9)***
Mining, quarrying, and oil and gas extraction		48.1 (1.6)***	47.4 (1.6)***
Utilities		45.2 (1.8)***	45.0 (1.8)***
Construction		41.9 (1.6)***	40.3 (1.6)***
Manufacturing - durable goods		28.3 (1.6)***	28.1 (1.6)***
Manufacturing - non-durable goods		24.2 (1.6)***	23.6 (1.6)***
Wholesale trade		28.0 (1.6)***	28.3 (1.6)***
Retail trade		12.7 (1.6)***	12.4 (1.6)***
Transportation and warehousing		25.8 (1.6)***	25.4 (1.6)***
Finance and insurance		30.1 (1.6)***	29.9 (1.6)***
Real estate and rental and leasing		25.5 (1.8)***	25.7 (1.8)***
Professional, scientific and technical services		27.1 (1.6)***	27.3 (1.6)***

Table 1 continued: Public-sector wage premium and wage differences in relation to sociodemographic and job characteristics in Quebec, 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>		23.9 (1.6)***	23.1 (1.6)***
<i>Educational services</i>		20.7 (1.6)***	19.6 (1.6)***
<i>Health care and social assistance</i>		16.8 (1.6)***	15.6 (1.6)***
<i>Information, culture and recreation</i>		21.3 (1.6)***	20.6 (1.6)***
<i>Accommodation and food services</i>		17.4 (1.6)***	17.9 (1.6)***
<i>Other services (except public administration)</i>		17.3 (1.6)***	17.3 (1.6)***
<i>Public administration</i>		28.2 (1.6)***	26.9 (1.6)***
Occupation (2016 version of National Occupational Classification (NOC))			
<i>(Senior management occupations)</i>		Reference	Reference
<i>Specialized middle management occupations</i>		27.8 (1.8)***	27.0 (1.8)***
<i>Middle management occupations in retail and wholesale trade and customer services</i>		10.0 (1.9)***	8.3 (1.9)***
<i>Middle management occupations in trades, transportation, production and utilities</i>		9.1 (1.9)***	8.0 (1.9)***
<i>Professional occupations in business and finance</i>		7.1 (1.8)***	4.8 (1.8)***
<i>Administrative and financial supervisors and administrative occupations</i>		-15.8 (1.8)***	-18.4 (1.8)***
<i>Finance, insurance and related business administrative occupations</i>		-19.0 (2.0)***	-21.2 (2.0)***
<i>Office support occupations</i>		-26.1 (1.8)***	-28.8 (1.8)***
<i>Distribution, tracking and scheduling co-ordination occupations</i>		-32.2 (1.9)***	-35.8 (1.9)***
<i>Professional occupations in natural and applied sciences</i>		10.0 (1.8)***	7.7 (1.8)***
<i>Technical occupations related to natural and applied sciences</i>		-7.8 (1.8)***	-10.4 (1.8)***
<i>Professional occupations in nursing</i>		13.6 (1.9)***	10.2 (1.9)***
<i>Professional occupations in health (except nursing)</i>		21.6 (2.0)***	18.5 (2.0)***
<i>Technical occupations in health</i>		-6.1 (1.9)***	-9.2 (1.9)***
<i>Assisting occupations in support of health services</i>		-25.0 (1.9)***	-28.9 (1.9)***
<i>Professional occupations in education services</i>		9.7 (1.9)***	5.9 (1.9)***
<i>Professional occupations in law and social, community and government services</i>		10.2 (1.9)***	7.1 (1.9)***
<i>Paraprofessional occupations in legal, social, community and education services</i>		-11.3 (1.9)***	-15.1 (1.9)***
<i>Occupations in front-line public protection services</i>		1.5 (2.0)	-1.3 (2.0)
<i>Care providers and educational, legal and public protection support occupations</i>		-23.9 (2.0)***	-26.6 (2.0)***
<i>Professional occupations in art and culture</i>		-6.6 (2.1)***	-9.7 (2.1)***
<i>Technical occupations in art, culture, recreation and sport</i>		-21.5 (1.9)***	-23.8 (1.9)***
<i>Retail sales supervisors and specialized sales occupations</i>		-22.7 (1.9)***	-25.0 (1.8)***
<i>Service supervisors and specialized service occupations</i>		-33.9 (1.8)***	-37.1 (1.8)***
<i>Sales representatives and salespersons - wholesale and retail trade</i>		-29.0 (1.8)***	-31.8 (1.8)***
<i>Service representatives and other customer and personal services occupations</i>		-30.5 (1.8)***	-34.0 (1.8)***

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

(Dependant variable = log of hourly wage)

	Model 1	Model 2	Model 2 (controlling for unionization)
	Coefficient	Coefficient	Coefficient
<i>Sales support occupations</i>		-37.1 (1.9)***	-40.9 (1.8)***
<i>Service support and other service occupations not elsewhere classified</i>		-38.8 (1.8)***	-42.5 (1.8)***
<i>Industrial, electrical and construction trades</i>		-7.1 (1.8)***	-12.7 (1.8)***
<i>Maintenance and equipment operation trades</i>		-10.8 (1.8)***	-14.6 (1.8)***
<i>Other installers, repairers and servicers and material handlers</i>		-32.6 (1.9)***	-36.4 (1.9)***
<i>Transport and heavy equipment operation and related maintenance occupations</i>		-29.1 (1.8)***	-32.8 (1.8)***
<i>Trades helpers, construction labourers and related occupations</i>		-25.1 (2.0)***	-29.6 (2.0)***
<i>Supervisors and technical occupations in natural resources, agriculture and related production</i>		-9.3 (2.1)***	-12.2 (2.1)***
<i>Workers in natural resources, agriculture and related production</i>		-19.4 (2.4)***	-22.5 (2.4)***
<i>Harvesting, landscaping and natural resources labourers</i>		-35.4 (2.3)***	-38.3 (2.3)***
<i>Processing, manufacturing and utilities supervisors and central control operators</i>		-18.0 (2.0)***	-21.4 (2.0)***
<i>Processing and manufacturing machine operators and related production workers</i>		-30.7 (1.9)***	-36.0 (1.9)***
<i>Assemblers in manufacturing</i>		-37.0 (1.9)***	-41.5 (1.9)***
<i>Labourers in processing, manufacturing and utilities</i>		-38.0 (2.0)***	-43.1 (2.0)***
Immigrant status			
<i>(Non-immigrant)</i>		Reference	Reference
<i>Immigrant, landed 10 or less years earlier</i>		-14.3 (0.5)***	-14.1 (0.5)***
<i>Immigrant, landed more than 10 years earlier</i>		-7.2 (0.4)***	-7.1 (0.4)***
Union status			
<i>(Union member)</i>			Reference
<i>Not a member but covered by a union contract or collective agreement</i>			-2.9 (0.5)***
<i>Non-unionized</i>			-7.8 (0.2)***
Constant	302.9 (0.2)***	261.9 (2.5)***	273.5 (2.5)***
N	108,750	108,750	108,750
Adjusted R Square	0.12	0.61	0.61

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.

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, 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 Quebec to 9.2%, on average. When unionization is included in Model 2, the premium falls to 5.8%, 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 10.8% more than women. As expected, higher education levels (particularly with a post-secondary certificate or higher) lead to higher wages. In fact, those who graduate from high school earn 4.5% more than those with elementary education or less. A university graduate earns 17.7% more than those with only elementary schooling, on average, whereas those with a graduate degree earn 22.6% more.

Recent immigrants, defined as those landed 10 or less years ago, and established immigrants (landed more than 10 years ago) earn, respectively, 14.3% and 7.2% 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 1.9% and 4.2% less than those with permanent jobs. The hourly wage of those work part time is 4.6% less than those with full-time jobs.

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

Although public-sector workers in Quebec 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 make a rough comparison of how Quebec's public-sector non-wage benefits compare to those of workers in the province'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. The benefit has two important dimensions. The first is the percentage of workers in both sectors who have a registered pension plan (RPP). The second dimension is the type of pension plan in each sector. [Table 2](#) summarizes the pension data for Quebec and Canada.

There is a dramatic difference between the registered pension coverage in the public and private sectors. In 2018, 22.0% of private-sector workers in Quebec were covered by a registered

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

	Quebec			Canada		
	Total	Private sector	Public sector	Total	Private sector	Public sector
Total number of members who have RPPs:	1,552,870	661,502	891,368	6,325,712	2,999,716	3,325,996
<i>Defined benefit plans</i>	1,206,610	356,106	850,504	4,240,414	1,219,867	3,020,547
<i>Defined contribution plans</i>	223,727	206,753	16,974	1,161,400	1,009,870	151,530
<i>Other pension plans</i>	122,533	98,643	23,890	923,898	769,979	153,919
Total Employment, 2018	3,943,800	3,006,900	936,900	17,113,400	13,322,300	3,791,100
Percentage of employees covered by pension plans	39.4	22.0	95.1	37.0	22.5	87.7
As a % of total number of members						
<i>Defined benefit plans</i>	77.7	53.8	95.4	67.0	40.7	90.8
<i>Defined contribution plans</i>	14.4	31.3	1.9	18.4	33.7	4.6
<i>Other pension plans</i>	7.9	14.9	2.7	14.6	25.7	4.6

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.

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

pension plan, compared to 95.1% of public-sector workers; that is, while a little over 2 of every 10 private-sector workers have a registered pension plan, it is the norm for 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. A defined benefit plan is increasingly scarce in the private sector because of its high costs and risks for employers since, 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 fund the guaranteed benefit fully.

The comparative data presented in table 2 illustrate the increasing scarcity of defined-benefit pensions in the private sector compared to the

prevalence of these pension plans in the public sector. In 2018, of the workers in Quebec who were covered by a pension plan, 95.4% of those in the public sector enjoyed a defined benefit pension compared to 53.8% of those in the private sector. While a little more than half of pension-plan members in the private sector have a pension with a guaranteed benefit in retirement, a guaranteed benefit is the norm in the public sector. Public-sector workers in Quebec 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.

Average age of retirement

Public-sector employees in Quebec not only earn more and are more likely to be covered by pension plans, but they 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.⁹ On average, Quebec's public-sector employees tend to retire 3.0 years earlier than their private-sector peers.¹⁰

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**

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. Regardless of whether the average or median age of retirement is used, public-sector workers in Quebec 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, Quebec's public-sector workers retire 3.9 years earlier than the private-sector employees if the median rather than the average is used.

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

	Total	Public-sector employees	Private-sector employees	Difference (years)
Canada	63.5	61.5	64.0	2.4
NL	62.2	59.7	63.9	4.2
PEI	64.1	62.4	65.7	3.3
NS	63.0	61.1	64.0	2.9
NB	63.0	61.3	63.6	2.3
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.

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 location, firms going out of business, changing business conditions, and dismissal. In 2018, 2.3% of those employed in the private sector experienced job loss in Quebec, compared to only 0.2% of those employed in the public sector. That means the rate of job loss was over ten times higher in the private sector.

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 10.2 days was lost for personal reasons in the private sector in Quebec, compared to 16.9 days in the public sector (6.7 days more).

Table 4: Job loss by sector in Quebec, 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
NL	10.8	0.7	10.1	5.2	1.1	7.1	6.1
PEI	1.5	n/a	1.4	2.3	n/a	3.1	n/a
NS	7.9	n/a	7.5	2.0	n/a	2.7	n/a
NB	9.8	0.5	9.3	3.1	0.6	4.1	3.6
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.

Table 5: Total days lost in Quebec 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
NL	11.0	15.6	9.0	6.6	MB	10.8	14.5	9.4	5.1
PEI	9.5	12.7	8.2	4.5	SK	10.2	13.6	8.7	4.9
NS	10.9	15.0	9.3	5.7	AB	8.7	12.4	7.6	4.8
NB	10.8	14.6	9.4	5.2	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, Quebec's government-sector workers earned a wage premium of 9.2%, on average. When unionization is accounted for, the wage premium declines to 5.8%. These findings are in line with previous research investigating wage differences between the two sectors. While there is insufficient data to calculate or make a definitive statement about the differences in

non-wage benefits between the public and private sectors in Quebec, 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.

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