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# Job vacancies in 2011: Results of the Workplace Survey

by Diane Galarneau

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## Job vacancies in 2011: Results of the Workplace Survey

by Diane Galarneau

#### Introduction

Statistics Canada has measured the concept of job vacancies several ways since the 1960s, namely, using the Help Wanted Index<sup>1</sup> from 1962 to 2003, the Job Vacancy Survey from 1971 to 1978, the Workplace and Employee Survey (WES) from 1999 to 2006 and since 2011, the Job Vacancy Statistics (JVS) produced from the Business Payrolls Survey (BPS). The Job Vacancy and Wage Survey (JVWS) was also recently launched, with the first results released in August 2015.

Shortly before the JVWS, the 2011 Workplace Survey (WS) was conducted in collaboration with Employment and Social Development Canada (ESDC). According to the WS, there were 392,500 job vacancies in December 2011, representing 2.7% of all filled and unfilled positions in Canada that month. This article presents the results of the WS and examines whether the trends observed in the job vacancies are reflected in selected Labour Force Survey (LFS) indicators. Since the WS was a pilot survey and response rates varied depending on the question, some results cannot be provided (see Lorenz, 2015).

#### **About the 2011 Workplace Survey**

The 2011 WS was an experimental survey funded by ESDC and was the first version of a cross-sectional survey that was to be conducted annually. They survey, conducted in 2012, was meant to help improve the content and collection tools used for subsequent cycles but unfortunately, budget constraints forced ESDC to cease funding of the WS after its first collection cycle.

A data quality report (Lorenz, 2015) was published and a microdata file was made available as a supplement to this analytical article. The lessons learned at different stages of this pilot survey were useful for the new JVWS.

The main purpose of the WS was to collect workplace data, such as employment profiles (active employees classified by the occupational code of the minor groups in the National Occupational Classification for Statistics<sup>2</sup>), unionization, type of employment (full-time or part-time, permanent or temporary) and workforce characteristics. The questionnaire was also to cover skills shortages and workplace practices.

The survey population included all locations of enterprises operating in Canada with paid employees, with the exception of the following industries: crop production; animal production and aquaculture; fishing, hunting and trapping; religious organizations; private households; federal public administration; provincial and territorial public administrations; and international and other extra-territorial public administrations. The WS initial sample consisted of 25,000 locations, with a response rate of approximately 72%. However, this rate varied depending on the size of the location: it was approximately 80% for locations with fewer than 20 employees and 58% for those with 500 or more employees.

This article focuses mainly on the issue of job vacancies. Respondents were asked to report numbers as of December 31, 2011. This estimate may include a seasonal component, given the number and rate of job vacancies generally decreases in December according to the Job Vacancy Statistics (CANSIM table 284-0001). WS data on labour turnover (persons hired and departures) and hard-to-fill jobs is also used in this article. In the questionnaire, each respondent was required to complete a table and indicate the total number of people hired, the number of departures, vacancies, and hard-to-fill positions for a given period. These concepts were defined as follows:

**Job vacancies:** Total number of vacant positions as of December 31, 2011. These could be full- or part-time, temporary or permanent, seasonal or on-call jobs that corresponded to specific positions at the location and would be available within a period of 30 days. The location also had to be actively searching for an outside candidate. There was no indication as to how long these jobs had to be vacant.

<sup>1.</sup> This index did not indicate the number of job vacancies, but rather the changes in labour demand, which provided an overview of trends in labour shortages by collecting help wanted ads in newspapers.

<sup>2.</sup> Due to the inadequate quality of occupational code data, employment profiles could not be released at a detailed level.

**Hard-to-fill positions:** Total number of hard-to-fill positions between January 1 and December 31, 2011. These could be jobs that were filled in 2011 or jobs vacant as of December 31 that an employer had trouble filling. These positions were those for which it took longer than usual to recruit or fill than originally expected. This variable was mainly based on respondents' perceptions.

**Persons hired:** All individuals added to the payroll of a location between January 1 and December 31, 2011. This could have been a newly hired or rehired person on a permanent, temporary or seasonal basis; an employee recalled after being laid off; an on-call employee who returned to work after an official departure; an employee who was hired and subsequently left during the year; or an employee transferred from another location.

**Departures:** Total number of departures between January 1 and December 31, 2011. These could consist of resignations, retirements, permanent or temporary layoffs, or any other type of departure. In this article, only resignations and retirements that took place between January 1 and December 31, 2011 have been included since layoffs do not usually result in job vacancies.

Job vacancy rates from the WS are higher than those from the monthly BPS. For a comparable period (December 2011), the rates were 2.7% and 1.5% respectively (for more information on this difference, see Lorenz, 2015).

In this article, oil-producing provinces were separated from the others<sup>3</sup> because of the significant economic growth they experienced during the 2000s, largely driven by the energy sector. The non-oil-producing provinces were divided into two groups to account for the population numbers of Quebec and Ontario, the two largest provinces.

#### Oil-producing provinces posted the highest job vacancy rates

In Canada, 27% of the locations in the WS reported job vacancies as of December 31, 2011 (Table 1). Nationally, there were 392,500 vacancies on that date. This number varied significantly from province to province however almost 80% of those positions were in Ontario, Quebec and Alberta.

Nunavut, the Northwest Territories and Yukon reported 3,500 job vacancies in December 2011, giving them a relatively high job vacancy rate<sup>4</sup> (10.8%). However, these territories are excluded from the remainder of the analysis as the sample sizes were too small to conduct a more detailed examination.

In the 10 provinces, the vacancy rate ranged from 1.9% to 4.6%, with a national average of 2.7% as of December 31, 2011. Generally, there is an inverse relationship between the unemployment rate and the job vacancy rate. This relationship is often represented by the Beveridge curve (Archambault and Fortin, 2001) and could be explained by the fact that enterprises in tight labour markets, characterized in part by low unemployment rates, would be more likely to have difficulty finding employees to fill their positions and would therefore have higher job vacancy rates than enterprises in other labour markets. Some of these enterprises might even face labour shortages. To attract workers and retain those they already have, employers in these markets would offer higher wages and generally more favourable working conditions than employers in markets where unemployment rates are higher.

<sup>3.</sup> This distinction between oil-producing and non-oil-producing provinces has recently been used in a number of articles, including Morissette and Frenette, 2014; Morissette, Chan and Lu, 2014; and Galarneau, Morissette and Usalcas, 2013.

The job vacancy rate is a ratio corresponding to the number of job vacancies expressed as a percentage of labour demand, or the sum of filled and unfilled positions.

Table 1 Number of job vacancies, job vacancy rate and unemployment rate by province and territory, 2011

	Number of job vacancies	Job vacancy rate	Unemployment rate
	thousands	percent	
Canada	392.5	2.7	6.9
Newfoundland and Labrador	2.4	1.9 <sup>E</sup>	13.0
Prince Edward Island	1.1	3.2 <sup>E</sup>	12.0
Nova Scotia	5.5 <sup>€</sup>	1.9	7.3
New Brunswick	5.7	3.1	8.8
Quebec	105.2	3.1	8.6
Ontario	122.6	2.0	6.7
Manitoba	10.7	2.1	5.1
Saskatchewan	10.3	3.3	4.3
Alberta	82.4	4.6	4.5
British Columbia	43.2	2.6	6.6
Territories <sup>1</sup>	3.5	10.8	8.9

E use with caution

Sources: Statistics Canada, Workplace Survey (WS) and Labour Force Survey (LFS).

Although this relationship is generally seen over a long period, in December 2011, Alberta posted the highest job vacancy rate (4.6%), significantly higher than the other provinces, and an unemployment rate among the lowest in the country (4.5%). However, for most provinces the relationship was more tenuous.

Table 2 presents selected indicators from the WS and LFS, with the provinces divided into three groups.

The oil-producing provinces of Alberta and Saskatchewan experienced considerable growth between 2000 and 2011 due to the exploitation of their energy resources. This was also the case in Newfoundland and Labrador. Although its unemployment rate was relatively high at the end of 2011 (13.0%) compared with other provinces, it was down considerably from 16.6% at the beginning of the 2000s. Moreover, Newfoundland and Labrador recorded the strongest increase in wages between 2000 and 2011, up more than 20% in real terms compared to the national average, with an increase of 8.9% (according to the LFS). As such, these three so-called "oil-producing" provinces were grouped together in this analysis.

This grouping of provinces reveals certain regional characteristics, which prevailed in 2011. For example, even though just over 15% of the jobs in Canada were in the oil-producing provinces, they accounted for more than 24% of job vacancies. In contrast, more than two-thirds of jobs were in the central provinces, though they accounted for just under 59% of job vacancies. Almost 19% of jobs were located in the remaining provinces; which accounted for a similar proportion of job vacancies (17%).

<sup>1.</sup> Includes Yukon, the Northwest Territoires and Nunavut.

Table 2
Select Workplace Survey and Labour Force Survey indicators by provincial grouping, 2011

		Oil-producing	Central	Other
	Canada <sup>1</sup>	provinces <sup>2</sup>	provinces <sup>3</sup>	provinces <sup>4</sup>
Workplace Survey				
Employment (thousands)	14,221	2,154	9,431	2,636
Proportion of employment (%)	100.0	15.2	66.3	18.5
Job vacancies (thousands)	389	95	228	66
Proportion of job vacancies (%)	100.0	24.4	58.6	17.0
Job vacancy rate (%)	2.7	4.2	2.4	2.5
Proportion of hard-to-fill positions <sup>5</sup> (%)	2.2	3.7	1.8	2.2
Proportion of full-time jobs <sup>6</sup> (%)	69.5	73.3	68.9	68.4
Proportion of permanent jobs (%)	82.0	82.7	81.9	81.7
Labour Force Survey				
Unemployment rate (%)	6.9	5.2	7.4	6.8
Average hourly wage <sup>7</sup> (\$)	22.59	24.50	21.64	22.41
Change from 2000 to 2011 (%)	8.9	21.3	7.0	6.5
Change from 2006 to 2011 (%)	5.4	9.6	7.2	3.7
Average weekly wage <sup>7</sup> (\$)	824.69	930.20	785.63	810.12
Change from 2000 to 2011 (%)	7.7	22.2	6.3	4.4
Change from 2006 to 2011 (%)	4.4	8.5	6.4	2.5

- 1. Data for the territories are excluded from this table.
- 2. Includes Newfoundland and Labrador, Alberta and Saskatchewan.
- 3. Includes Quebec and Ontario.
- 4. Includes Prince Edward Island, New Brunswick, Nova Scotia, Manitoba, and British Columbia.
- 5. Hard-to-fill positions may be filled or unfilled, which is why they are shown here as part of total employment and job vacancies.
- 6. The highest proportion of full-time jobs in the oil-producing provinces was also seen in the LFS, but the difference was smaller, with the proportions being 84% in the oil-producing provinces and 81% in the central provinces.
- 7. For the wages, the LFS universe has been modified to be comparable to that of the WS. The percentage change in hourly and weekly wages was assessed in real terms using the Consumer Price Index (CPI) at the provincial level.

Sources: Statistics Canada, Workplace Survey (WS) and Labour Force Survey (LFS).

In December 2011, the job vacancy rate was therefore significantly higher in the oil-producing provinces (4.2%). This relatively high rate coincided with a lower unemployment rate for these provinces (5.2%) compared with 7.4% in the central provinces and 6.8% elsewhere. There was also a higher proportion of hard-to-fill positions (3.7%) compared with 1.8% and 2.2% in the other provincial groups, higher wages and a faster increase in hourly and weekly wages from 2000 to 2011. Real hourly and weekly wages rose by more than 21.3% between 2000 and 2011 in the oil-producing provinces, compared with increases of 7.0% and 6.5% in the other provincial groups. Moreover, the oil-producing provinces had the highest proportion of full-time jobs (73%) compared with just under 69% in both the central and other provinces.

There was little difference in the proportion of permanent jobs, varying between 82% and 83% depending on of the region.<sup>6</sup> Although the trends in these indicators may reflect a set of factors, it is interesting to note that the job vacancy rates are higher in regions where the labour market conditions are most dynamic.

#### The job vacancy rate in the energy sector was more than twice as high as all sectors combined

The WS breaks down job vacancies by sector. In December 2011, mining, quarrying, and oil and gas extraction posted the highest vacancy rate at 6.4% (Table 4). It was followed by health care and social assistance (4.3%) and professional, scientific and technical services (4.2%). In contrast, the lowest rate was observed in the utilities sector (0.2%), followed by retail trade, educational services, and finance and insurance, with rates ranging from 1.4% to 1.7%.

<sup>5.</sup> In theory, excess labour demand increases the number of job vacancies, which eventually leads to an increase in real wages if pressures on the market persist. In enterprises, employers will seek various alternatives to meet their labour needs before raising real wages. As a result, the links between job vacancies and wages are not always seen over short periods. This is why this analysis covers an 11-year period. We also confirmed that these links existed over a shorter period (from 2006 to 2011). However, it should be noted that wage changes are not exclusively linked to labour shortages or excess job offer. Other factors such as the composition of jobs by occupation and industry, unionization rate, labour legislation, and economic conditions also play a role.

<sup>6.</sup> We also examined the differences in unionization rates, however, the provincial differences were due mainly to historical trends. The unionization rate was historically higher in Newfoundland and Labrador, Quebec and British Columbia. The grouping used in this article masks these trends and makes it impossible to establish a link between unionization rates and the characteristics of tight labour markets. The 2011 rates were 24.5% in the oil-producing and central provinces, and 27.6% in the remaining provinces.

Table 3
Employment growth by sector, from 2000 to 2011

	percent
Construction	72.5
Mining, quarrying and oil and gas extraction	70.3
Administrative and support, waste management and remediation services	39.9
Health care and social assistance	39.1
Arts, entertainment and recreation	38.3
Professional, scientific and technical services	33.8
Management of companies and enterprises	29.1
Accommodation and food services	23.7
Retail trade	22.0
Other services (except public administration)	22.0
Finance and insurance	20.5
Educational services	20.1
Real estate and rental and leasing	19.8
Wholesale trade	18.9
Utilities	18.3
All sectors	17.8
Transportation and warehousing	11.6
Public administration	10.9
Information and cultural industries	-0.3
Manufacturing	-23.8
Forestry, logging and support activities for forestry	-48.2

Notes: The LFS universe has been modified to be comparable to that of the WS.

Data for the territories are excluded from this chart.

Source: Statistics Canada, Labour Force Survey (LFS).

The relatively high job vacancy rate in the mining, quarrying, and oil and gas extraction sector coincided with indicators of strong growth as employment in this sector grew by 70% between 2000 and 2011, compared with 18% for all sectors combined (Table 3). Moreover, real wages in this sector rose by 17.3%, compared with 8.9% for all sectors as a whole (Table 4).

Table 4
Distribution of employment, job vacancy rate and average hourly wage in 2011 and the percent change in hard-to-fill positions, professional positions and average hourly wage from 2000 to 2011, by sector<sup>1</sup>

	D	Distribution in 2011		Change from 2000 to 2011		
		Job	Average	Hard-to-fill	Professional	Average
	Employment	vacancy rate	hourly wage <sup>2</sup>	positions <sup>3</sup>	positions	hourly wage <sup>2</sup>
	thousands	percent	dollars		percent	
All sectors	14,221	2.7	22.59	2.2	17.6	8.9
Forestry, logging and support activities for forestry	39	F	22.87	6.7	2.3	-0.9
Mining, quarrying, and oil and gas extraction	208	6.4	33.01	2.6	14.8	17.3
Utilities	125	0.2	33.82	0.1	22.0	10.3
Construction	855	3.0	24.82	3.9	2.3	10.8
Manufacturing	1,489	2.0	22.95	1.6	7.6	4.3
Wholesale trade	749	2.3	23.56	2.0	5.0	10.8
Retail trade	1,919	1.4	15.48	F	2.4	6.1
Transportation and warehousing	698	3.0	22.77	2.2	3.3	4.2
Information and cultural industries	331	2.9	25.93	1.5	25.8	5.1
Finance and insurance	690	1.7	26.62	1.1	25.6	8.8
Real estate and renting and leasing	243	2.2	20.61	2.1	6.1	17.0
Professional, scientific and technical services	795	4.2	28.76	4.7	46.3	9.7
Management of companies and enterprises	107	3.2	26.06	1.5	45.7	-1.6
Administrative and support, waste management and remediation services	745	3.4	17.11	2.5	4.4	11.3
Educational services	1,246	1.6	29.43	0.5	63.3	8.6
Health care and social assistance	1,679	4.3	24.23	3.3	27.9	12.4
Arts, entertainment and recreation	227	2.5	17.99	1.5	8.5	16.5
Accommodation and food services	1,090	2.6	13.17	2.8	0.8	11.5
Other services (except public administration)	524	3.1	19.50	2.8	13.8	11.0
Public administration	463	2.4	29.34	0.6	27.0	19.3

F too unreliable to be published

Sources: Statistics Canada, Workplace Survey (WS) and Labour Force Survey (LFS).

<sup>1.</sup> Data for the territories are excluded from this table.

<sup>2.</sup> The LFS universe has been modified to be comparable to that of the WS. The percentage change in hourly wages was assessed in real terms using the Consumer Price Index (CPI).

<sup>3.</sup> Hard-to-fill positions may be filled or unfilled.

The strong momentum of the energy sector in the oil-producing provinces during the 2000s seemed to have spread to other sectors, as reflected by the higher job vacancy rates in December 2011. For example, the relatively high rate in the professional, scientific and technical services sector, 4.2% at the national level, could stem from the strength of the energy sector in the oil-producing provinces as they posted the highest job vacancy rates, at 8.4% (Table 5).

Table 5

Job vacancy rate by sector and provincial grouping, 2011

	Canadal	Oil-producing	Central provinces <sup>3</sup>	Other	
	Udildud	Canada <sup>1</sup> provinces <sup>2</sup>		provinces4	
All and All an		<u>.</u>			
All sectors	2.7	4.2	2.4	2.4	
Forestry, logging and support activities for forestry	F	F	F	F	
Mining, quarrying, and oil and gas extraction	6.4	7.3	3.1	F	
Utilities	0.2	2.9	0.1	0.6	
Construction	3.0	3.9	1.9	4.6	
Manufacturing	2.0	4.5	1.6	2.1	
Wholesale trade	2.3	3.8	2.1	1.9	
Retail trade	1.4	2.9	1.2	1.0	
Transportation and warehousing	3.0	5.3	2.3	4.6	
Information and cultural industries	2.9	1.4	3.8	2.3	
Finance and insurance	1.7	2.8	1.8	1.1	
Real estate and renting and leasing	2.2	2.1	2.0	F	
Professional, scientific and technical services	4.2	8.4	3.1	4.1	
Management of companies and enterprises	3.2	4.7	3.2	2.2	
Administrative and support, waste management and remediation services	3.4	3.7	3.5	2.7	
Educational services	1.6	4.1	1.1	1.1	
Health care and social assistance	4.3	2.1	5.9	1.8	
Arts, entertainment and recreation	2.5	F	2.7	F	
Accommodation and food services	2.6	5.4	1.4	4.0	
Other services (except public administration)	3.1	F	2.9	2.7	
Public administration	2.4	3.3	1.9	2.5	

F too unreliable to be published

Source: Statistics Canada, Labour Force Survey (LFS).

High job vacancy rates are not necessarily a sign of growth; other factors, such as employee characteristics (i.e. average age and skill level), can have an impact. In addition, some enterprise characteristics such as the stage of development in their life cycle (expanding or declining), employee retention ability (i.e. wages and offered working conditions) and competition from similar enterprises (with respect to products and services offered, the means used to attract the type of workers they need) can play a role. Since Canada is an open economy, the global economic context and the rise of the Canadian dollar against foreign currency during the 2000s can also be contributing factors. There are two major categories of job vacancies identified: those to meet replacement demand and those to address expansion demand. A single enterprise can seek candidates to meet both types of demand (Galarneau et al., 2001).

The results of the WS do not explain why positions are vacant in a specific location or sector. However, it is possible to identify certain factors using indicators from the WS and LFS.

The relatively high job vacancy rate in the health care and social assistance sector (4.3%) could be due in part to an aging population, which increases the need for health care and for new workers to meet the demand for expansion, and to an aging workforce, resulting in more retirements and the demand for workers to meet the need for replacements. The vacancy rate in this sector is especially high (5.9%) in the central provinces of Ontario and Quebec compared to the oil-producing and other provinces (2.1% and 1.8% respectively). This higher rate might also be attributable to budget constraints in health care spending in these provinces.

Furthermore, the low job vacancy rate (0.2%) observed in the utilities sector, which includes electric power generation, transmission and distribution; natural gas distribution; and water and sewage systems, might indicate that this sector was able to fill most of its jobs since it did not show particular signs of growth in terms of jobs or wages. Employment growth and increased wages in the utilities sector were comparable to the average observed for all sectors and it also posted the smallest proportion of hard-to-fill positions (0.1%).

<sup>1.</sup> Data for the territories are excluded from this table.

<sup>2.</sup> Includes Newfoundland and Labrador, Alberta and Saskatchewan.

<sup>3.</sup> Includes Quebec and Ontario.

<sup>4.</sup> Includes Prince Edward Island. New Brunswick. Nova Scotia, Manitoba, and British Columbia.

According to the WS, retail trade was the largest sector in Canada in terms of employment and had a relatively low proportion of job vacancies (1.4%). It offered a relatively low average hourly wage (following the accommodation and food services sector), which grew more slowly (6.1%) from 2000 to 2011 than in all sectors combined (8.9%). The retail trade sector also experienced high labour turnover. As established by the WS, departure and hiring rates were 26% and 46% respectively, compared to 15% and 36% for all sectors combined, with a good proportion of the job vacancies most likely meeting replacement demand. The low job vacancy rate suggests that this sector managed to fill most of its jobs, which could be attributable to the fact that the majority of positions required few qualifications. According to the 2011 LFS, only 21% of positions in the retail trade sector required at least a college diploma, compared with almost 46% for all sectors combined. This sector can rely on abundant student labour and retirees to fill its many part-time positions.

#### Job vacancy rates are similar regardless of the size of location

According to the 2011 WS data, job vacancy rates were similar for small and large locations (Table 6). A previous study (Morissette and Zhang, 2001) revealed an inverse relation between the job vacancy rate and size of the location. This was due to the more favourable employment conditions in large locations, as reflected by their higher average hourly wage of \$24.68 in locations with 500 or more employees, compared to \$18.44 in locations with fewer than 20 employees and their much higher unionization rate of 41.4% compared to 7.0%. Employees in large locations are also more likely to be covered by a pension plan. These more favourable conditions might explain the lower departure and hiring rates. The hiring rate was 30.9% in locations with 500 or more employees and 41.7% in those with less than 20 employees, while departure rates were 14.1% and 17.3% respectively. This suggests that the retention rate is higher in large locations. In fact, the average age of employees in these locations was 40 years old, almost two years more than in the smallest locations where the average age was 38.5 years old.

Table 6

Job vacancies by location size and select indicators, 2011<sup>1</sup>

	Less than 20 employees	20 to 99 employees	100 to 499 employees	500 employees or more
Employment (thousands)	2,934	2,744	2,186	6,357
Job vacancy rate (%)	3.1	2.3	2.6	2.7
Average hourly wage <sup>2</sup> (\$)	18.44	20.89	23.08	24.68
Unionization rate (%)	7.0	18.4	31.8	41.4
Departure rate <sup>3</sup> (%)	17.3	19.5	16.7	14.1
Retirement rate (%)	0.5	0.6	0.9	1.5
Average age <sup>2</sup> (years)	38.5	39.1	40.3	40.0
Hiring rate (%)	41.7	41.0	35.9	30.9
Proportion of hard-to-fill positions (%)	3.3	2.3	1.8	1.8

<sup>1.</sup> Data for the territories are excluded from this table.

Sources: Statistics Canada, Workplace Survey (WS) and Labour Force Survey (LFS).

The inverse relation from the WS data is not evident, which might be due to several factors, including the fact that the WS may contain a certain bias as a result of the lower response rate of large establishments (Lorenz, 2015).

#### Technical personnel, trades workers and professionals are in highest demand

Using WS data, job vacancy rates can be presented by occupational category (Table 7). Nationally, positions requiring technical personnel, trades workers and professionals were apparently in greatest demand, with job vacancy rates of 4.0%, 3.6% and 3.4% respectively as of December 31, 2011.

Jobs requiring technical personnel and trades workers were especially evident in the oil-producing provinces, with job vacancy rates of 6.4% and 7.2% respectively; significantly higher than the other provincial groups. The number of jobs for production and services workers and for sales personnel were also high in oil-producing provinces. These differences may be attributable to the growth in the energy sector in this region in the 2000s, the effects of which likely spread to several sectors. In the other provincial groups, differences between occupational categories were less pronounced.

<sup>2.</sup> The LFS universe has been modified to be comparable to that of the WS.

<sup>3.</sup> Departures do not include layoffs; only resignations and retirements.

<sup>7.</sup> Data not shown, special extractions from the WS.

<sup>8.</sup> Data not shown, special extractions from the LFS.

<sup>9.</sup> These rates were significantly higher than all occupations combined.

Table 7
Job vacancy rate by occupational category, 2011

	Canada <sup>1</sup>	Oil-producing provinces <sup>2</sup>	Central provinces <sup>3</sup>	Other provinces4
		pe		
All occupational categories	2.7	4.2	2.4	2.5
Managers and senior managers	2.4	3.6	2.2	2.2
Professionals	3.4	3.7	3.4	2.9
Technical personnel	4.0	6.4	3.6	3.0
Trades workers	3.6	7.2	2.7	3.3
Apprentices	2.7	3.0	2.4	3.0
Sales and marketing personnel	1.9	3.8	1.8	1.4
Administrative and office personnel	2.0	2.4	2.0	1.8
Production or services workers	2.5	4.2	2.1	2.6
Others	2.0	3.8	1.5	2.0

- 1. Data for the territories are excluded from this table.
- 2. Includes Newfoundland and Labrador, Alberta and Saskatchewan.
- 3. Includes Quebec and Ontario.
- 4. Includes Prince Edward Island, New Brunswick, Nova Scotia, Manitoba, and British Columbia.

Source: Statistics Canada, Workplace Survey (WS).

#### **Summary**

The purpose of this article was to provide some insight into the Canadian labour market using results from the 2011 Workplace Survey (WS). The WS collected information on job vacancies as of December 31, 2011 by region, sector, location size, and occupational category. Given the WS was a pilot survey, whether or not the trends observed with respect to its job vacancies were reflected in selected Labour Force Survey (LFS) indicators was verified. In this article, the oil-producing provinces of Alberta, Saskatchewan and Newfoundland and Labrador were grouped together due to their strong economic growth between 2000 and 2011.

The job vacancy rate in December 2011 was relatively high in the oil-producing provinces, which also posted a lower unemployment rate, a much faster increase in hourly and weekly wages since 2000 (as well as since 2006) and the highest proportion of full-time jobs.

The economic vitality of the oil-producing provinces in 2011 seemed to be reflected in several sectors, based on the higher job vacancy rates in most industrial sectors. However, high job vacancy rates are not necessarily a sign of growth. For example, the relatively high rates in the health care and social assistance sector were likely attributable to an aging population or budget constraints, while job vacancies in the retail trade sector appeared to be due more to labour turnover.

Growth in the energy sector of the oil-producing provinces was also reflected in the job vacancy rates by occupational group in 2011. In December 2011, jobs requiring technical personnel, trades workers and professionals were in greatest demand in locations across Canada. These occupations were in particular demand in the oil-producing provinces. The number of jobs for production and services workers and sales personnel were also high in these provinces, compared with the rates observed in the other provincial groups.

#### Sources, data quality and definitions

This article is based mainly on the results of Statistics Canada's WS and LFS. The WS was a pilot survey funded by ESDC. For more information on data quality, please consult Lorenz (2015). The LFS is a monthly survey of about 56,000 households that provides data on major labour force trends by industry and occupation, hours worked, participation rate, and unemployment rate.

#### **Documents consulted**

Advisory Panel on Labour Market Information. 2009. Working Together to Build a Better Labour Market Information System for Canada: Final Report. 228 p.

Archambault, Richard and Mario Fortin. 2001. "The Beveridge curve and unemployment fluctuations in Canada." *Canadian Journal of Economics*. Vol. 34, no. 1. p. 58-81.

Demedash, Susan, Leon Jang and Jack Lothian. 2013. "The Workplace Survey of Job Vacancies: A Plethora of Challenges." *Statistics Canada International Symposium Series: Proceedings – Symposium 2013: Producing Reliable Estimates from Imperfect Frames, 2013.* Ottawa, Ontario. October 21, 2014.

Frenette, Marc and René Morissette. 2014. "Wages and Full-time Employment Rates of Young High School Graduates and Bachelor's Degree Holders, 1997 to 2012." *Analytical Studies Branch: Research Paper Series*. No. 360. April. Statistics Canada Catalogue no. 11F0019M.

Galarneau, Diane, Howard Krebs, René Morissette and Xuelin Zhang. 2001. "The Quest for Workers: A New Portrait of Job Vacancies in Canada." The Evolving Workplace Series. No. 02. November. Statistics Canada Catalogue no. 71-584-MIE.

Galarneau, Diane, René Morissette and Jeannine Usalcas. 2013. "What has changed for young people in Canada?" *Insights on Canadian Society*. July. Statistics Canada Catalogue no. 75-006-X.

Lorenz, Peter. 2015. "2011 Workplace Survey – Summary and Lessons Learned." Labour Statistics: Technical Papers. April. Statistics Canada Catalogue no. 75-005-M.

Morissette, René, Ping Ching Winnie Chan and Yuqian Lu. 2014. "Wages, Youth Employment, and School Enrollment: Recent Evidence from Increases in World Oil Prices." *Analytical Studies Branch: Research Paper Series*. No. 353. January. Statistics Canada Catalogue no. 11F0019M.

Morissette, René and Xuelin Zhang. 2001. "Which Firms Have High Job Vacancy Rates in Canada?" Analytical Studies Branch: Research Paper Series. No. 176. November. Statistics Canada Catalogue no. 11F0019MIE.