

## Insights on Canadian Society

# Long-term job vacancies in Canada

by Manon Langevin

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## Overview of the study

This study uses data from the Job Vacancy and Wage Survey (JVWS) to examine the characteristics of long-term job vacancies, defined as positions for which recruitment efforts had been ongoing for 90 days or more on the day of the survey. Specifically, the study aims to answer the following questions: What is the prevalence of long-term job vacancies in Canada? How do these vacancies differ from other vacant jobs? Is there a link between the duration of the vacancy and the offered wage?

- In 2016, long-term job vacancies (i.e., positions vacant for 90 days or more) represented 9% of Canada's 377,500 job vacancies. As a proportion of total labour demand (i.e., job vacancies and occupied jobs), the long-term vacancy rate was 0.23%.
- The percentage of long-term job vacancies varies by province and territory. In 2016, the North had the highest prevalence of long-term job vacancies, with a proportion of 17% in Nunavut.
- Occupations in health (16%), management (16%) and natural and applied sciences and related fields (14%) had the highest proportions of long-term job vacancies. The lowest proportion was sales and service occupations (5%).
- In 2016, 19% of vacancies requiring a university degree above the bachelor level had been vacant for 90 days or more, compared with 6% for positions with no educational requirements.
- Offered wages were higher for long-term job vacancies. Even after accounting for the difference in characteristics of long-term job vacancies and other vacancies, offered wages were 5% higher for full-time long-term job vacancies than they were for those who had been vacant for less than 15 days.

## Introduction

Businesses invest time and money to attract and hire candidates who possess the skills needed to carry out the duties of the positions they want to fill. Some positions require minimal skills, experience or education, while others require specific knowledge and skills, making them more difficult to fill. For businesses, it is important to understand the factors that affect the duration of vacant positions since long-term job vacancies can lead to additional costs and challenges (e.g., decreased production or lost business opportunities). For workers, a better understanding of the characteristics of long-term job vacancies can help them make better decisions about training and career choices.

The duration of job vacancies varies depending on economic and labour market conditions.<sup>1</sup> When the economy is doing well and approaching its full employment potential, the labour market tends to

tighten up. Fewer people are looking for jobs, and there is more competition between employers as businesses expand and increase their workforce, a phenomenon referred to as a congestion effect. As a result of these factors, finding new employees takes longer.

This effect is even more pronounced among businesses that are seeking skilled workers.<sup>2</sup> Other studies have shown that the duration of a vacancy is positively correlated with more demanding hiring criteria such as age, level of education and years of required experience.<sup>3</sup> Positions left vacant for longer periods are also more likely to be removed from the market prior to being filled.<sup>4</sup>

Sometimes, vacant positions can be difficult to fill because of the type of work required<sup>5</sup> or working conditions (work schedule, wages and benefits). Jobs that involve working

at night or performing dangerous tasks are examples of positions that are more difficult to fill. These types of positions are not a good fit for everyone, and employers must often provide additional benefits in order to attract a sufficient number of candidates.

Finally, positions can be more difficult to fill when the demand for certain skills or educational requirements exceeds the supply—that is, when there is a labour shortage. In such cases, employers may compete between themselves to select the best candidate, which may result in higher offered wages and in a longer period of time to find qualified candidates.

The issue of long-term job vacancies has not been studied recently in Canada, largely because there was a lack of detailed data on job vacancies.<sup>6</sup> This situation changed with the introduction of the Job Vacancy and Wage Survey (JVWS), which collects data on the characteristics of job vacancies in Canada, including the number of days that employers spent recruiting (see [Data sources, methods and definitions](#).) In this study, a long-term job vacancy is defined as a position for which recruitment efforts had been ongoing for 90 days<sup>7</sup> or more on the day of the survey.<sup>8</sup>

The following questions are examined in the study:

1. What is the prevalence of long-term job vacancies in Canada?
2. How do long-term job vacancies differ from other vacant jobs?
3. Is there a link between the duration of the vacancy and the offered wage?

### Long-term job vacancies represent 9% of all vacancies

According to a previous study, the most common reasons provided by employers for long-term job vacancies were a smaller pool of candidates and a lack of experience among applicants.<sup>9</sup> Even though vacancy duration should not be used exclusively to identify sectors where labour demand exceeds supply, it can offer a cautionary tale for those sectors.<sup>10</sup> When labour demand increases, the number of unemployed workers often declines which, in turn, brings an increase in the duration of job vacancies. When this happens, the probability of a position remaining vacant long enough to be observed increases,<sup>11</sup> which exerts upward pressure on vacancy rates (all else being equal).

In 2016, the number of positions vacants for 90 days or more averaged 35,200,<sup>12</sup> representing

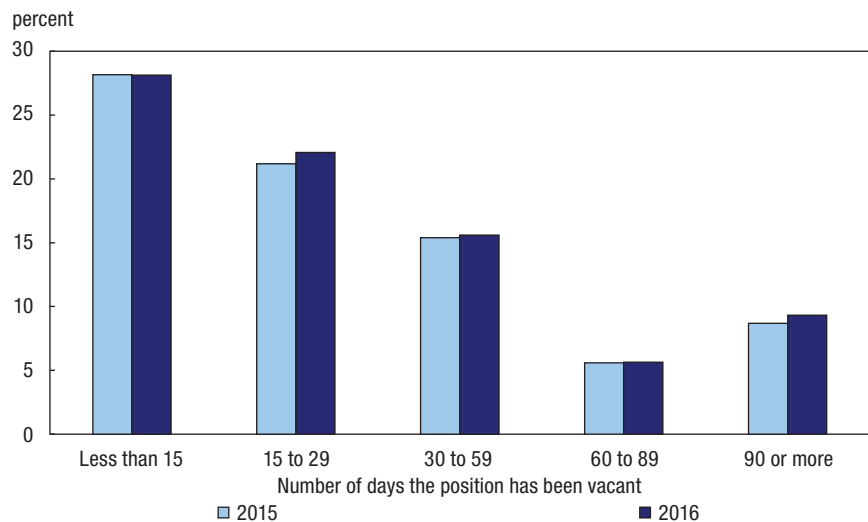
about 9% of all job vacancies in Canada (Chart 1) and 0.23% of total labour demand (i.e., the total number of filled and unfilled positions in Canada). The results were similar in 2015.<sup>13</sup>

Long-term job vacancies, however, do not affect all regions of Canada and industries in the same way. Regional differences are examined in the next section.

### Long-term job vacancies are more prevalent in the North, in oil-producing provinces, and in British Columbia

The proportion of long-term job vacancies varies by province and territory. In 2016, the percentage of positions vacant for 90 days or more varied from less than 6% in Prince Edward Island to nearly 17% in Nunavut (Table 1). In general, there was a higher percentage of long-term job vacancies in the territories

**Chart 1**  
Distribution of job vacancies, by vacancy duration at the time of the survey, 2015 and 2016



**Note:** The percentages do not add up to 100 because vacant positions for which employers are constantly recruiting have no duration.

**Source:** Statistics Canada, Job Vacancy and Wage Survey, 2015 and 2016.

## Long-term job vacancies in Canada

(Nunavut, the Northwest Territories and Yukon), which also had the highest percentages of workplaces reporting long-term job vacancies. Long-term job vacancies also represented a larger proportion of vacant positions in the oil-producing provinces (Alberta, Saskatchewan and Newfoundland and Labrador) and in British Columbia.

In the territories, long-term job vacancies did not only affect a higher percentage of workplaces, but each workplace also reported a higher proportion of long-term job vacancies. Factors that may contribute to labour shortages in this part of Canada include remoteness from large urban centres and greater challenges in finding workers in this part of the country.

When expressed in relation to total labour demand, the rate was also higher in the North. In

Yukon, the Northwest Territories and Nunavut, long-term vacancies represented 0.42% to 0.50% of total labour demand in those parts of the country. Among the provinces, British Columbia had the highest rate (0.33%). The lowest rate was in Prince Edward Island, where long-term job vacancies represented 0.11% of total labour demand.<sup>14</sup>

The territories, however, represent a small fraction of Canada's long-term job vacancies with 1% of the total in 2016. Much like total vacancies, most long-term job vacancies could be found in Ontario (41%), British Columbia (20%), Quebec (16%) and Alberta (13%). The disparities between provinces may reflect other regional differences related to occupations and industries. These differences are examined in the next section.

### The prevalence of long-term job vacancies is higher in the health care and social assistance and professional, scientific and technical services sectors

In 2016, the health care and social assistance sector (14%) and the professional, scientific and technical services sector (11%) had the highest prevalence of long-term job vacancies (Table 2).<sup>15</sup> The professional, scientific and technical services sector also posted the highest long-term job vacancy rate (0.31%). The lowest long-term vacancy rate was in educational services, which represented 0.07% of labour demand.

Long-term job vacancies also varied by occupation. Those in health (16%), management (16%) and natural and applied sciences and related fields (14%) had the highest proportions of long-term job vacancies (Chart 2). For these occupations, the percentage of such vacancies was approximately three times higher than the proportion observed for occupations in sales and services (5%). Such results reflect the aging of the population, which exerts upward pressure on the demand for health services, and could possibly reflect the importance of scientific and management skills in the Canadian labour market.

The proportion of long-term job vacancies was also calculated for each occupational skill category. To do so, job vacancies were divided into four broad categories: management positions (senior and intermediate), positions requiring a university education (professionals), positions requiring a college education (technical personnel and supervisors) and positions requiring a high school diploma or less (support staff).

**Table 1**  
Total number of job vacancies and percentage of positions vacant for 90 days or more, by province and territory, 2016

|                           | Number of job vacancies <sup>1</sup> | Job vacancy rate | Percentage of positions vacant for 90 days or more | Long-term job vacancy rate <sup>2</sup> |
|---------------------------|--------------------------------------|------------------|--|---|
|                           | thousands                            |                  | percent  |   |
| <b>Canada</b>             | <b>377.5</b>                         | <b>2.4</b>       | <b>9.3</b>   | <b>0.23</b>                             |
| Newfoundland and Labrador | 3.6                                  | 1.8              | 10.6   | 0.19                                    |
| Prince Edward Island      | 1.2                                  | 2.0              | 5.6  | 0.11                                    |
| Nova Scotia               | 8.6                                  | 2.2              | 9.1  | 0.20                                    |
| New Brunswick             | 6.3                                  | 2.1              | 8.0  | 0.17                                    |
| Quebec                    | 62.5                                 | 1.8              | 9.0  | 0.17                                    |
| Ontario                   | 160.2                                | 2.6              | 9.0  | 0.24                                    |
| Manitoba                  | 11.2                                 | 1.9              | 7.1  | 0.14                                    |
| Saskatchewan              | 9.3                                  | 2.0              | 10.6   | 0.21                                    |
| Alberta                   | 42.1                                 | 2.2              | 10.7   | 0.23                                    |
| British Columbia          | 71.0                                 | 3.4              | 9.7  | 0.33                                    |
| Yukon                     | 0.6                                  | 3.4              | 14.8   | 0.50                                    |
| Northwest Territories     | 0.6                                  | 2.6              | 16.2   | 0.42                                    |
| Nunavut                   | 0.3                                  | 2.8              | 16.9   | 0.47                                    |

1. The number of vacant positions includes positions for which employers are constantly recruiting.

2. The long-term job vacancy rate can be obtained by dividing the number of positions vacant for 90 days or more by the total number of job vacancies and occupied jobs.

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

## Long-term job vacancies in Canada

**Table 2**  
Total number of job vacancies and percentage of positions vacant for 90 days or more, by main industrial sector, 2016

|   | Number of job vacancies <sup>1</sup> | Job vacancy rate | Percentage of positions vacant for 90 days or more | Long-term job vacancy rate <sup>2</sup> |
|---|--------------------------------------|------------------|--|---|
|   | thousands                            |                  | percent  |   |
| <b>All sectors</b>                              | <b>377.5</b>                         | <b>2.4</b>       | <b>9.3</b>   | <b>0.23</b>                             |
| Construction                                    | 24.2                                 | 2.4              | 8.6  | 0.21                                    |
| Manufacturing                                   | 30.1                                 | 2.0              | 8.5  | 0.17                                    |
| Wholesale trade                                 | 15.1                                 | 1.9              | 9.6  | 0.18                                    |
| Retail trade                                    | 53.4                                 | 2.7              | 9.3  | 0.25                                    |
| Transportation and warehousing                  | 17.4                                 | 2.3              | 9.5  | 0.22                                    |
| Professional, scientific and technical services | 25.5                                 | 2.9              | 10.9   | 0.31                                    |
| Administrative and support services             | 30.7                                 | 3.8              | 6.3  | 0.24                                    |
| Educational services                            | 9.7                                  | 0.8              | 8.9  | 0.07                                    |
| Health care and social assistance               | 37.9                                 | 2.0              | 13.7   | 0.27                                    |
| Accommodation and food services                 | 52.5                                 | 4.0              | 7.1  | 0.28                                    |
| Other   | 80.9                                 | 2.4              | 9.9  | 0.24                                    |

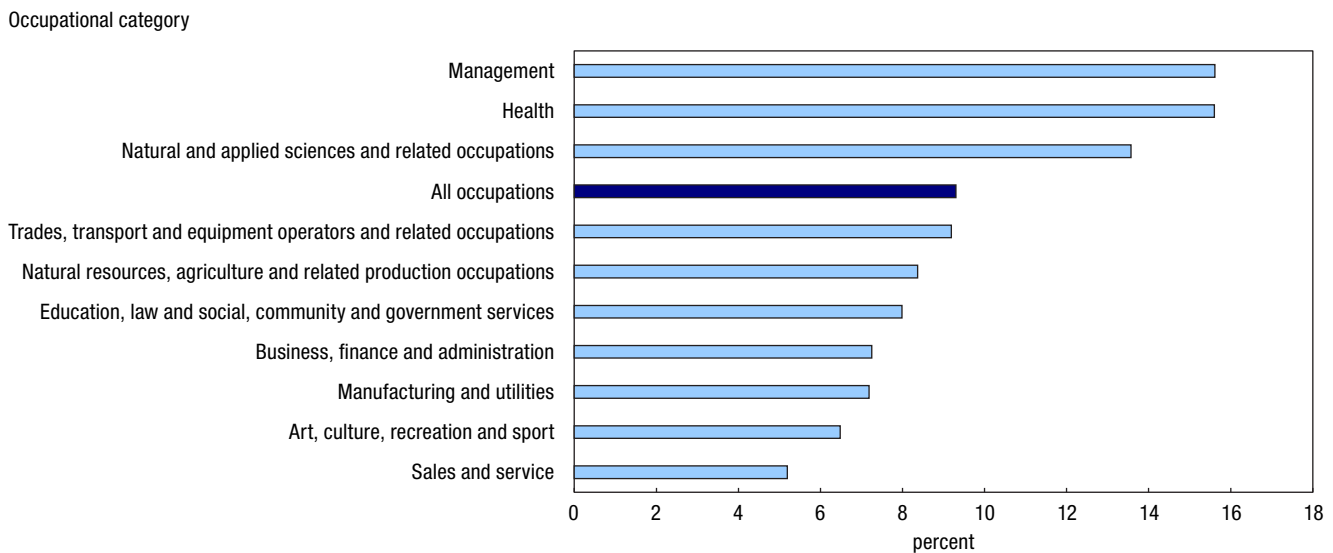
1. The number of vacant positions includes positions for which employers are constantly recruiting.

2. The long-term job vacancy rate can be obtained by dividing the number of positions vacant for 90 days or more by the total number of job vacancies and occupied jobs.

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

The results indicate that management and professional positions were the most likely to remain vacant for 90 days or more (Chart 3). The percentage of long-term job vacancies for management positions (16%) was nearly three times higher than the rate observed for support staff (6%). Among health occupations, more than 1 in 5 (22%) vacant professional positions were long-term vacancies while less than 1 in 10 (8%) vacant support staff positions were long-term vacancies.

**Chart 2**  
Percentage of positions vacant for 90 days or more, by occupational category, 2016



Source: Statistics Canada, Job Vacancy and Wage Survey, 2015 and 2016.

### Large workplaces are more likely to have long-term job vacancies

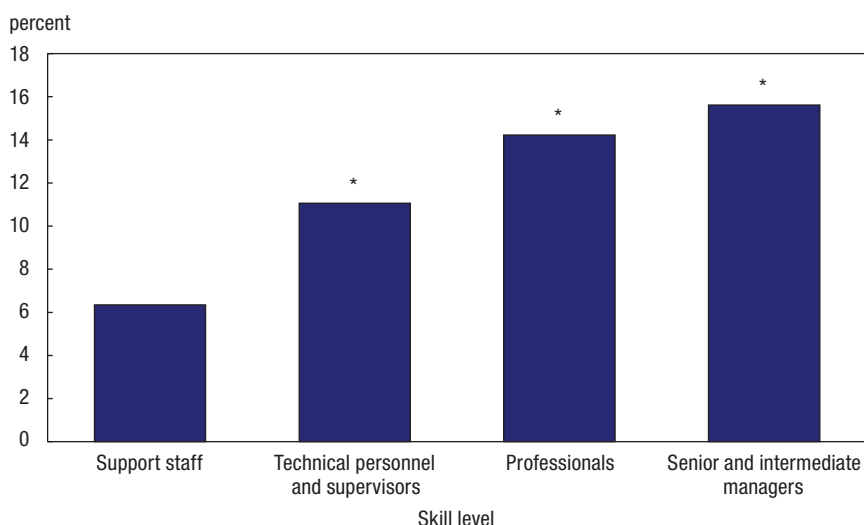
In 2016, the highest prevalence of positions vacant for 90 days or more was found in larger workplaces<sup>16</sup> (500 employees or more), which posted a 14% long-term vacancy rate. In comparison, the proportion of positions vacant for 90 days or more was 6% in workplaces with 20 to 99 employees, 9% for those with 100 to 499 employees, and 10% in workplaces with less than 20 employees (Table 3).

Workplaces with less than 20 employees, however, had the highest long-term vacancy rate (0.30% of labour demand). Since smaller workplaces do not have the same human resources or staffing recruitment tools as larger ones, it is possible that smaller workplaces face greater recruitment or hiring challenges. Small companies also have higher staff turnover rates than large businesses,<sup>17</sup> which increases the probability that they have to recruit for positions that take longer to fill.

While smaller workplaces represent the majority of Canadian workplaces,<sup>18</sup> relatively few had vacant positions for 90 days or more (Chart 4). In 2016, 1% of workplaces with less than 20 employees had at least one long-term vacancy, while 8% had a vacant position for less than 90 days and 91% had no job vacancies.

Among larger workplaces, 28% had at least one position that had been vacant for 90 days or more, and 18% had no job vacancies. This result is not surprising, given that larger workplaces may be more likely to fill highly skilled positions, which typically take longer. Larger workplaces may also have more rigid hiring processes.<sup>19</sup>

**Chart 3**  
Percentage of positions vacant for 90 days or more, by skill level, 2016



\* significantly different from reference category (support staff) ( $p < 0.05$ )

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

**Table 3**  
Total number of job vacancies and percentage of positions vacant for 90 days or more, by workplace size, 2016

|                        | Number of job vacancies <sup>1</sup> | Job vacancy rate | Percentage of positions vacant for 90 days or more | Long-term job vacancy rate <sup>2</sup> |
|------------------------|--------------------------------------|------------------|--|---|
|                        | thousands                            |                  | percent  |   |
| <b>All workplaces</b>  | <b>377.5</b>                         | <b>2.4</b>       | <b>9.3</b>   | <b>0.23</b>                             |
| Less than 20 employees | 127.1                                | 3.0              | 10.0   | 0.30                                    |
| 20 to 99 employees     | 112.8                                | 2.5              | 6.2  | 0.16                                    |
| 100 to 499 employees   | 82.8                                 | 2.4              | 9.1  | 0.22                                    |
| 500 employees or more  | 54.8                                 | 1.6              | 14.4   | 0.23                                    |

1. The number of vacant positions includes positions for which employers are constantly recruiting.

2. The long-term job vacancy rate can be obtained by dividing the number of positions vacant for 90 days or more by the total number of job vacancies and occupied jobs.

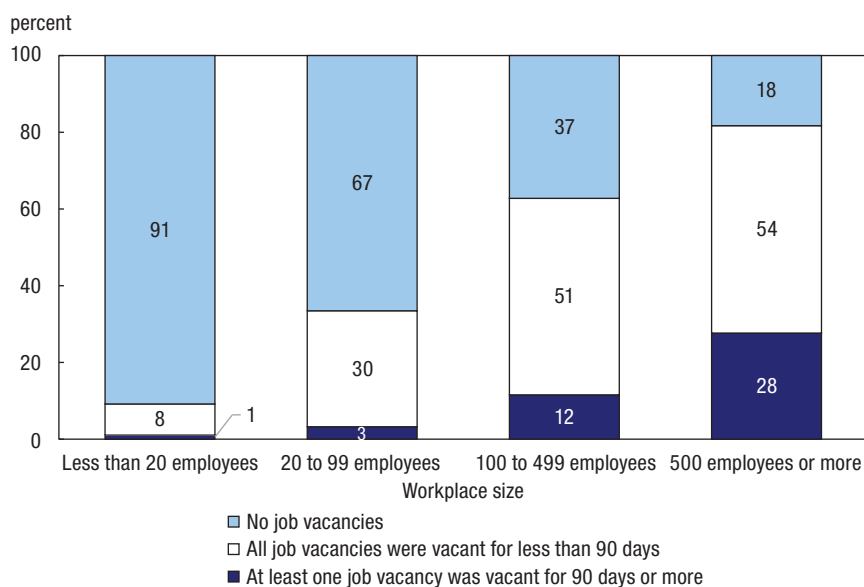
Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

### Positions with higher education and experience requirements take longer to fill

Previous studies have indicated that it takes longer to fill positions with a high level of required education and work experience.<sup>20</sup> Not only are such qualifications more difficult to find, but employers looking for more

advanced skills would be more likely to use a more comprehensive hiring process in order to evaluate the candidates. They are more inclined to spend more hours per candidate<sup>21</sup> and on average they interview more candidates before making a job offer.<sup>22</sup> This cautious approach to candidate selection can in large part be explained by the high cost of terminating a qualified worker and

**Chart 4**  
Distribution of workplaces<sup>1</sup> by job vacancy situation and workplace size, 2016



1. The unit of analysis is the workplace. The calculation is based on all workplaces.  
Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

**Table 4**  
Distribution of job vacancies and percentage of positions vacant for 90 days or more, by qualifications required, 2016

|   | Distribution of positions vacant for less than 90 days | Distribution of positions vacant for 90 days or more | Percentage of positions vacant for 90 days or more |
|---|--|--|--|
|   | percent  |  |  |
| <b>Level of education required</b>                            | <b>100.0</b>   | <b>100.0</b>   | <b>9.3</b>   |
| No minimum level of education sought                          | 30.1   | 22.5*  | 6.3  |
| High school diploma or equivalent                             | 30.0   | 26.1*  | 8.5  |
| Apprenticeship or trades certificate or diploma               | 7.4  | 9.6*   | 10.9   |
| College, CEGEP or other non-university certificate or diploma | 15.4   | 17.1   | 11.2   |
| University certificate or diploma below bachelor's degree     | 4.0  | 3.8  | 10.2   |
| Bachelor's degree   | 10.9   | 16.6*  | 15.2   |
| University certificate or diploma above bachelor's degree     | 2.2  | 4.3*   | 18.6   |
| <b>Professional certification requested</b>                   |  |  |  |
| Yes   | 20.7   | 31.3*  | 13.3   |
| No  | 79.3   | 68.7*  | 8.2  |
| <b>Work experience required</b>                               |  |  |  |
| Less than 1 year  | 46.9   | 41.7*  | 7.9  |
| 1 year to less than 3 years                                   | 31.9   | 28.5*  | 8.6  |
| 3 years to less than 5 years                                  | 9.8  | 12.2*  | 12.2   |
| 5 years to less than 8 years                                  | 9.1  | 13.7*  | 14.7   |
| 8 years or more   | 2.2  | 3.9*   | 17.5   |

\* significantly different from reference category (positions vacant for less than 90 days) ( $p < 0.05$ )  
Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

the productivity losses that result from matching the wrong person to a job. At the same time, candidates with higher levels of educational attainment are more likely to receive a large number of job offers and are less likely to accept a job offer than their less-educated counterparts.<sup>23</sup>

In 2016, nearly one-quarter (23%) of long-term job vacancies were positions for which the employer did not specify any educational requirements (Table 4). However, the prevalence of long-term job vacancies was higher among positions requiring postsecondary education. Among vacancies for jobs requiring a bachelor's degree, 15% were long-term job vacancies. For positions requiring a graduate degree, the corresponding proportion was 19%, which is three times higher than the proportion recorded among positions with no educational requirements (6%).

Similar trends can be observed for jobs requiring professional certification or work experience. Among vacancies for positions requiring at least eight years of experience, 18% had been vacant for 90 days or more—double the percentage obtained for all vacancies.

### Factors related to longer vacancy times among vacant positions

The findings presented in this section are from a logistic regression model. With this methodology, risk factors affecting the probability that a vacant position will be a long-term vacancy can be examined simultaneously. The dependent variable is equal to 1 when a position has been vacant for 90 days or more; otherwise it is equal to 0. The model takes into account several risk factors related to the local labour market (e.g.



unemployment rate), workplace characteristics (e.g., industry, size), and the position to be filled (e.g., occupation type, educational requirements).

In general, the same trends observed in the descriptive analysis were found. The province, workplace size, educational requirements, work experience requirements, and occupational category were all significantly associated with the probability of a position being vacant for at least 90 days, even after holding other factors constant (Table 5).

The probability of a position remaining vacant for 90 days or more was significantly higher in the territories, and in British Columbia, Alberta, Saskatchewan and Newfoundland and Labrador. This raises the possibility that the characteristics of these regions and of the local workforce, along with provincial regulations and local economic fluctuations, influence the length of time that positions remain vacant. For example, in the territories, it is possible that remoteness from urban centres plays an important role and slows the migration of workers toward that part of the country.

As observed in the descriptive analysis, occupations in management, health, and natural and applied sciences had a significantly higher probability of having long-term job vacancies.<sup>24</sup> However, the regression results indicate that the probability of long-term job vacancies was significantly lower for the professional and technical services sector. This finding is contrary to the observations made during the descriptive analysis and is probably attributable to the fact that a large number of occupations in natural and applied sciences can be found in this sector.<sup>25</sup>

All else equal, workplace size remains an important factor. This result supports the view that the duration of a vacancy is not solely linked to composition of employment within large businesses, but also to factors that may be more specific to large firms, such as a longer hiring process. Finally, as observed in the descriptive analysis, a significantly higher probability was also observed for positions requiring a certain level of educational attainment or more years of work experience.

### Offered wages are higher for long-term job vacancies

Offered wages are an important indicator of the working conditions with potential employers. According to economic theory, employer and

worker behaviours are closely related and the cost of labour is determined by variations in labour supply and demand. Employers who are experiencing a rising demand for their products or a labour shortage in certain key occupations should be more inclined to offer higher salaries and negotiate advantageous work arrangements.

In 2016, employers were willing to pay \$23.61 per hour on average to fill long-term vacancies compared with \$19.63 for positions vacant for less than 90 days, amounting to a difference of about 20 % (Table 6).<sup>26</sup>

Differences in the characteristics of long-term job vacancies could explain the observed wage gaps. More particularly, long-term job

**Table 5**  
Predicted probability that a position would be vacant for 90 days or more, by various characteristics, 2016

|   | predicted probability |
|---|-----------------------|
| <b>Province</b>   |                       |
| Newfoundland and Labrador   | 12.0*                 |
| Prince Edward Island  | 7.5                   |
| Nova Scotia   | 9.9                   |
| New Brunswick   | 11.3 <sup>†</sup>     |
| Quebec  | 9.4                   |
| Ontario (ref.)  | 9.7                   |
| Manitoba  | 7.4**                 |
| Saskatchewan  | 12.2**                |
| Alberta   | 12.9**                |
| British Columbia  | 11.4**                |
| Northwest Territories   | 19.3**                |
| <b>Quarter</b>  |                       |
| January to March  | 9.6 <sup>†</sup>      |
| April to June (ref.)  | 10.5                  |
| July to September   | 9.9                   |
| October to December   | 11.2                  |
| <b>Local unemployment rate below the national unemployment rate</b> |                       |
| Yes   | 10.4                  |
| No (ref.)   | 10.2                  |
| <b>Full-time job</b>  |                       |
| Yes   | 11.4**                |
| No (ref.)   | 8.2                   |
| <b>Permanent job</b>  |                       |
| Yes   | 10.6**                |
| No (ref.)   | 9.6                   |

**Table 5**  
**Predicted probability that a position would be vacant for 90 days or more, by various characteristics, 2016**

|   | predicted probability |
|---|-----------------------|
| <b>Main industrial sector</b>                                     |                       |
| Construction  | 10.2                  |
| Manufacturing   | 10.1*                 |
| Wholesale trade   | 9.8*                  |
| Retail trade  | 12.0                  |
| Transportation and warehousing                                    | 11.9                  |
| Professional, scientific and technical services                   | 8.9**                 |
| Administrative and support services                               | 7.2**                 |
| Educational services  | 8.7**                 |
| Health care and social assistance (ref.)                          | 12.1                  |
| Accommodation and food services                                   | 11.5                  |
| Other sectors   | 9.8**                 |
| <b>Occupational category</b>                                      |                       |
| Management  | 11.9**                |
| Business, finance and administration (ref.)                       | 8.6                   |
| Natural and applied sciences and related occupations              | 12.2**                |
| Health  | 13.2**                |
| Education, law and social, community and government services      | 7.1*                  |
| Art, culture, recreation and sport                                | 8.2                   |
| Sales and service   | 11.0**                |
| Trades, transport and equipment operators and related occupations | 10.6**                |
| Natural resources, agriculture and related production occupations | 10.7†                 |
| Manufacturing and utilities                                       | 7.5                   |
| <b>Workplace size</b>   |                       |
| Less than 20 employees  | 11.5                  |
| 20 to 99 employees  | 7.5**                 |
| 100 to 499 employees  | 10.5*                 |
| 500 employees or more   | 14.6**                |
| <b>Level of education required</b>                                |                       |
| No minimum level of education sought (ref.)                       | 9.2                   |
| High school diploma or equivalent                                 | 10.3*                 |
| Apprenticeship or trades certificate or diploma                   | 11.6**                |
| College, CEGEP or other non-university certificate or diploma     | 10.4*                 |
| University certificate or diploma below bachelor's degree         | 9.3                   |
| Bachelor's degree   | 12.2**                |
| University certificate or diploma above bachelor's degree         | 14.6**                |
| <b>Work experience required</b>                                   |                       |
| Less than 1 year (ref.)   | 10.2                  |
| 1 year to less than 3 years                                       | 9.0**                 |
| 3 years to less than 5 years                                      | 11.6*                 |
| 5 years to less than 8 years                                      | 13.3**                |
| 8 years or more   | 14.1**                |
| <b>Professional certification requested</b>                       |                       |
| Yes   | 12.7**                |
| No (ref.)   | 9.7                   |

\* significantly different from reference category (ref.) ( $p < 0.05$ )

\*\* significantly different from reference category (ref.) ( $p < 0.01$ )

† significantly different from reference category (ref.) ( $p < 0.10$ )

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

vacancies are more likely to be positions with a high level of required education, which tend to pay more.

In most cases, however, offered wages are higher for long-term job vacancies than for positions vacant for less than 90 days, regardless of sector, occupation, educational requirements or required work experience. The wage gap varied, depending on the characteristics of the vacant positions. This finding applies to both full-time and part-time positions across the entire period for which data were collected. The gap, however, is smaller when only full-time positions are considered.

Yet, the largest wage gaps (as a percentage) were not necessarily observed in the sectors or occupations with higher numbers or prevalence of long-term job vacancies. In 2016, the largest gaps between long-term job vacancies and other job vacancies were in the manufacturing (32%) and transportation and warehousing sectors (33%). The health care and social assistance (21%) and professional, scientific and technical services sectors (18%) ranked fourth and sixth, respectively.

With regard to required work experience, the salary gap for long-term job vacancies for positions requiring less than one year of experience was nearly five times higher (27%) than the gap observed for positions requiring eight or more years of experience (6%). This is despite the fact that there is a higher prevalence of long-term job vacancies among positions requiring eight or more years of experience.

## Long-term job vacancies in Canada

**Table 6**  
**Average hourly wage offered by characteristic and duration of vacant positions, 2016**

|   | All job vacancies            |                            | Full-time job vacancies      |                            |
|---|------------------------------|----------------------------|------------------------------|----------------------------|
|   | Vacant for less than 90 days | Vacant for 90 days or more | Vacant for less than 90 days | Vacant for 90 days or more |
|   | dollars                      |                            |                              |                            |
| <b>All vacant positions</b>                                       | <b>19.63</b>                 | <b>23.61*</b>              | <b>21.94</b>                 | <b>25.71*</b>              |
| <b>Main industrial sector</b>                                     |                              |                            |                              |                            |
| Construction  | 22.19                        | 24.22*                     | 22.53                        | 24.24                      |
| Manufacturing   | 20.48                        | 27.04*                     | 20.99                        | 27.35*                     |
| Wholesale trade   | 22.34                        | 26.68*                     | 23.13                        | 27.24*                     |
| Retail trade  | 13.57                        | 13.71                      | 16.84                        | 18.64                      |
| Transportation and warehousing                                    | 20.95                        | 27.79*                     | 22.47                        | 30.04*                     |
| Professional, scientific and technical services                   | 27.78                        | 32.71*                     | 29.20                        | 33.23*                     |
| Administrative and support services                               | 17.11                        | 21.46*                     | 17.99                        | 22.50*                     |
| Educational services  | 26.82                        | 29.64*                     | 27.42                        | 31.11*                     |
| Health care and social assistance                                 | 22.95                        | 27.87*                     | 24.61                        | 29.36*                     |
| Accommodation and food services                                   | 12.32                        | 14.28*                     | 13.05                        | 14.80*                     |
| Other   | 22.11                        | 25.35*                     | 24.17                        | 26.79*                     |
| <b>Occupational category</b>                                      |                              |                            |                              |                            |
| Management  | 33.89                        | 37.35*                     | 35.30                        | 38.93*                     |
| Business, finance and administration                              | 21.69                        | 24.17*                     | 22.97                        | 25.65*                     |
| Natural and applied sciences and related occupations              | 29.54                        | 34.46*                     | 29.75                        | 34.57*                     |
| Health  | 25.36                        | 29.65*                     | 26.73                        | 30.72*                     |
| Education, law and social, community and government services      | 23.88                        | 27.80*                     | 25.41                        | 29.26*                     |
| Art, culture, recreation and sport                                | 17.90                        | 20.98*                     | 19.50                        | 22.39*                     |
| Sales and service   | 13.45                        | 14.61*                     | 14.97                        | 16.44*                     |
| Trades, transport and equipment operators and related occupations | 20.19                        | 22.06*                     | 20.84                        | 22.43*                     |
| Natural resources, agriculture and related production occupations | 14.88                        | 14.35                      | 15.08                        | 14.31                      |
| Manufacturing and utilities                                       | 15.93                        | 18.47*                     | 16.20                        | 18.64*                     |
| <b>Level of education required</b>                                |                              |                            |                              |                            |
| No minimum level of education sought                              | 13.70                        | 15.24*                     | 15.05                        | 16.72*                     |
| High school diploma or equivalent                                 | 15.45                        | 17.03*                     | 16.59                        | 18.62*                     |
| Apprenticeship or trades certificate or diploma                   | 21.19                        | 21.80                      | 22.51                        | 22.50                      |
| College, CEGEP or other non-university certificate or diploma     | 23.05                        | 25.07*                     | 24.06                        | 25.58*                     |
| University certificate or diploma below bachelor's degree         | 28.43                        | 32.49*                     | 29.07                        | 33.77*                     |
| Bachelor's degree   | 34.40                        | 37.57*                     | 34.87                        | 38.59*                     |
| University certificate or diploma above bachelor's degree         | 39.95                        | 44.46*                     | 40.62                        | 44.90*                     |
| <b>Work experience required</b>                                   |                              |                            |                              |                            |
| Less than 1 year  | 15.46                        | 18.93*                     | 16.89                        | 21.40*                     |
| 1 year to less than 3 years                                       | 18.24                        | 20.17*                     | 19.16                        | 20.19*                     |
| 3 years to less than 5 years                                      | 25.90                        | 26.36                      | 26.34                        | 26.23                      |
| 5 years to less than 8 years                                      | 32.48                        | 34.70*                     | 32.84                        | 35.13*                     |
| 8 years or more   | 47.04                        | 50.90*                     | 48.05                        | 50.85                      |

\* significantly different from reference category (positions vacant for less than 90 days) ( $p < 0.05$ )

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

It may be that salary gaps are more closely related to the characteristics of the long-term job vacancies than to their prevalence. For example, there may be a higher prevalence

of positions offering less attractive working conditions (such as hours of work, work environment and types of duties) among long-term job vacancies with lower educational or

work experience requirements. In such cases, better wages are often offered for this type of position to compensate for the unpleasant aspects of the job and to attract a sufficient number of applicants. In contrast, salaries may be more rigid for positions requiring an elevated level of education or experience.

To measure the extent to which the duration of vacancies affect the hourly wage offered by employers, a linear regression model was estimated with the offered wage as the dependent variable. Two models were estimated. The first model included the duration of the vacancy as the only variable, whereas the second model added several other control factors related to the region, job seasonality, the local labour market (unemployment rate, activity rate, vacancy rate), workplace (size, sector), job characteristics (occupation, required skill level) and requirements in terms of education and experience. Separate models were estimated for all positions and for full-time positions.

The results indicate that most of the observed salary gap (slightly more than 80%) can be explained by differences in the characteristics of the vacant positions, which is not surprising since there is a high prevalence of long-term job vacancies among well-paid occupations.

However, even after taking the differences in characteristics into account, the offered hourly wage for full-time positions vacant for 90 days or more was 5% higher than the offered wage for positions that had been vacant for less than 15 days (Table 7). Thus, an employer who offers \$20 per hour<sup>27</sup> for a full-time position that has been vacant for less than 15 days, would typically offer one more dollar per hour for the same position when the vacancy

**Table 7**  
**Percentage difference in hourly wages, by vacancy duration, 2016**

|                          | All job vacancies |         | Full-time job vacancies |         |
|--------------------------|-------------------|---------|-------------------------|---------|
|                          | Model 1           | Model 2 | Model 1                 | Model 2 |
|                          | percent           |         |                         |         |
| <b>Duration</b>          |                   |         |                         |         |
| Less than 15 days (ref.) | ...               | ...     | ...                     | ...     |
| 15 to 29 days            | 5.5**             | -0.3    | 4.9**                   | -0.1    |
| 30 to 59 days            | 18.2**            | 3.4**   | 16.8**                  | 3.6**   |
| 60 to 89 days            | 24.6**            | 4.1**   | 24.2**                  | 5.3**   |
| 90 days or more          | 25.9**            | 4.4**   | 24.3**                  | 5.4**   |

... not applicable

\*\* significantly different from reference category (ref.) ( $p < 0.01$ )

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

duration is at least 90 days. The wage advantage of long-term job vacancies over positions that have been vacant for less than 15 days was 4% when all positions were considered (i.e., part-time and full-time positions).

### Conclusion

The duration of job vacancies provides information that may be useful for understanding future fluctuations in labour demand. For individuals seeking their first job or looking to make a career change, identifying which sectors are growing or which have insufficient labour supply may be crucial in

determining their field of study. For employers, a better understanding of factors that cause long-term job vacancies could translate into improved hiring strategies that could significantly reduce the time it takes to fill a position when there is a labour shortage or when they plan to expand.

This article presents a profile of long-term job vacancies in Canada and the associated risk factors. In 2016, 9% of Canada's 377,500 vacant positions remained unfilled for 90 days or more. Although long-term job vacancies occur in all occupations and all regions, their prevalence

varies according to their various characteristics. The study's findings reveal, for instance, that there is a higher prevalence of long-term job vacancies in the territories, in the oil-producing provinces and in British Columbia. There is also a higher percentage of long-term job vacancies in health care, management and professional positions, and in positions requiring a high level of education, more work experience or professional certification.

Lastly, the findings of this study indicate that there is a link between the offered hourly wage and the duration of the vacancy. The average hourly wage for long-term job vacancies is significantly higher than the average hourly wage of positions vacant for less than 90 days. The salary gap persists when differences in the characteristics of long-term job vacancies and other vacant positions are taken into account. These findings support the conclusion that employers are willing to offer higher wages for a comparable position when it remains vacant for 90 days or more.

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### Data sources, methods and definitions

#### Data sources

Data for the Job Vacancy and Wage Survey (JVWS) are collected quarterly, with the exception of the first quarter of 2015, which only covers February and March. The JVWS includes all workplaces in Canada except private households, religious organizations, federal, provincial and territorial governments, international public administrations and all other extra-territorial public administrations.

For the purposes of this study, data were classified by year and annual estimates were obtained by taking the average for all quarters and giving each quarter equal weight. Classifying quarterly data minimizes the effect of seasonality and extreme values on the estimates. Since there were no significant differences between the estimates for 2015 and 2016, the analysis is mainly based on the 2016 results.

#### Job vacancies

The unit of analysis used in this study is a job vacancy (unless otherwise indicated). A “job vacancy” refers to a position that is vacant on the first day of the month or that becomes vacant during the course of the month. The employer must be actively recruiting a new employee outside its organization and have duties related to the position to perform during the month. The position can be full time, part time, permanent, temporary or seasonal.

Vacant positions for which recruitment efforts had been ongoing for 90 days or more on the day of the survey are considered long-term job vacancies.

The characteristics of vacant positions are collected at the occupation level. When characteristics varied among vacancies for the same occupation, employers were instructed to declare the characteristics of one of the positions only. For required level of education, employers were asked to report the lowest level of required education among all vacancies for the same occupation. For vacancy duration, employers were asked to report the amount of time it took to fill the position that remained vacant for the longest period. Consequently, long-term job vacancies and positions requiring a low level of education may be overrepresented in the JVWS.

Data for the JVWS are collected monthly and relate solely to positions vacant on the first day the month or positions expected to be vacant during the month. Consequently, jobs that tend to be filled quickly (i.e., in less than four weeks) are less likely to be included in the sample. Short-term vacancies are therefore underrepresented in this type of data.

The JVWS, however, does not provide information on the total duration of job vacancies. In other words, the total number of days between when the position became vacant and when it was filled is unknown. Consequently, some positions that fall into the “positions vacant for less than 90 days” category, and very likely those vacant for 60 to 90 days, are positions that will still be vacant 90 days after being posted, and thus are actually long-term job vacancies.

## Recruitment methods used by employers

The number of days it takes to hire a new employee is largely influenced by the recruitment strategies used by the employer.<sup>28</sup> In general, employers do not hire the first person who applies at the company. Instead, they select the best candidate from a relatively large pool of applicants. However, the hiring process can be costly for employers, who must strike a balance between the benefits of finding the right person and the production losses associated with the job vacancy. Choosing the right recruitment strategy is therefore very important, as it affects the likelihood of finding the right candidate for the position, the amount of time spent searching for the right candidate and the probability that the position will be filled.<sup>29</sup>

The number of methods used in the hiring process is also important. Using multiple recruitment channels gives employers access to more candidates<sup>30</sup> or a larger pool of candidates with more diverse personal characteristics.

The most common recruitment methods used by employers include posting vacancies on online job boards, advertising vacancies on the company website, and obtaining referrals through informal networks (Table 8). More traditional methods, such as publishing ads in newspapers, posting a sign on the storefront of the workplace, and advertising at job fairs and recruiting events at educational institutions, ranked last in 2016.

**Table 8**  
Recruitment methods used by employers, by vacancy duration, 2016

| Recruitment method  | Positions vacant for less than 90 days | Positions vacant for 90 days or more |
|---|--|--------------------------------------|
|   | percent                                |                                      |
| Personal contacts, referrals, informal networks                   | 58.5                                   | 57.4                                 |
| Sign on the workplace storefront                                  | 18.4                                   | 17.1                                 |
| Company website   | 56.8                                   | 60.0*                                |
| Online job boards   | 65.2                                   | 69.6*                                |
| Social media  | 36.1                                   | 39.1*                                |
| Job or recruitment fairs at schools, colleges or universities     | 15.6                                   | 20.6*                                |
| Government employment centre or website                           | 20.2                                   | 24.2*                                |
| Professional networking, employment agencies or headhunting firms | 13.6                                   | 22.6*                                |
| Newspaper ads   | 13.1                                   | 18.4*                                |

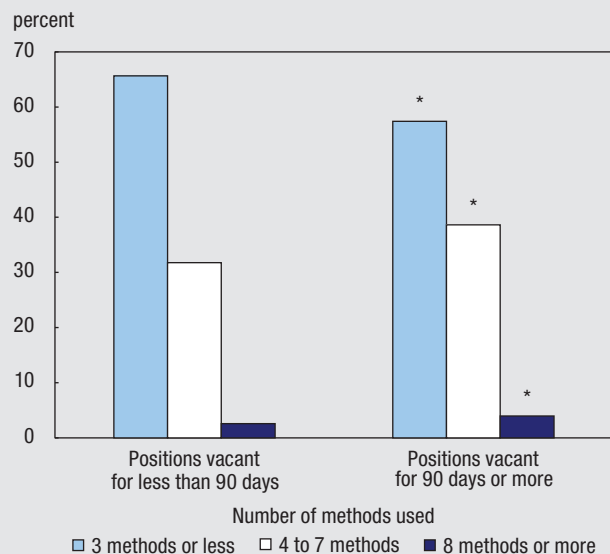
\* significantly different from reference category (positions vacant for less than 90 days) (p < 0.05)

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

Even though the recruitment methods used for long-term job vacancies and positions vacant for less than 90 days ranked similarly, there were some differences in terms of preferred methods. Employers were more likely to use professional networking, employment agencies or headhunting firms for long-term job vacancies. They were also more likely to publish ads in newspapers.

The largest difference, however, was in the number of recruitment methods used to fill the two different types of vacancies. In 2016, 34% of employers seeking to fill positions vacant for less than 90 days used four or more recruitment methods. For long-term job vacancies, the corresponding percentage was 43% (Chart 5).

**Chart 5**  
Number of recruitment methods used by employers, by vacancy duration, 2016



\* significantly different from reference category (positions vacant for less than 90 days) (p < 0.05)

Source: Statistics Canada, Job Vacancy and Wage Survey, 2016.

### Notes

1. See van Ours and Ridder (1991); Chen and Eriksson (2009).
2. See van Ours and Ridder (1991). Furthermore, Morissette and Zhang (2001) have shown that in 1999, businesses in Canada with high vacancy rates were those that innovated and sought highly qualified workers.
3. See Gorter and van Ommeren (1999). It also takes longer to fill non-manual positions (Andrews et al. 2008), high-skilled jobs (van Ours and Ridder 1991; Burdett and Cunningham 1998) and jobs in smaller companies (Burdett and Cunningham 1998; Chen and Eriksson 2009).
4. See Andrews et al. (2008).
5. See Chen and Eriksson (2009).
6. A better understanding of the factors affecting the duration of job vacancies, and especially the factors associated with long-term vacancies, is useful for studying and measuring frictional and structural unemployment in Canada. Frictional unemployment is unemployment resulting from the time it takes for a person to find another job. It generally stems from a lack of information among unemployed persons and employers. Structural unemployment is caused by labour market adjustment problems. The sources of these problems include changes in demographic, social and economic structures and mechanisms that hinder adjustment between labour supply and demand (e.g., labour market regulation and taxation).
7. In the 1999 Workplace and Employee Survey, positions that were vacant for 4 months or more were considered long-term vacancies. In the 1971 to 1978 Job Vacancy Survey, positions that had been vacant for four weeks or more were considered long-term vacancies.
8. The Job Vacancy and Wage Survey does not collect information on the total duration of job vacancies. Consequently, a position that was vacant for less than 15 days is not necessarily a position that was filled in 15 days—this merely indicates how long the position had been vacant on the day of the survey. The position may have been filled several weeks later. However, it is reasonable to assume that the position was filled shortly thereafter and did not remain vacant for 90 days. Burdett and Cunningham (1998) calculated that 72% of job vacancies were filled within two weeks, and 98% in 90 days or less. Adams et al. (2002) show that 92% of vacant positions were filled in 12 weeks or less. Data from other studies indicate that vacancies lasting 90 days or more are a clear sign of personnel recruitment challenges.
9. See Galarneau et al. (2001).
10. The job vacancy rate is generally used to identify labour shortages in a specific sector or occupation. According to van Ours and Ridder (1991), the duration of job vacancies is positively correlated with the job vacancy rate.
11. Positions that generally have very short vacancies are underrepresented in databanks, which is attributable to collection periods.
12. In this article, the terms “long-term job vacancies” and “positions vacant for 90 days or more” are used interchangeably.
13. How vacancy durations vary in accordance with economic cycles cannot be studied for several more years since chronological data do not go back far enough in time.
14. In 2016, British Columbia had the lowest unemployment rate among all Canadian provinces (6.0%). In contrast, Prince Edward Island had the second-highest unemployment rate among the provinces (10.7%).
15. Galarneau (2016) presented similar results for the health care and social services sector, which posted some of the highest job vacancy and long-term vacancy rates in 2011. In this industry, the aging of the population is exerting upward pressure on demand for services (expansion demand) while the growing number of retiring workers is increasing demand for labour (replacement demand).
16. Data are collected at the workplace level and not at the company level. The economic activity of a workplace occurs within a specific geographic location, whereas a company is a legal entity that may be comprised of several workplaces.
17. Traditionally, large businesses post lower layoff rates (Picot et al. 1997; Bernard and Galarneau 2010) and better employee retention rates (Morissette et al. 1992) than smaller businesses.
18. In 2016, workplaces with less than 20 employees accounted for 86% of workplaces in Canada. This explains why one-third of vacant positions are at this type of workplace despite the low proportion with at least one vacancy.
19. Akyeamong (2006) indicates that establishments with 500 employees or more were much more likely to require medical exams, background checks and drug testing than smaller workplaces.
20. See Barron et al. (1985); van Ours and Ridder (1991); Gorter and van Ommeren (1999).

21. See Barron et al. (1985).
22. See van Ours and Ridder (1992); Barron et al. (1997).
23. See Blau and Robins (1990).
24. A significantly higher probability was also observed for occupations in sales and services, as well as those in trades, transportation and machinery when other risk factors were taken into account.
25. Occupations in natural and applied sciences accounted for 37% of vacant positions in this sector in 2016.
26. It is important to keep in mind that the figures given are for wages offered and not those negotiated and confirmed in an employment contract between the employer and employee. These amounts do not include bonuses or other financial benefits related to the job, or non-wage benefits (e.g., dental insurance), which may be paid in part or in full by the employer.
27. In 2016, the average hourly wage in Canada was \$25.72.
28. See Adams et al. (2002); DeVaro (2005); Sabatier (2010).
29. See Barron et al. (1997); Sabatier (2010).
30. See Barron et al. (1985); Barron and Bishop (1985); Barron et al. (1997).

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