

The Road Ahead: Addressing Canada's Trucking and Logistics Industry Labour Shortages

March 2020



Trucking HR Canada's new labour market initiative delivers comprehensive labour market information that will support employers in managing current and future workforce challenges. Trucking HR Canada (THRC) engaged The Conference Board of Canada to undertake the research that is the basis for this report.

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We also want to recognize our partner The Canadian Trucking Alliance (CTA).



For more information about this report or Trucking HR Canada, please contact us: (613) 244-4800 / theteam@truckinghr.com / www.truckinghr.com

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i. Table of Contents

1	Overview	3
	Market Size and Impact	3
	Size of the Trucking and Logistics Workforce	4
	Quantifying the Labour Shortage	4
	Our Scope	6
2	The Truck Driver Occupation	8
	Employment	8
	Compensation	11
3	Truck Driver Labour Shortages	14
	The Severity	14
	The Causes	18
	The Impacts	23
4	The Outlook	26







1.0 Overview

Labour shortages in trucking and logistics are an ongoing and growing concern. The labour pool is shrinking, and the shortage is growing — escalating stress on the entire industry, while significantly impacting critical sectors of the Canadian economy.

To quantify the problem, **Trucking HR Canada** (THRC) launched a Labour Market Information Project in the summer of 2018. **The Conference Board of Canada** was engaged to work on a comprehensive survey to more accurately assess the industry's labour needs.

This research provides important intelligence for the Trucking and Logistics sector. Understanding the industry's labour needs, and taking appropriate action has an impact on all Canadians.

Market Size and Impact

Transportation is one of 10 critical sectors¹ on which Canada's economy and security depends, as identified by Public Safety Canada's *'National Cross Sector Forum 2018-2020 Action Plan for Critical Infrastructure.'*²

Trucking and logistics companies connect consumers, businesses, and international markets that are vital to our economy. The sector carries an estimated \$550 billion worth of goods³ purchased by Canadians and more than \$300 billion worth of Canadian goods⁴ destined to export markets (these figures exclude the sizable markets for wheat and crude oil).

In addition, it supports the nine other critical infrastructure sectors: energy and utilities, information and communication technology, finance, health, food, water, safety, government, and manufacturing. These pillars of our economy depend on a healthy trucking and logistics industry.

¹ The nine other critical infrastructure sectors include energy and utilities, information and communication technology, finance, health, food, water, safety, government, and manufacturing.

² <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/pln-crtcl-nfrstrctr-2018-20/pln-crtcl-nfrstrctr-2018-20-en.pdf>

³ Total consumption expenditures in 2018 for all types of goods (durables, semi-durables, and non-durables). These include vehicles, food, clothing, electronics, appliances, pharmaceutical products, etc.

⁴ Products that are typically exported by other modes of transportation such as rail are excluded from this estimate. Examples: wheat and crude oil.





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Size of the Trucking and Logistics' Workforce

In 2019, the trucking and logistics sector employed 3.6% of Canada's workforce, or just over 650,000 workers.⁵ Truck drivers are at the core of the trucking and logistics industry. They keep the flow of goods moving. Their activities directly support the remaining 54% of the sector's workforce, that includes: 90,000 people in shipping and receiving, 70,000 courier service drivers, 38,000 material handlers at warehouses and distribution centers, and: an estimated 40,000 managers, supervisors, and administrative staff, along with 9,000 accounting personnel.

Truck drivers matter. With their current level of employment at 300,000, they represent 46% of the trucking and logistics workforce.

Quantifying the Labour Shortage

According to Statistics Canada's Job Vacancy and Wage Survey, the truck transportation industry experienced an average job vacancy rate of 6.8% in 2019. This is the second-highest vacancy rate among Canadian industries after crop production, and more than double the national average of 3.3%.

Most of these job vacancies are for truck drivers. While truck drivers represent 46% of the industry, they account for 63% of its job vacancies. The total number of truck driver vacancies in Canada has increased over 138% between 2016 and the first three quarters of 2019 – climbing from 8,600 to 20,500, during this timeframe.

Against this backdrop, it's not surprising that 61% of employers who responded to our survey reported difficulties filling truck driver positions within the past year.

This study uncovers several reasons that explain the shortage. It captures unique insights and analyzes data at a granular level, that previously wasn't available.

This study represents the first of its kind to measure and probe the full trucking and logistics industry. It analyzes differences in long-haul vs short haul, and provides the most informed analysis to-date in understanding and quantifying the driver shortage.

This work is essential— if we are to adequately address this problem, we must first understand it.

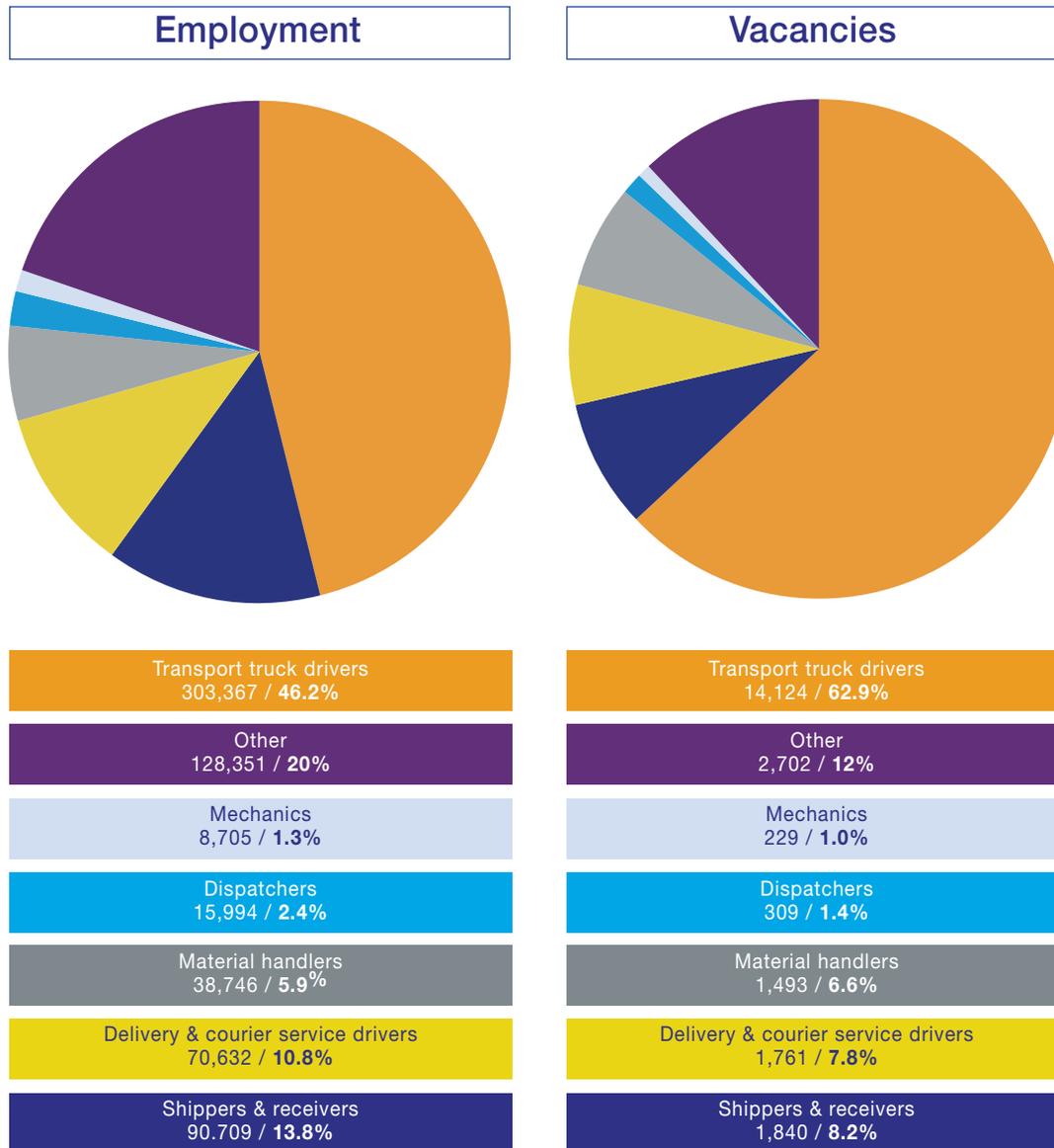


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Chart 1.1

Breakdown of trucking and logistics employment and vacancies by occupation

(annual average, 2016-2018)



Source: Statistics Canada, Labour Force Survey (Special request from Statistics Canada); Job Vacancy and Wage Survey (Special request from Statistics Canada).



1

Our Scope

To assist employers in understanding the significance of sector labour challenges, Trucking HR Canada (THRC) commissioned The Conference Board of Canada (Conference Board) to undertake a comprehensive Labour Market Information (LMI) research project to assess the labour market situation for 30 occupations⁶ in the trucking and logistics sector. This study provides an industry first — the most detailed, extensive analysis to date. It uses a multitude of data collection and analysis methodologies to quantify the status of the sector's labour market. Previous related analysis was limited and focused solely on the truck transportation industry.⁷

The analysis presented in this briefing (and forthcoming comprehensive report) is based on a wide range of data, information, and analysis collected from numerous sources. These include one-on-one interviews with employers, industry associations, and truck drivers; custom tabulations of Statistics Canada data; a detailed survey of employers in the industry; as well as the development of a labour supply and demand forecasting tool.⁸ In turn, labour market projections provide additional insights into the causes of future labour market imbalances and can help identify potential solutions.

The employer survey was carried out in the Fall of 2019. It provided us with key insights into the driver labour shortage, and enabled us to better understand the impact on individual businesses and the overall sector. In addition, the survey information collected allowed us to deepen our understanding of truck driver employment and compensation in Canada, especially for long-haul versus short-haul truck drivers and employed truck drivers versus owner-operators. In total, we received 352 responses from employers, covering 44,207 truck drivers, or 14% of total truck driver employment in Canada.

⁶ For the list of occupations falling under the umbrella of the "trucking and logistics" sector, as defined in this report, please refer to the comprehensive report for this project.

⁷ For the purpose of this labour market information project, the overall trucking and logistics sector was defined by Trucking HR Canada as the combination of Truck Transportation (NAICS 484), Couriers and Messengers (NAICS 492) and Warehousing and Storage (NAICS 493). For truck drivers and delivery drivers specifically, all sectors of the economy were included in the analysis.

⁸ Details on the methodology used for this LMI project are discussed in the comprehensive report.



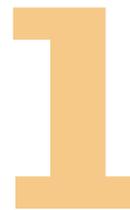
This briefing presents the key findings of our research, focusing on the truck driver labour shortage. Below are noteworthy highlights:

- **An acute labour shortage:** The truck driver occupation in Canada is facing an acute labour shortage, as confirmed by the large number of truck driver vacancies and the occupation's historically low unemployment rate. The combination of these trends has put upward pressure on wages, especially in the long-haul segment.
- **Reduced revenues of \$3.1 billion:** The truck driver labour shortage reduced revenues in the truck transportation industry⁹ by an estimated 4.7% in 2018, equivalent to roughly \$3.1 billion.
- **Impacts on small business are more severe:** Smaller businesses are disproportionately affected by their inability to fill truck driver vacancies. Job vacancies cost firms with revenues below \$1 million an average of 24.5% of their sales, compared with 7.4% for those with sales exceeding \$50 million.
- **Concerning labour supply challenges:** Key factors behind the current labour shortage issues include: an aging workforce, difficulties attracting women and youth, and a high rate of voluntary turnover.
- **Vacancies will grow:** Under a status quo scenario, i.e. assuming the sector's ability to recruit and retain workers does not improve, the truck driver shortage would worsen, with vacancies projected to surpass 25,000 positions within the next three to five years.

What are job vacancies?

Vacancies is a term used to describe labour shortages from a business perspective. In this briefing, vacancies represent the average annual number of unfilled jobs at any given time throughout the year. A vacancy refers to a position that remains unfilled for at least one month despite efforts to fill that position. This definition is consistent with the Statistics Canada's definition for its Job Vacancy and Wage Survey (JVWS). The JVWS collects data on the number of job vacancies by occupation and economic region based on a quarterly survey of approximately 100,000 business locations with at least one paid employee.

⁹ This estimate is for the truck transportation industry only (NAICS 484) not for the overall trucking and logistics sector, as defined by THRC.





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2.0 The Truck Driver Occupation

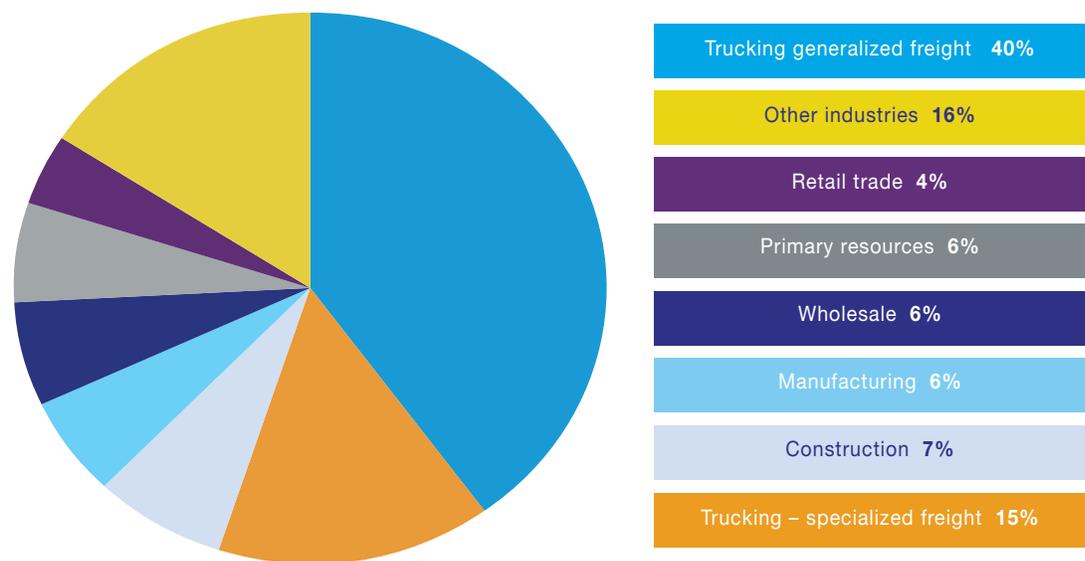
Truck drivers account for over 46% of employment in the trucking and logistics sector, as defined by THRC. They account for 63% of vacancies within the sector. In view of the importance of truck drivers to the sector, this section reviews the employment and compensation structure of occupation, referencing the information collected from Statistics Canada and the employer survey.

Employment

In recent years, there has been an average of just over 300,000 truck drivers¹⁰ working in Canada, equivalent to 1.7% of working Canadians. One out of every 60 working Canadians is employed as a truck driver. Based on the 2016 Census, over half (55%) of truck drivers work in the truck transportation industry, particularly in the shipping of generalized freight (40%). Truck drivers also work in a wide variety of sectors, including construction, manufacturing, wholesale, primary resources, and retail. (See Chart 2.1)

Chart 2.1

Breakdown of truck driver employment by industry
(2016, per cent)



Source: Statistics Canada, CENSUS 2016 (Special request from Statistics Canada).

¹⁰ Employment data can vary widely from one year to the next. For this reason, we are using a three-year average of Statistics Canada's Labour Force Survey data.



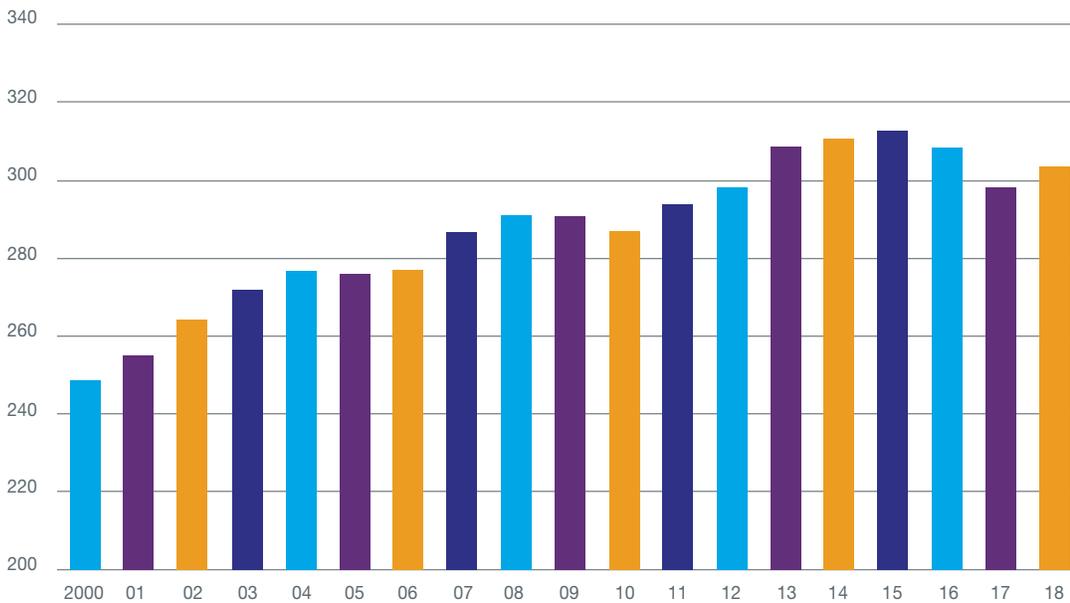
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In terms of growth, the number of truck drivers working in Canada has increased by over 80,000 over the past two decades. However, this increase has not been evenly spread across the period. The rate of increase in employment of truck drivers has slowed, with Canada adding an average of 4,100 truck drivers per year over the past decade (excluding the recession year of 2009) compared to 5,500 a year over the previous decade. (See [Chart 2.2](#))

Chart 2.2

Number of truck drivers employed in Canada

(3-year moving average, 000s)



Source: Statistics Canada, Labour Force Survey (Special request from Statistics Canada).

Beyond the above employment breakdown and general employment trends, there is limited additional publicly available data on truck driver employment and compensation. For example, within the occupation, we find two key types of workers: truck drivers employed at a company and self-employed truck drivers (owner-operators). This is the first industry report to distinguish between these two types of workers.



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Through our interviews with company executives and representatives of industry associations, it became clear the occupation was divided further, into two additional types of truck drivers: long-haul and short-haul. However, Statistics Canada does not distinguish between these two categories of truck drivers in its National Occupational Classification. Instead, it recognizes one transport truck driver occupation. For this reason, no data has been collected on this front in recent years. Based on the information gathered during interviews with industry stakeholders, we developed the two definitions below. These definitions were then used in the survey to collect data and information on both employment and compensation for each type of truck drivers. From these survey results, we were able to create a new data set for truck driver employment and compensation.

Definitions for long-haul and short-haul truck drivers

- **Long-haul truck drivers:** Drivers spending at least one night away from home each week.
- **Short-haul truck drivers:** Drivers being home every night unless exceptional circumstances prevent them from returning home.

Source: Definitions developed in partnership with THRC, and in consultation with industry.

The employer survey allowed us to capture a more detailed picture of truck driver employment in Canada, with breakdowns between employed versus owner-operators and long-haul versus short-haul drivers.

The survey contained 28 questions and was conducted between August 28 and November 19, 2019. A total of 352 responses from employers were received, covering 44,207 truck drivers, or 14% of total truck driver employment in Canada. More than 90% of reported truck drivers were from the for-hire trucking segment, with the remainder being employed by private fleets.¹¹



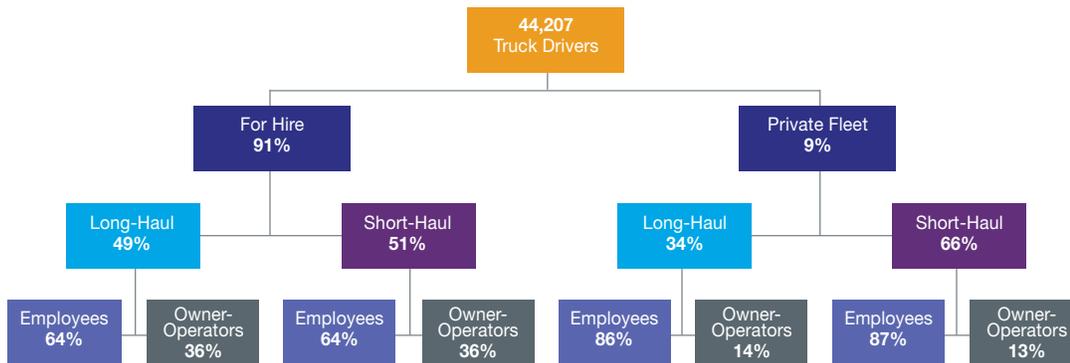
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Based on the survey results, two key observations stand out in the for-hire segment (See Diagram 2.3):

1. Truck drivers are fairly evenly distributed between long-haul and short-haul drivers.
2. Employees are more common than owner-operators, accounting for 64% of drivers in both the long-haul and short-haul segments.

Chart 2.3

Breakdown of truck driver employment - Employer survey



Source: Trucking HR Canada Employer Survey.

Compensation

The compensation structure for truck drivers is complex due to different types of loads, driver specialties, and cross-border transportation.¹² Common pay structures in the sector include mileage pay, hourly pay, and flat rate per trip. Furthermore, truck drivers' pay structure is continually evolving, especially as trucking firms compete for drivers amid worsening labour shortages. Against this backdrop, it is crucial to understand how truck drivers are being paid across the occupation, and how the pay structure is transitioning.

¹² Trucking HR Compensation Benchmarking Report. May 2018. <https://truckinghr.com/wpcontent/uploads/2019/09/Compensation-Report-2018.pdf>



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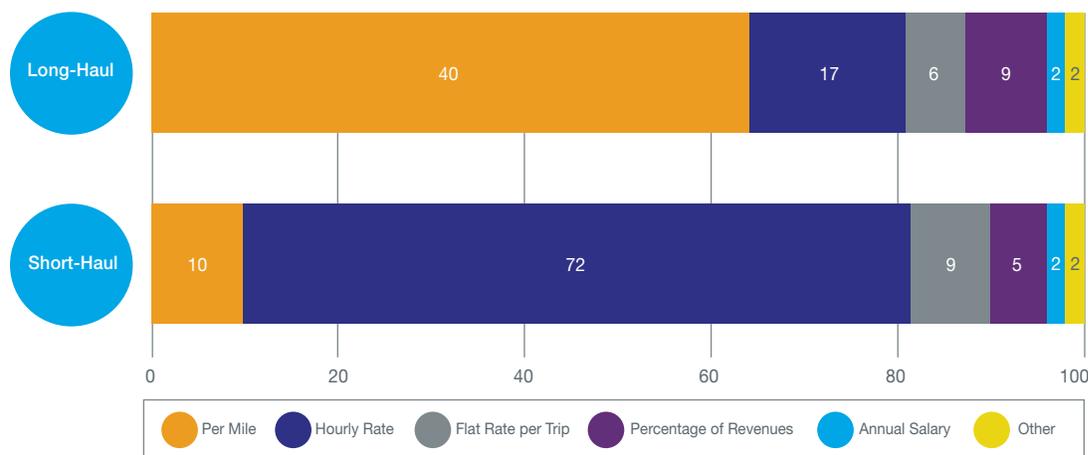
Fortunately, the employer survey allowed us to expand our understanding of truck driver compensation beyond the information that is currently available. To begin with, the survey allows us to distinguish the most common compensation types for long-haul and short-haul employed truck drivers.^{13,14} On the one hand, we found that short-haul drivers are much more likely to be paid an hourly rate. In fact, close to three-quarters of short-haul employers cited an hourly rate as their most common type of compensation for truck drivers, with these employers paying an average hourly rate of \$23.77. (See Chart 2.4.)

On the other hand, long-haul truck drivers tend to be paid by the mile, with roughly two-thirds (64%) of long-haul employers reporting per-mile pay as their most common type of compensation. On average, long-haul employers paid their drivers \$0.53 per mile. Other less common forms of compensation across segments include flat rate per trip, percentage of revenues, and annual salaries.

Chart 2.4

Per-mile pay most common in long-haul; Hourly pay dominates short-haul

(most common type of truck driver compensation, share of employers, per cent)



Long-haul (n = 220), short-haul (n=257)
Source: Trucking HR Canada Employer Survey.

¹³ THRC performed a detailed compensation benchmarking survey in 2017, with information on truck drivers' base pay and average annual income. The compensation data gathered under this current project is more limited, given the shorter length of the survey, although it provides additional compensation information on the two types of truck drivers, longhaul and short-haul. For additional information, see Trucking HR Canada. "Compensation Benchmarking Report". May 2018. <https://truckinghr.com/wp-content/uploads/2019/09/Compensation-Report-2018.pdf>

¹⁴ Information collected on the types of compensation in the employer survey was only for employed truck drivers, not owner-operators.



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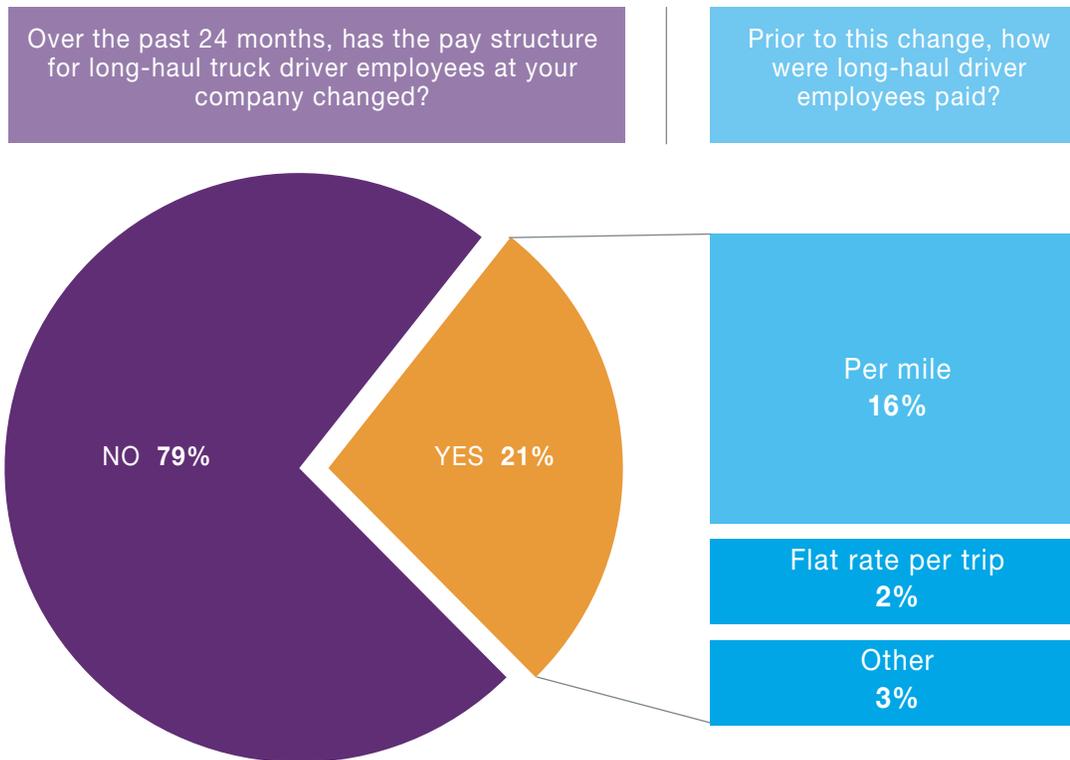
While mileage pay remains the most common type of compensation for long-haul truck drivers, the survey suggests that a substantial portion of long-haul employers are transitioning away from mileage pay. Over the past two years, more than one in five (21%) long-haul employers reported having changed the pay structure for their truck drivers, with three quarters of them abandoning mileage pay. (See [Chart 2.5](#))

Moreover, many long-haul employers who reported changing pay structure switched to an hourly rate. To justify this shift, employers in the survey mentioned the need to remain competitive amid worsening driver shortages, suggesting that hourly rates make it easier to attract and retain truck drivers, particularly younger ones. At the same time, employers highlighted that an hourly rate allows them to better capture the accurate hours worked by truck drivers, which not only improves logistics, but also makes it easier to calculate overtime pay.

Chart 2.5

Long-haul employers transitioning away from mileage pay

(share of employers, per cent)



n = 220
Source: Trucking HR Canada Employer Survey



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3.0 Truck Driver Labour Shortages

In section 2, we presented a new snapshot of truck driver employment. Moreover, we learned more about the compensation structure for employed truck drivers, and demonstrated how this structure is shifting. Considering the importance of compensation to recruiting and retaining qualified truck drivers, this information will help lay the foundation for the discussion on truck driver labour shortages in this section.

Considering the importance of truck drivers in the trucking and logistics sector and thus the Canadian economy, it should come as little surprise that labour shortages in this occupation are concerning. And identifying solutions is a priority. To do so, the sector needed a better understanding of the severity, causes, and impacts of the current truck driver shortages. Fortunately, a combination of data from the employer survey as well as publicly available data from Statistics Canada allowed us to shed light onto each of these topics.

The Severity

According to Statistics Canada's *Job Vacancy and Wage Survey*, the truck transportation industry experienced an average job vacancy rate^{15,16} of 6.8% in 2019. This is the second highest vacancy rate among Canadian industries after crop production, and more than double the Canadian average of 3.3%. The truck transportation industry is unable to fill roughly one out of every 15 positions – mostly truck drivers. In fact, the total number of truck driver vacancies in Canada more than doubled since 2016, from an annual average of 8,600 to 20,500 in the first three quarters of 2019. (See [Chart 3.1](#)) Against this backdrop, it may come as little surprise that over three in five (61%) employers reported difficulties filling truck driver positions in the 12-month period prior to taking the survey.

¹⁵ The job vacancy rate is only available for the truck transportation industry (NAICS 484), as reported by Statistics Canada, not the overall trucking and logistics sector as identified by THRC.

¹⁶ The vacancy rate for a particular industry is calculated as the number of vacant jobs expressed as a percentage of all jobs in the industry (including those that are occupied and those for which employees are being sought). Vacancies can include both new positions or existing positions that have been vacated by a former employee.



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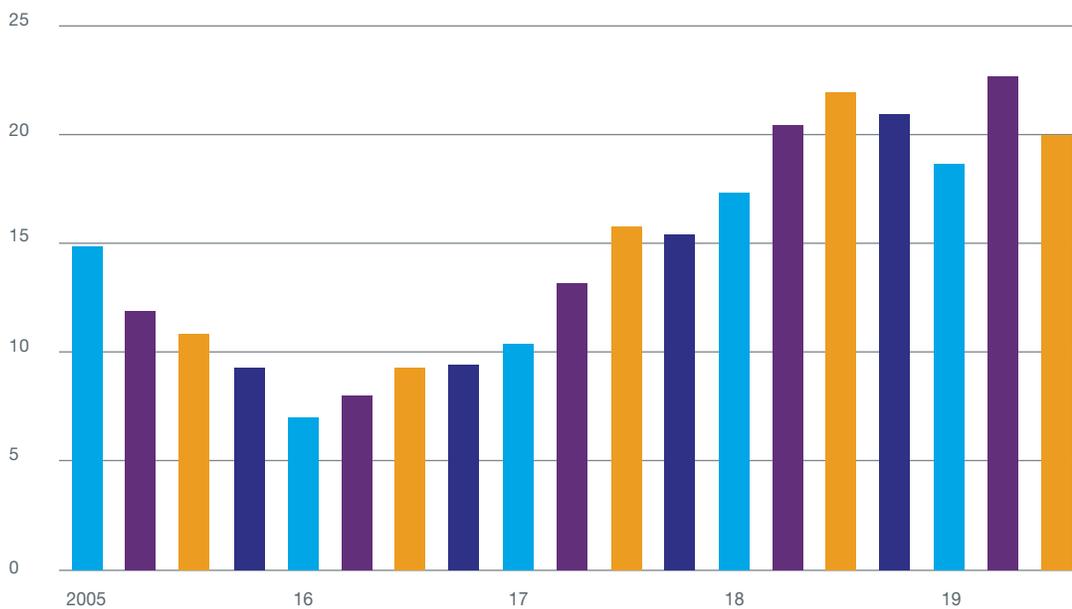
Labour shortages are not affecting all types of truck drivers evenly. Based on the survey, we estimate that the vacancy rate among long-haul truck drivers (9.4%) is significantly higher than that for short-haul drivers (5.9%). (See [Chart 3.2](#))

This suggests that while filling truck driver positions is difficult no matter what the driving job is, it is more difficult to recruit truck drivers who are willing to spend time away from home each week. Or as one interviewee noted “the struggles to recruit truck drivers are harder, the longer the haul”. This finding suggests that efforts to manage truck labour shortages should be focused on the long-haul segment.

Chart 3.1

Increasing number of truck driver positions going unfilled

(000s, all industries)



Source: Statistics Canada Table, 14-10-0356-01 (formerly CANSIM 285-0003).

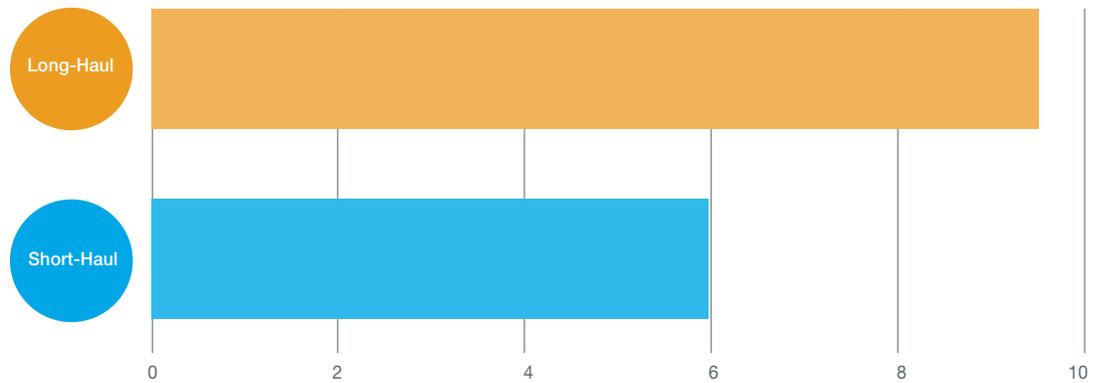


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Chart 3.2

Employers face greater difficulties filling long-haul positions

(Vacancy rate by segment, per cent)



Long-haul (n=153), short-haul (163)
Source: Trucking HR Canada Employer Survey.

Given the current challenges to find truck drivers, it appears employers are tapping into the pool of unemployed truck drivers. A key result is that the truck driver unemployment rate has fallen from 6.6% to 3.8% between 2016 and 2018. (See Chart 3.3) In comparison, the unemployment rate for all occupations fell at a considerably slower pace, from 7.0% in 2016 to 5.8% in 2018.

This development matters because it indicates the pool of potentially available truck drivers is becoming depleted. Put differently, the already historically low truck driver unemployment rate is approaching a floor, known as the structural level of unemployment.¹⁷ At this level of unemployment, there will still be a certain number of truck drivers that are not employable due to factors including skills and geographic mismatches. Employers are thus very limited in their ability to tap into the pool of unemployed truck drivers, highlighting the pressing need to find alternate pools of potential workers to fill vacancies.

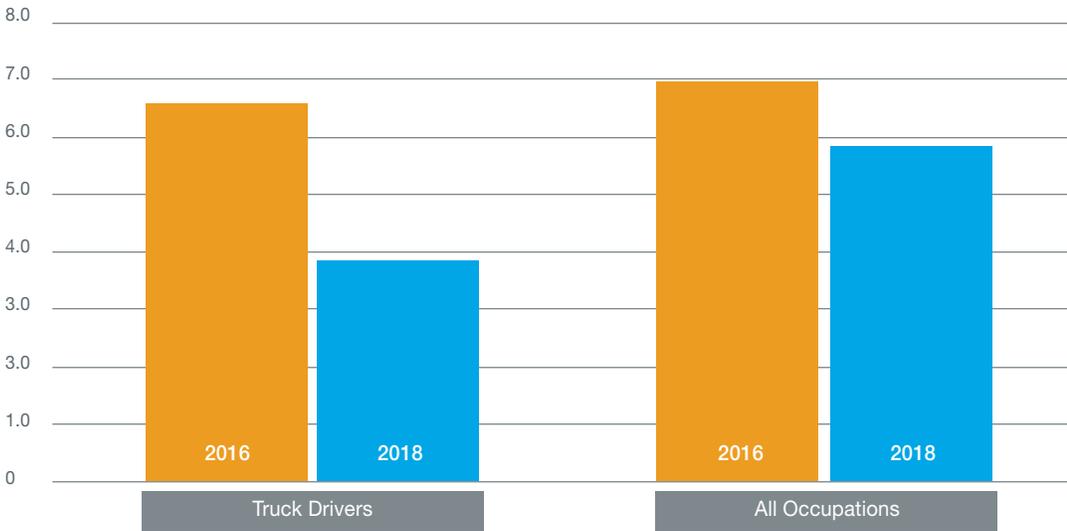
¹⁷ Statistics Canada defines structural unemployment as the situation when “workers are unable to fill available jobs because they lack the skills, do not live where jobs are available, or are unwilling to work at the wage rate offered in the market.” <https://www150.statcan.gc.ca/n1/en/catalogue/11F0019M2000145>



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Chart 3.3

Shrinking unemployment rate constraining ability to fill truck driver vacancies (unemployment rate, per cent)



Source: Statistics Canada, Labour Force Survey (Special request from Statistics Canada).

Based on the survey results, it seems the tightening labour market for truck drivers, particularly in the long-haul segment, has led to upward pressure on wages. As the supply of truck drivers becomes scarcer relative to demand, businesses are impelled to pay higher wages to remain attractive. We estimate¹⁸ that wages for long-haul drivers increased by 2.7% and 3.8% in 2017 and 2018, respectively, compared to 1.7% and 3.1% across all Canadian industries. (See [Chart 3.4](#))

In the short-haul segment, wage growth has remained more modest, although it too has picked up. Over the near-to-medium terms, we believe that the fundamentals that are driving truck driver wages higher, including vacancies, will persist.

¹⁸ We weight our estimate of wage growth by the number of truck drivers that an employer reports. A survey respondent that employs many truck drivers will consequently have a larger impact on our estimate of wage than one with fewer truck drivers.

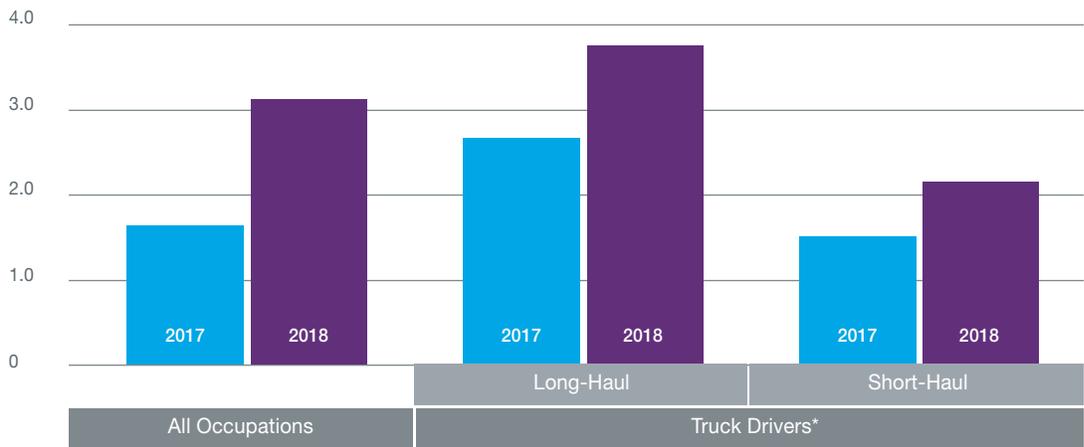


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Chart 3.4

Long-haul segment faces elevated wage pressures, amid heightened competition for truck drivers

(year-over-year wage growth, per cent)



* estimated

Long-haul (n=201), short-haul (n=233)

Source: Trucking HR Canada Employer Survey; The Conference Board of Canada.

The Causes

The rising number of vacancies combined with low unemployment and wage growth provides compelling economic evidence of a labour shortage for truck drivers. But what exactly is causing these shortages?

On the demand side, healthy demand growth for truck transportation services has been a significant factor behind the growing need for truck drivers. Between 2014 and 2018, the truck transportation industry, which employs 55% of truck drivers across Canada, saw its gross domestic product (GDP) expanding by an average of 2.7% per year, well above the pace of the overall Canadian economy, which grew at an annual pace of only 1.9%. In turn, strong growth in the truck transportation industry came on the heels of strong export growth in key trucking commodities, most notably agriculture and food products, industrial machinery, and wood and paper products.



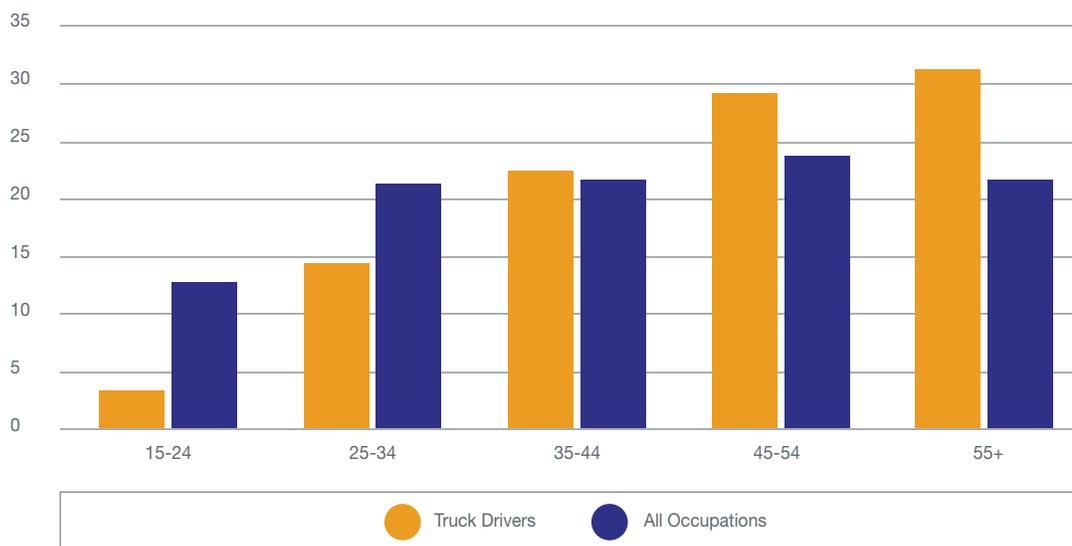
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While demand for truck drivers was rising at a robust pace, the supply of truck drivers was not keeping pace. And the occupation's aging demographics is one of the key reasons why. According to the Statistic Canada's 2016 Census, 32% of truck drivers in Canada were 55 years or older, compared to 21% of the entire Canadian labour force. (See Chart 3.5)

Chart 3.5

Older-than-average truck drivers leading to an increase in retirements

(share of employed workers by age group, per cent)



Source: Statistics Canada, CENSUS 2016 (Special request from Statistics Canada).

With a portion of this large cohort beginning to retire, hiring has become increasingly geared towards replacing retiring truck drivers. This has constrained the ability of the trucking and logistics sector to maintain, let alone grow the truck driver workforce. On a positive note, two in five (43%) employers surveyed reported having adopted strategies and practices to retain aging truck drivers as they approach retirement. The most commonly cited initiatives include flexible work arrangements, reduced physical work, and improved equipment (e.g. more ergonomic equipment, stairs on trailers, automatic transmissions).



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Difficulties attracting women and young workers have been another key obstacle to increasing the supply of truck drivers. With regards to women, there are several barriers to working as a truck driver, with our interviews highlighting “access to safety and rest areas that are highly lit and visible” as a top concern. Even with these obstacles, the degree to which women are underrepresented in the truck driver occupation is striking, with women making up only 3.5% of truck drivers, compared to 48.2% of employed Canadians.¹⁹ To put this into perspective, if the truck driver workforce mirrored the gender representation of the overall economy, there would be an additional 129,100 female truck drivers in Canada.

Younger workers represent a very small share of the truck driver workforce, compared to the national average. Only 3.4% of truck drivers are under 25 of age, compared to 12.7% across all occupations. (See [Chart 3.5](#)) Several factors help explain this low representation among the younger generation. The minimum age to obtain a truck driver license is 18 or 19 years old, depending on the province.

Also, many businesses require new hires to have at least three years of driving experience. Based on the survey, 41% of employers reported not hiring drivers with less than three years’ experience on the road, with concerns around insurance being the number reason mentioned by respondents. As a result, it can be very difficult for young drivers to qualify for the occupation under the age of 21. This is particularly concerning for an occupation that relies heavily on a workforce with a high school diploma or less (63% of employed truck drivers have a high school diploma or less, compared with 35% for the overall Canadian workforce. (See [Chart 3.6.](#)) In turn, younger individuals with a high school diploma or less are more likely to aspire to entry into the workforce at an earlier age than those pursuing higher education. And with the above delays to join the occupation, these people may opt for another occupation.

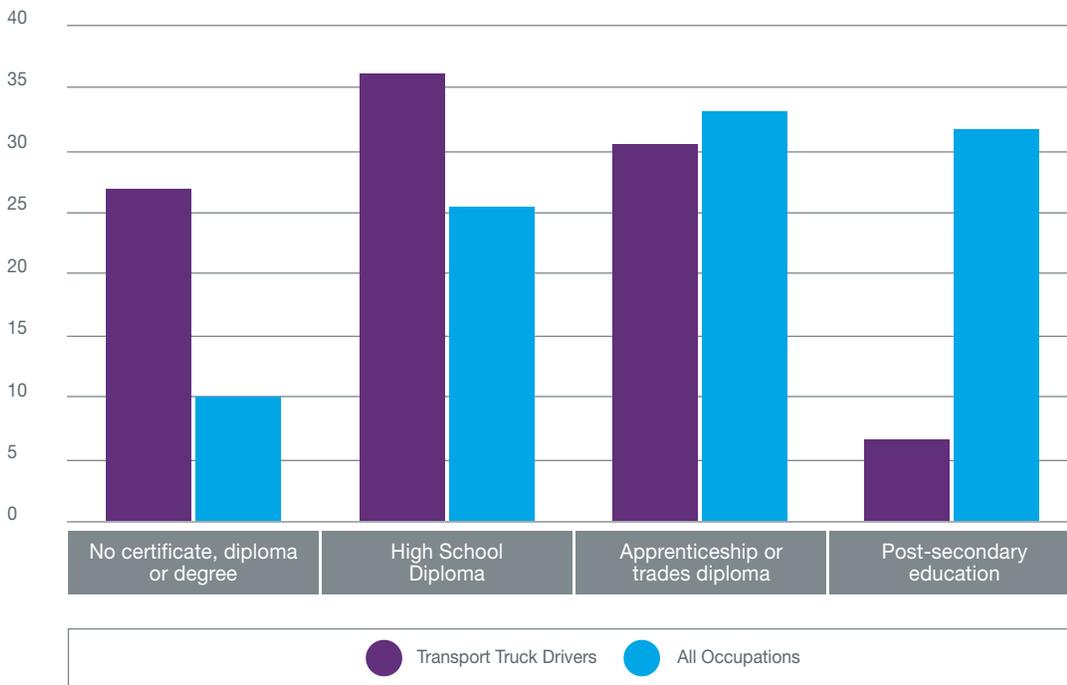


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Chart 3.6

Highest level of education achieved

(share of employed workers by education level, per cent)



Source: Statistics Canada, 2016 Census (custom tabulations).

Lastly, high levels of voluntary turnover²⁰ among truck drivers is another factor that is contributing to labour shortages in the occupation. Based on our employer survey, we estimate a firm-level²¹ voluntary turnover rate among truck drivers of 13.6%. To put this into perspective, the average voluntary turnover rate for all sectors in Canada is 8.9%.²²

This higher voluntary turnover rate, compared to other occupations, can reduce productivity and make it costly for individual trucking businesses. However, our data does not conclude whether truck drivers are moving to another company within the sector, or leaving their employers for another industry (e.g. construction).

²⁰ Voluntary turnover that is due to an employee-initiated departure. It is sometimes referred to as avoidable or regrettable turnover.

²¹ The firm-level voluntary turnover rate for truck drivers should not be confused with an occupational voluntary turnover rate. The former, which we use in this report, reflects the rate at which truck drivers are expected to leave their employer in any given year. It does not imply that truck drivers are changing occupations, although some may decide to do so.

²² Coburn, Kelsey, and Allison Cowan. Compensation Planning Outlook 2020. Ottawa: The Conference Board of Canada, 2019.



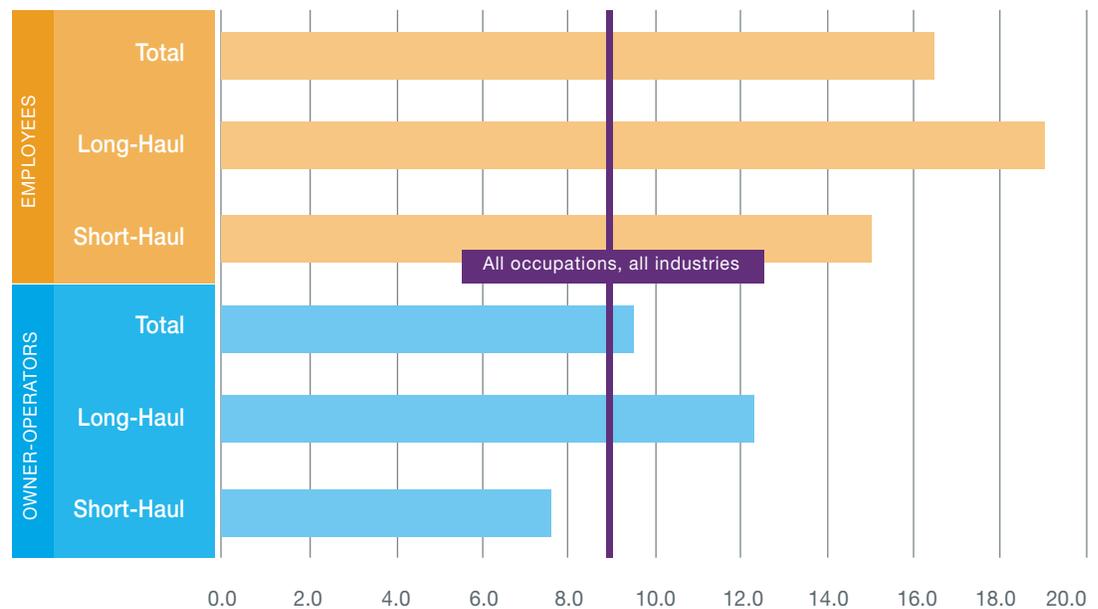
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Based on the results from the employer survey, we were able to estimate a voluntary turnover by segment. We found that voluntary turnover rates are higher for long-haul truck drivers (16.4%) than for short-haul truck drivers (12.1%). This came as little surprise, given that labour shortages appear to be more acute among long-haul drivers, as per the higher vacancy rate and wage growth data presented in the previous section. Voluntary turnover rates are significantly higher for employees (16.5%) than owner-operators (9.5%). (See Chart 3.7)

Chart 3.7

Voluntary turnover highest among long-haul employees

(voluntary turnover rate by category of truck driver, per cent)



Total (n = 268), long-haul (n = 191), short-haul (n = 202)
Source: Trucking HR Canada Employer Survey.



The Impacts

3

Evaluating the impacts of truck driver shortages, both from the perspective of an individual business as well as the overall truck transportation industry, underscores the urgency to address the shortages. Currently, businesses are losing sales because they are unable to fill the demand for truck drivers.

According to one interviewee, their company was “turning down work on a daily basis”, with “*six trucks parked that [they are] making payments on, and for which [they don't] have drivers.*” Exploring this consideration through our employer survey, we find that 40% of employers in for-hire trucking reported that truck driver shortages resulted in lost sales for their business in the previous year.

Using survey data on reported firm revenues as well as lost sales percentages²³ we estimate that, on average, truck driver vacancies cost firms 11.6% of their sales. Combining the average percentage sales lost (11.6%) with the share of employers who reported lost sales (40.1%), we estimate that truck driver labour shortages reduced revenues in the overall truck transportation industry²⁴ by 4.7% in 2018, equivalent to roughly \$3.1 billion. (See [Chart 3.8](#))

However, not all businesses are equally impacted by truck driver vacancies. Based on the survey, smaller businesses are disproportionately affected by their inability to fill truck driver vacancies. Vacancies cost firms with revenues below \$1 million an average of 24.5% of their sales, compared with 7.4% for those with sales exceeding \$50 million. (See [Chart 3.9](#)) While total forgone sales in dollar terms are significantly higher for larger firms, smaller businesses appear much more vulnerable to truck driver vacancies. The extent to which driver shortages can impact smaller firms is especially concerning considering that small firms account for the bulk of businesses within the industry. Of the roughly 9,000 firms that employ five or more workers, around 6,400 (or 71%) employ fewer than 20 workers.²⁵

²³ Loss sales estimates were provided by 88 of the 116 businesses who reported lost sales.

²⁴ The lost sales estimate calculated is a reliable estimate for the truck transportation industry only — i.e. NAICS 484 and also known as the for-hire segment—not the entire trucking and logistics sector, due to our sample being composed of 90 per cent of employers in for-hire trucking.

²⁵ Statistics Canada. Table 33-10-0214-01 Canadian Business Counts, with employees, June 2019

3

Chart 3.8

The cost of truck driver vacancies

(estimate, for-hire trucking segment)

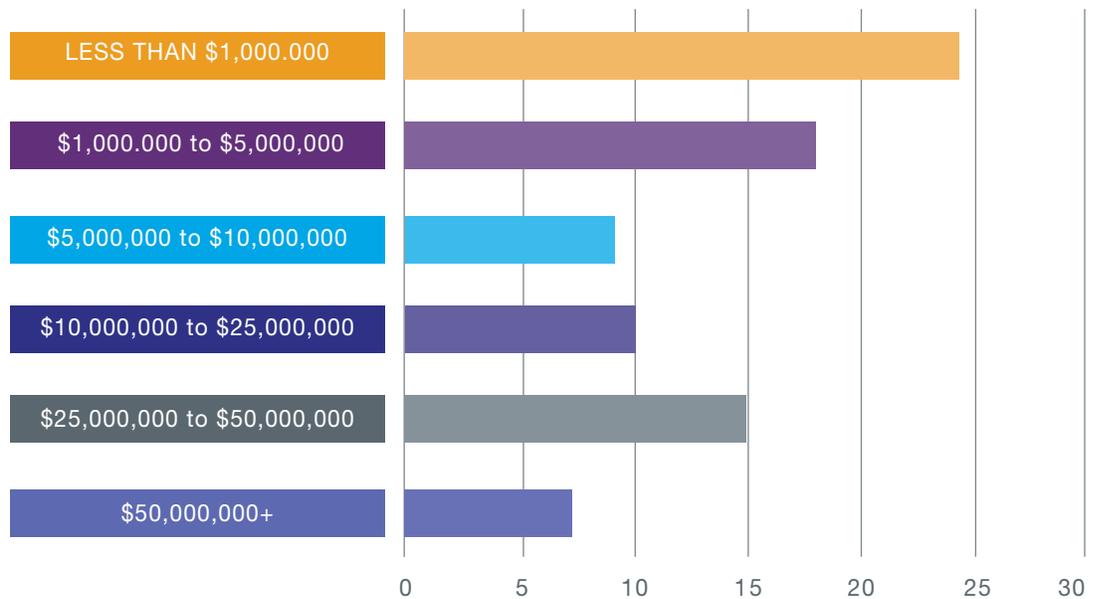


Source: Calculations by The Conference Board of Canada based on the results from the Trucking HR Canada Employer Survey.

Chart 3.9

Smaller firms disproportionately affected by truck driver shortages

(average percentage lost sales by firm revenues, for-hire trucking)



*Based on responses of 88 employers in the for-hire trucking segment who reported truck driver vacancies and specified revenues.

Source: Trucking HR Canada Employer Survey.



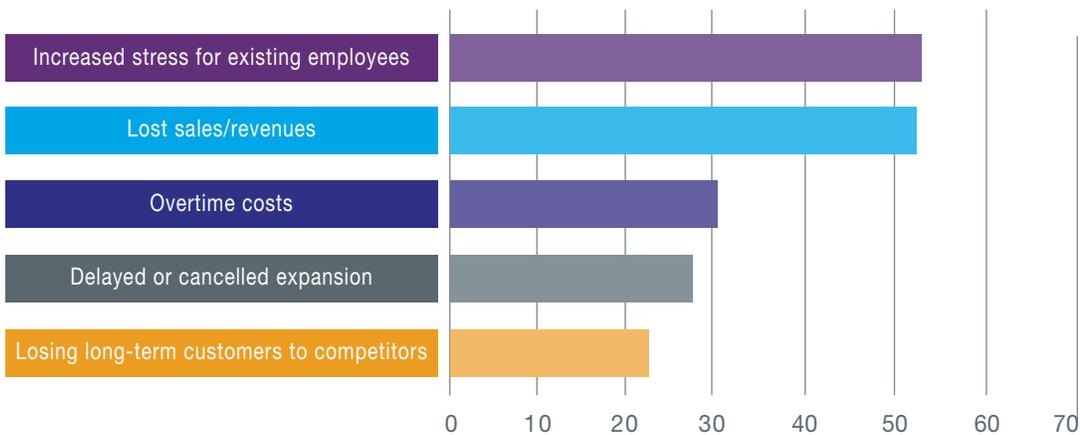
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The impacts of truck driver vacancies extend beyond lost sales. Notably, unfilled truck driver positions can increase the workload and stress levels for other truck drivers and employees. Close to two thirds of respondents (63.2%) reported increased stress for existing employees as an impact of labour shortages. This makes it a top reported impact of truck driver shortages alongside lost sales (62.7%), and ahead of overtime costs (30.6%). (See [Chart 3.10](#)) The additional stress caused by shortages is concerning, considering the already high voluntary turnover rate in the occupation.

Chart 3.10

Truck driver shortages increase stress for existing employees

(share of employers who reported truck driver vacancies, per cent)



n = 211
Source: Trucking HR Canada Employer Survey.

Truck driver labour shortages also impact the future of the trucking industry. For example, over one in four employers (27.8%) reported delaying or canceling expansion plans as a result of truck driver vacancies. This suggests that businesses are reluctant to invest in new trucks in an environment where they don't expect to have the labour to operate them. This ultimately weighs on the future growth path of the sector.

A final point is that labour shortages don't just impact the firms experiencing them. Several employers who were able to staff their required truck drivers report that the hiring process was a significant burden, taking much longer than desired. One employer even noted that it took an average of 6-8 weeks to hire a qualified driver. In this environment, businesses are directing resources towards hiring instead of potentially profitable investments that could generate value for the trucking and logistics sector and Canada as a whole.



4

4.0 The Outlook

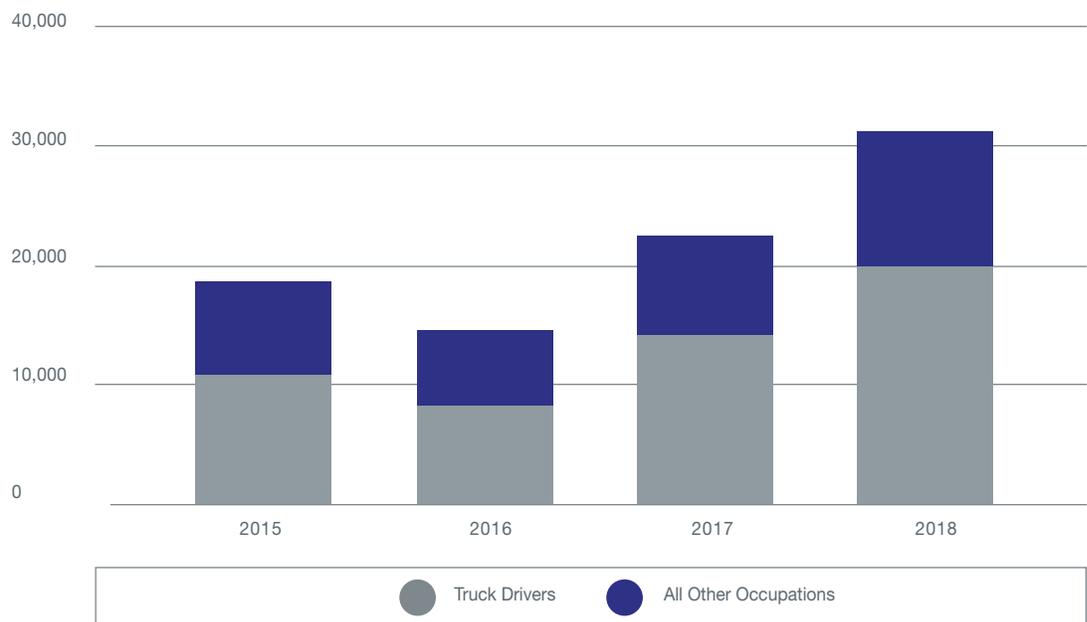
The findings discussed in the previous section highlighted that the trucking and logistics sector is facing significant labour challenges, especially among truck drivers. In recent years, the number of unfilled jobs (vacancies) in the sector increased from just over 18,000 in 2015 to over 30,000 in 2018, with truck drivers accounting for an average of 60% of the sector's vacancies in any given year. (See [Chart 4.1](#))

How is the situation likely to evolve in the next three to five years? To answer this question, and as part of this LMI research project, we created a labour supply and demand forecasting tool.²⁶ The information gathered to develop the tool and the resulting projections will be helpful in identifying solutions to the labour shortage issue.

Chart 4.1

Vacancies in the trucking & logistics sector

(average vacancies)



Sources: Statistics Canada, Job Vacancy and Wage Survey; Statistics Canada, Labour Force Survey (custom tabulations).

²⁶ For the purpose of this LMI research, the labour supply and demand projections developed cover 30 occupations in the trucking and logistics sector, including truck drivers, dispatchers, mechanics, and delivery and courier drivers. The comprehensive report will provide further details into the projections for the key occupations in the sector.



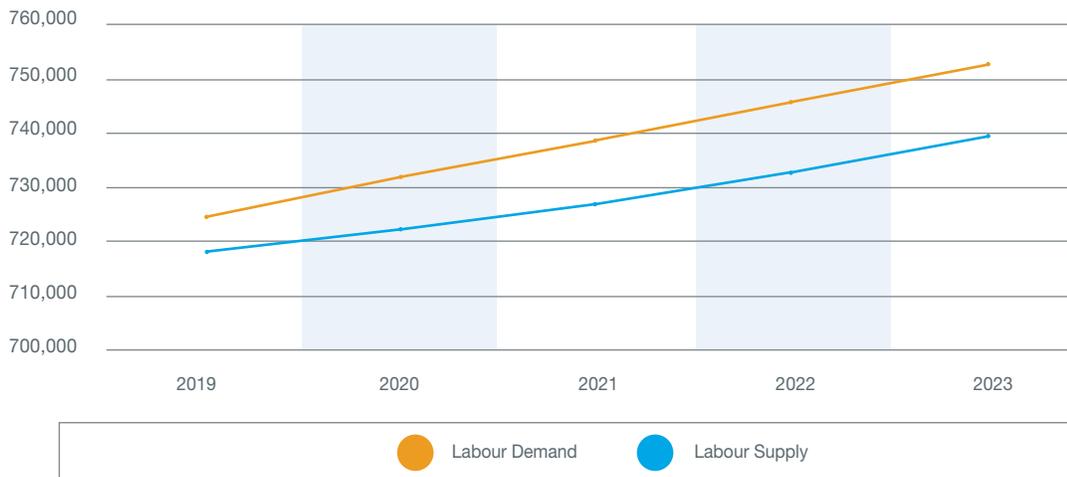
Based on the Conference Board’s current economic and demographic projections, overall labour demand for occupations in the trucking and logistics sector is forecast to increase at an average annual pace of 0.9% over the next three to five years (to 2023). Unfortunately, this pace is still projected to exceed the average annual growth projected in the supply of workers (0.7%), and will lead to growing shortages for many occupations in the trucking and logistics sector. (See [Chart 4.2](#))

4

Chart 4.2

Labour demand vs. labour supply – Overall trucking & logistics sector

(2019-2023, number of jobs)



Source: The Conference Board of Canada.

Over the long term, the advent of fully autonomous vehicles may constitute a revolution in the truck driver occupation. However, in the short to medium term, the most realistic assumption is that the occupation will continue to exist alongside more modest advancements, including, the development and use of load and route optimization systems and modest increases in truck load capacity (piggy-backing, platooning, etc.).

These technological advancements are expected to support labour productivity growth for the truck driver occupation and, in turn, help curtail the demand for drivers slightly over the short to medium term. However, even with these productivity gains, the demand for truck drivers is still projected to grow at a modest 0.1 per cent annual pace through 2023.



4

Despite modest growth in labour demand for truck drivers going forward, the challenge for businesses will be to fill recently vacated positions (either from retirements or voluntary turnover). Our projections suggest labour shortages will become more acute as retirement rates increase and the inflow from Canadians and foreigners abate.

Based on the projections from the labour supply and demand forecasting tool, the outflow of workers in the truck driver occupation will outweigh the inflow of workers and lead to a slight decline in employment levels over the next few years. We project that employment in the occupation will decline at an average annual pace of over 400 workers through 2023. (See [Chart 4.3](#))

Outflows from the occupation includes workers who retire, pass away or leave the occupation either voluntarily or involuntarily. Meanwhile, sources of inflow into the occupation include new entries into the occupation (recently having left school/college/university or other formal education), entries from other occupations, recent immigrants, as well as non-permanent residents (either temporary foreign workers or those here on working visas).

The chart below shows the relative importance of the various inflows and outflows that will impact the supply of truck drivers for the 2019-2023 period. The chart shows that 27,000 truck drivers will leave the occupation voluntarily or involuntarily on an annual basis (including those that pass away) and an additional 7,200 truck drivers will retire.²⁷

New entries (recent school leavers) and those entering the occupation from other occupations represent the most important inflows source into the truck driver occupation.²⁸ Together, they will account for over 28,000 workers joining the occupation annually. This is five times the combined number of recent immigrants and non-permanent residents expected to join the occupation each year.

²⁷ Based on the survey results, it is estimated that two-thirds (67%) of the turnover is voluntary.

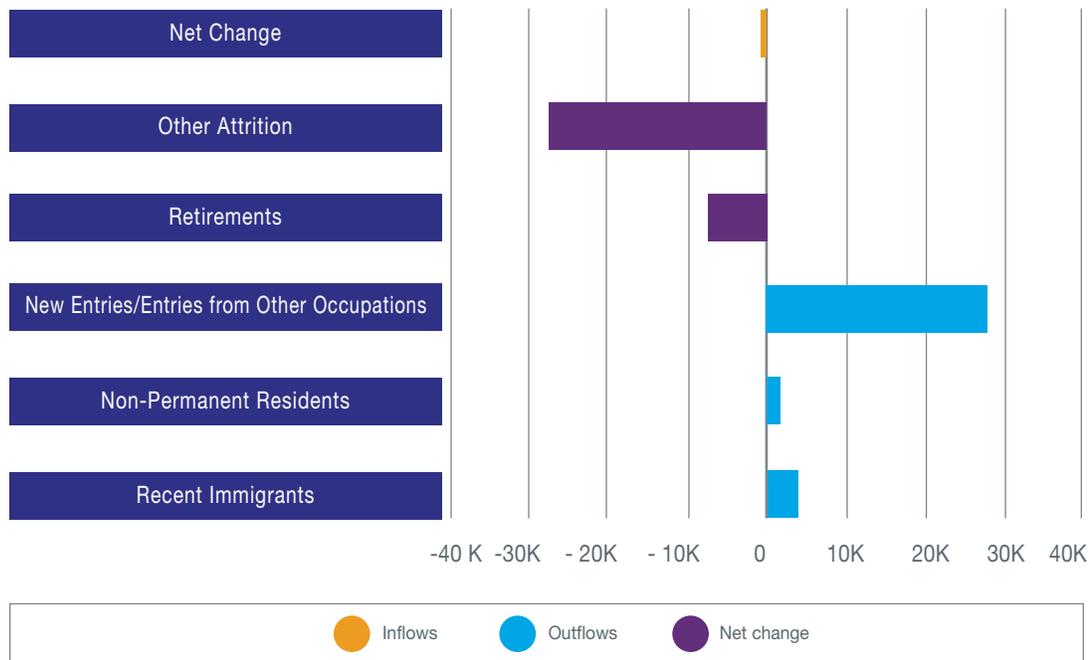
²⁸ Unfortunately, data is not available to accurately distinguish between the share that is new entries (recently finishing school) versus entries from other occupations.



Chart 4.3

Effect of inflows/outflows on employment in the truck driver occupation

(average number of workers coming in/leaving the occupation each year, 2019-2023)



Sources: Statistics Canada, 2016 Census (custom tabulations); The Conference Board of Canada.

With demand for truck drivers rising by over 400 workers per year through 2023 and employment contracting by about the same amount due to outflows outweighing inflows, the sector will see an increase in the number of truck driver vacancies over the next few years. By 2023, we expect truck driver vacancies will have surpassed 25,000 unfilled positions, an increase of over 25% compared with 2019. (See Chart 4.4)

As discussed in the previous section, the potential for firms to fill these vacant positions with unemployed truck drivers has become increasingly limited in recent years, with the decline in the occupation's unemployment rate at historically low levels. According to our projections, this trend will continue in coming years, with the number of unemployed truck drivers expected to fall by approximately 300 workers between 2019 and 2023. As a result, this shrinking pool of workers is unlikely to be part of the solution to the occupation's rising vacancies.

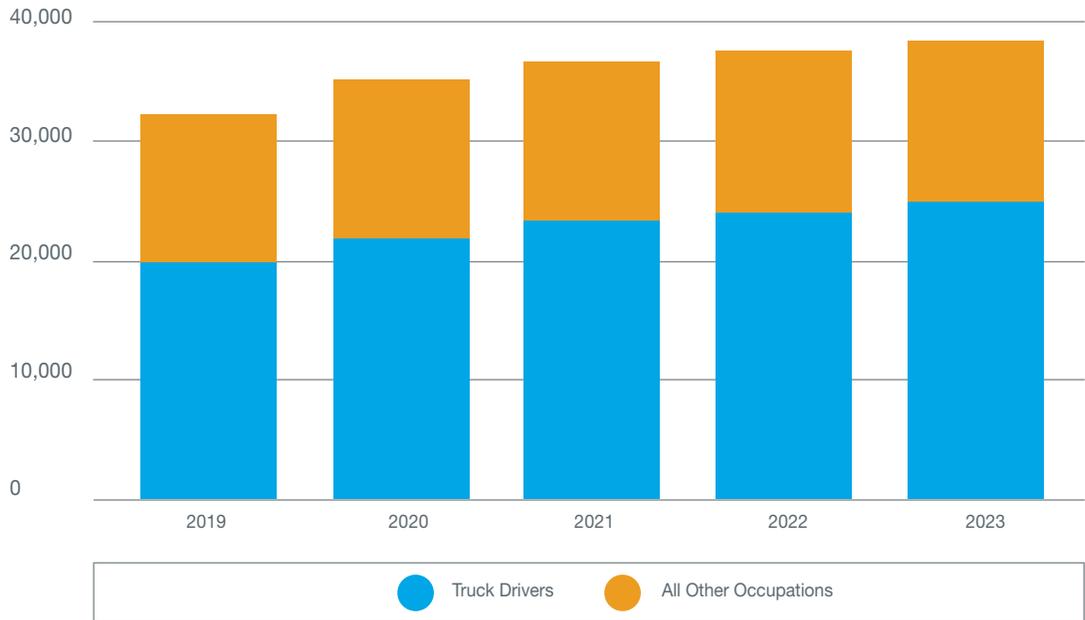
4



4

Chart 4.4

Projected vacancies in the trucking & logistics sector
(average vacancies)



Source: The Conference Board of Canada.

The status quo (base-case) outlook assumes the appeal of working in the trucking and logistics sector among potential population segments continues at fixed (historical) rates. As discussed in the previous section, the majority of candidates for truck drivers largely possess a less than high school or high school education. This attraction, in large part, can be explained because of the significant wage premiums the occupation offers relative to other work these candidates may be qualified to do. Unfortunately, demographic projections suggest that the growth of younger workers, particularly those with less than high school or high school education alone, will not be sufficient to offset the anticipated exits stemming from retirement and all other attrition (including voluntary/involuntary attrition and death).



The good news is that intervention can change this trajectory, particularly on the labour supply side. In particular, a scenario depicting the impact of reducing the voluntary turnover of truck drivers by 25 per cent (from 13.6% to 10%), suggests the level of vacancies would drop from over 25,000 in 2023 to just over 13,000. The only time in recent years where vacancies were lower was prior to 2017.

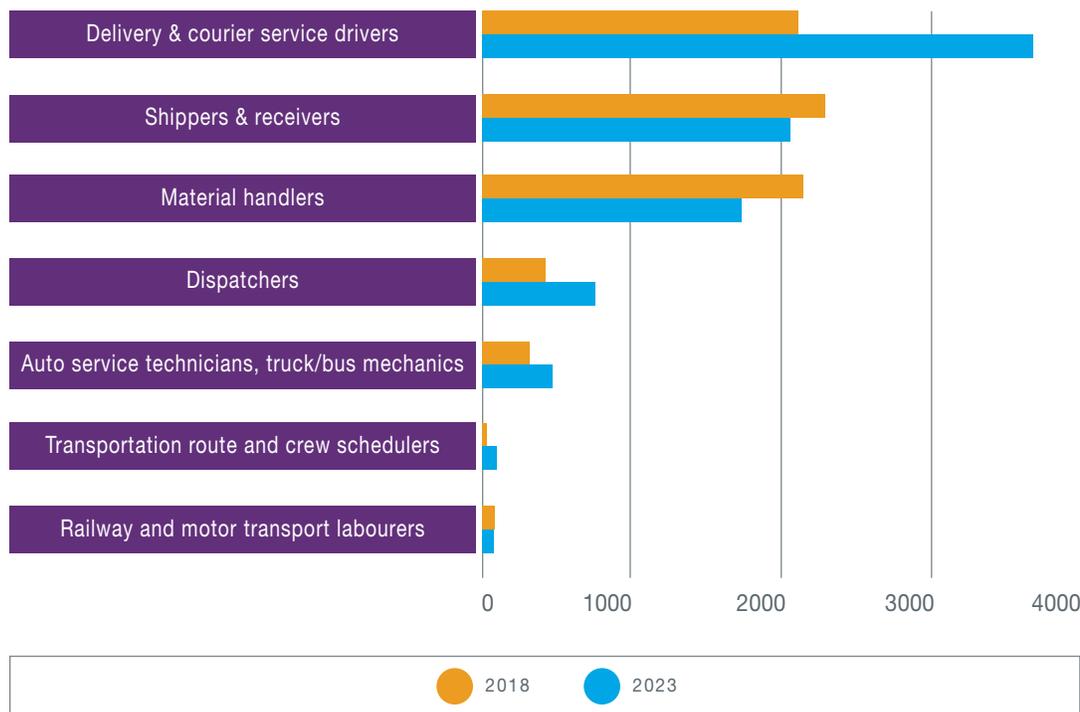
While the worsening labour shortages may be most noticeable for truck drivers, the imbalance between the labour demands and availability of qualified workers will also increase for many key occupations in the sector, including dispatchers, delivery and courier service drivers and transportation route and crew schedulers. (See Chart 4.5)

4

Chart 4.5

Vacancies among other key trucking and logistics occupations

(average vacancies)



Sources: Statistics Canada, Job Vacancy and Wage Survey (JWS); The Conference Board of Canada.



4

One scenario we looked at to examine this issue was to tackle the challenge of attracting more entrants into the sector (including both recent school leavers and those coming from other occupations), across all occupations. Under this alternative scenario, we explored what would happen if the sector was able to increase the interest among new entrants (recent school leavers) and those coming from other occupations by 10 per cent.²⁹ The results from this modelling exercise suggest it could reduce vacancies in the trucking and logistics sector by nearly 17,000 in 2023—from nearly 39,000 to just over 23,000.

Despite the optimistic projections implied by these two scenarios, the challenge for the sector will be to identify strategies that could lead to the above stated results. Without action, and contrary to the views of outsiders who feel that labour shortages will alleviate themselves, the analysis suggests that vacancies for truck drivers and other key occupations will only get worse in the next three to five years. In turn, this situation will not only impede the operations of Canada’s trucking and logistics sector but also disrupt the integrated supply chain that flows between industries, consumers and international markets.

²⁹ The increased interest among potential new entrants (recent school leavers) and entrants from other occupations would imply that where previously we had 100 candidates choosing to pursue a career as a truck driver, we would now have 110.

The Road Ahead

What does this mean for Canada's economy, and for the sector itself?

This study is paving the way for solutions that will help build a healthier trucking and logistics industry, which in turn means a healthier integrated supply chain flowing between industries, consumers and international markets. The industry needs to come together to provide support for sector-wide solutions. In addition, Government can work as a conduit to support the industry, which in turn will fuel the Canadian economy and Canadian jobs.

The attention, support, and resources required to provide practical and impactful solutions need to better reflect the enormous size of this industry's economic impact, workforce, and problem. We now have accurate, credible and reliable labour market information for the trucking and logistics sector, that can inform both short- and long-term solutions.

Moving forward, Trucking HR Canada will continue to seek industry input as we work together in finalizing an even more comprehensive report on the industry's overall labour shortages.

Emerging key themes include the need to: increase women's participation, focus on retention approaches that can support lower turn-over, and identify best practices that specifically support better integration of younger workers.



104-720 Belfast Road
Ottawa, Ontario
K1G 0Z5

Email: theteam@truckinghr.com

Web: www.truckinghr.com