



Labour Market Study of Alberta's Trucking and Logistics Industry

NOVEMBER, 2022



PRODUCED IN PARTNERSHIP WITH:



Alberta Motor
Transport Association

FUNDED BY:



The Province of Alberta is working in partnership with the Government of Canada
employment support programs and services.

November 2022

For more information, please contact Trucking Human Resources Canada:
(613) 244-4800 / theteam@truckinghr.com / www.truckinghr.com

When referring to the information presented in this report, please cite **Trucking HR Canada**,
or use the following reference: *Trucking HR Canada. (November 2022) Labour Market Study of
Alberta's Trucking and Logistics Industry*

1.0 Introduction/ Background

Alberta's trucking and logistics industry provides essential services that support virtually every other sector of the provincial economy. In particular, trucking services are needed to support growth and recovery from the economic downturn and collapse of global oil prices between 2014 and 2016 which hit Alberta particularly hard, impacting employment in oil and gas extraction, forestry, agriculture and construction, among other industries. The onset of the COVID-19 pandemic in early 2020 only served to underscore the vital role played by trucking and logistics in getting goods to their destination. Alberta's last three budgets as well as the 2022 – 2025 Strategic Plan all prioritize getting the province's labour market back on track and getting Albertans back to work.

This study illuminates the specific challenges and opportunities in Alberta's trucking and logistics sector and provides key stakeholders and decision-makers with the data they need to develop evidence-based programs and policies to address critical labour market needs. Programs and policies based on accurate and reliable labour market information will support collaboration between the truck transportation industry and other sectors of the economy, helping to secure a resilient workforce that will overcome the impacts of the pandemic and support economic recovery in the province.

1.1 Study Objectives and Methodology

The study has four main objectives: 1) Assessing the state of the sector's current labour market, focusing on the transport truck driver occupation, 2) analyzing the impact of the COVID-19 pandemic on the trucking and logistics labour market 3) examining the labour market factors that will support or hinder post-pandemic economic recovery, both in trucking and logistics as well as the other economic sectors supported by the trucking industry, and 4) recommending key labour market programs and tools to help develop the skilled workforce that unpins a strong economic recovery for the province.

The study uses both primary and secondary data to analyze employment, unemployment, job vacancies and to evaluate the industry's critical labour shortages, measured by the gap between labour supply and demand. In addition, the research highlights the impact of the COVID-19 pandemic on these labour market variables.

This report provides:

- A detailed analysis of the current and future supply and demand for labour including employment, unemployment and vacancies, and a comparative analysis with the rest of Canada.
- An assessment of the effect of the COVID-19 pandemic on the trucking and logistics labour market in Alberta and discussion on how it may impact employment and unemployment during the economic recovery period.
- A complete occupational profile for Transport Truck Drivers (NOC 7511), including Alberta-specific data on demographics, employment, turnover rates, and vacancies.
- Recommendations on interventions that will help overcome critical labour market imbalances.

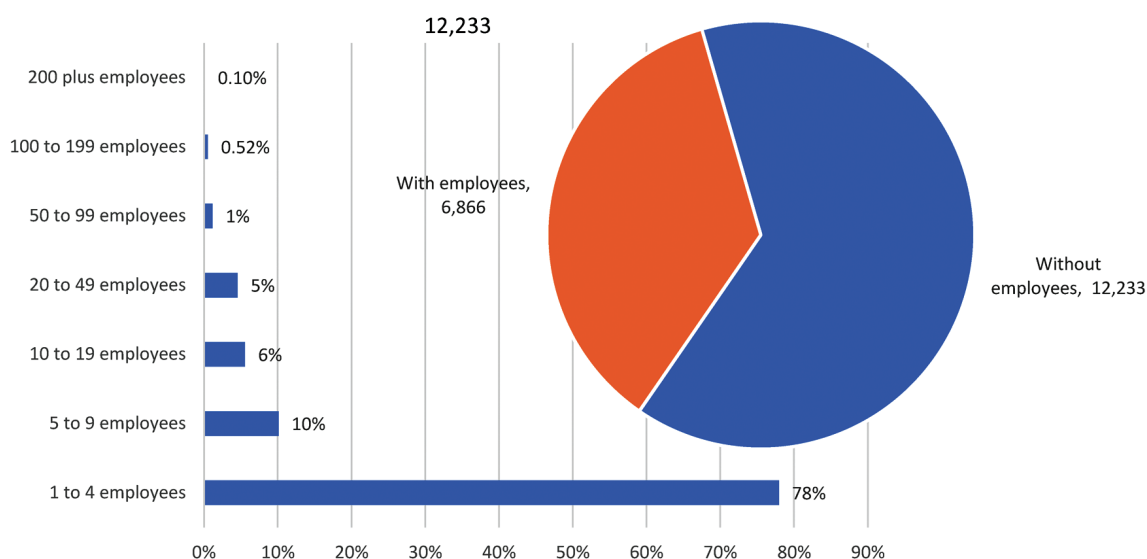
The findings will inform stakeholders – employers, training schools, government officials and other sectors that depend on trucking services – of current and potential labour market challenges. It will provide the foundation for future workforce planning and support informed decisions about interventions that aim to address gaps between labour supply and demand.

2.0 Overview of the Trucking and Logistics Sector in Alberta

2.1 Alberta's Trucking Sector is Dominated by Small Businesses

According to Statistics Canada's December 2021 business counts, Alberta had approximately 19,100 trucking establishments. Of these, 64% are self-employed (have no payroll employees) and another 28% have fewer than five employees, suggesting about 92% are small owner-operated businesses. Less than one percent (0.6%) of trucking establishments have more than 100 employees. See Figure 1.

Figure 1: Number of Truck Transportation establishments with and without employees (December 2021- Business counts with and without employees), Alberta



Source: Statistics Canada. Table 33-10-0493-01 Canadian Business Counts, with employees, December 2021 and Table 33-10-0494-01 Canadian Business Counts, without employees, December 2021

The truck transportation sector (NAICS 484) contributes approximately \$3.52 billion to the province's GDP, accounting for just over 1.1% of total GDP in Alberta.¹

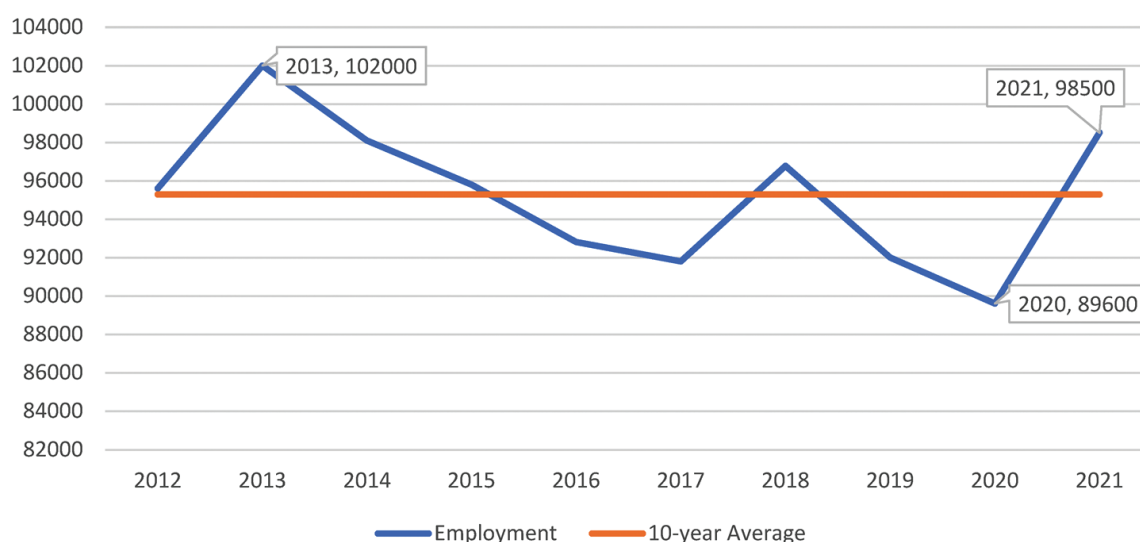
¹ Source: Statistics Canada. Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000)

2.2 Employment in Trucking and Logistics Recovered Quickly from Pandemic-Induced Job Losses

Total employment in the trucking and logistics² sector in Alberta has averaged 95,300 workers over the past decade, accounting for 4.3% of employment in the province. Alberta accounts for 14.3% of employment in trucking and logistics across Canada. Employment peaked at a ten-year high of 102,000 employees in 2013 and fell to a low of 89,600 in 2020, with the onset of the COVID-19 pandemic. In 2020, employment in Alberta's trucking and logistics sector fell by 2.6%, compared to 2019, shedding 2,400 jobs to settle well below the ten-year average for the sector in 2020. See Figure 2.

Alberta's pandemic-induced job losses were less severe than those experienced across Canada: the sector's workforce decreased by roughly 4% from 2019 to 2020 in response to the onset of the pandemic and the imposition of public health restrictions.

Figure 2: Employment, trucking and logistics sector, Alberta, 2012 - 2021)



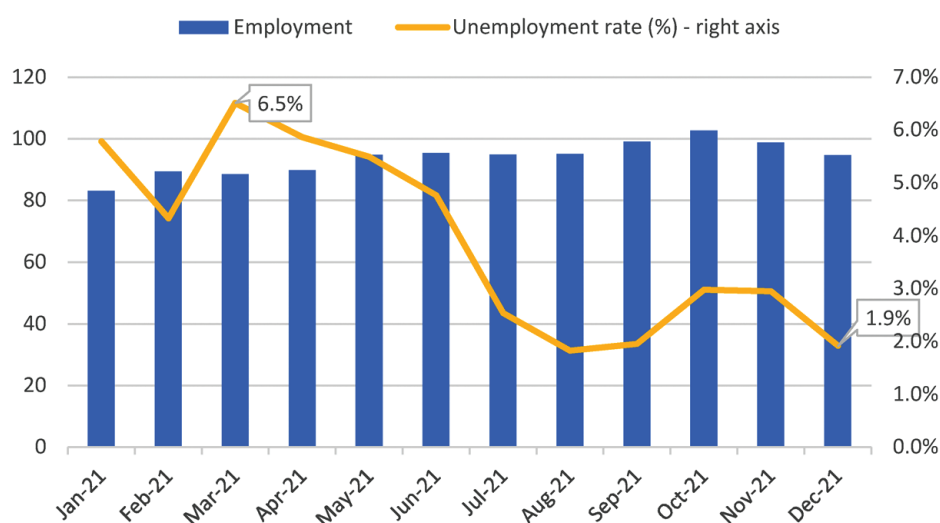
Source: Trucking HR Canada, Statistics Canada, Labour Force Survey, custom data request, 2022

In 2021, with the economy beginning to cautiously reopen, employment in Alberta's trucking and logistics sector surged by 10% above 2020 levels, with an additional 8,900 jobs added despite renewed public health restrictions in response to the onset of the Delta and Omicron variants. At the national level, recovery to the sector's employment was more modest at 5%.

Throughout 2021, employment in the sector showed a slight upward trend with an average of 85,858 workers, accounting for 4.2% of total employment in Alberta (see Figure 3). At the same time, the unemployment rate in the trucking and logistics sector fell dramatically in 2021 from a high of 6.5% in March to a low of 1.9% in December. The average unemployment rate in the trucking and logistics sector for 2021 was 3.9%, well below the provincial unemployment rate of 8.7%. At the national level, the average unemployment rate in the sector in 2021 was 4.6%.

² See Annex 1 for the definition of NAICS and NOCs that make up the trucking and logistics sector in Canada.

Figure 3: Employment ('000) and Unemployment rate (%), trucking and logistics sector, Alberta, 2021



Source: Trucking HR Canada, Statistics Canada, Labour Force Survey, custom data request, 2021

2.3 Higher Vacancies in the Truck Transportation Sector Indicate Increasing Labour Market Tightness

In 2021 the average number of vacancies in Truck Transportation (NAICS 484)³ was 2,654. This amounts to 3.6% of all vacant jobs in the province. Alberta accounts for almost one in five (19.3%) vacant jobs in the Truck Transportation sector across Canada.

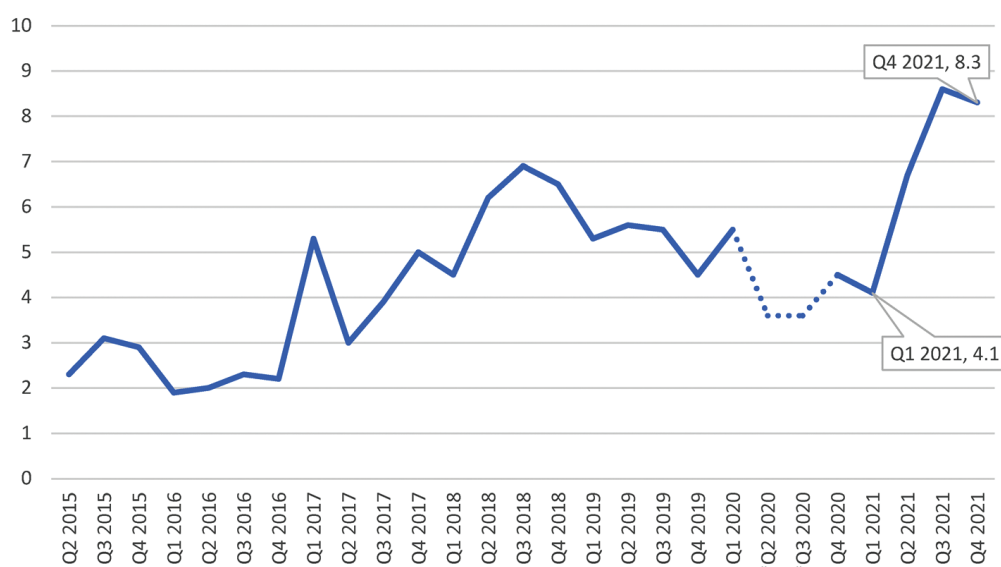
The vacancy rate measures the percentage of all jobs in a sector or occupation that are currently vacant and is an indicator of the proportion of total demand for labour that is currently unmet.³

In 2019, the Truck Transportation sector (NAICS 484) had an average vacancy rate of 5.2% which is significantly higher than the vacancy rate for Alberta's labour market as a whole (2.6%). In 2021, the average vacancy rate for Truck Transportation jumped to 6.9% which remains substantially higher than the provincial vacancy rate of 3.8% and just slightly lower than the 2021 vacancy rate for the Canadian Truck Transportation sector (7.1%).

Over the course of 2021, the vacancy rate in the sector climbed from a low of 4.1% in Q1 to a high of 8.6% in Q3, settling at 8.3% by the last quarter of the year – a record high for the sector since vacancy data was first collected by Statistics Canada in 2015 (see Figure 4).

³ Currently custom cross-tabulations of vacancy data are not available from Statistics Canada. As a result, vacancy data for NAICS 484 is used as a proxy for the broader trucking and logistics sector as described in Annex 1.

Figure 4: Vacancy Rates (%), Truck Transportation, Alberta, 2015 - 2021⁴



Source: Trucking HR Canada and Statistics Canada. Table 14-10-0326-01, 2022

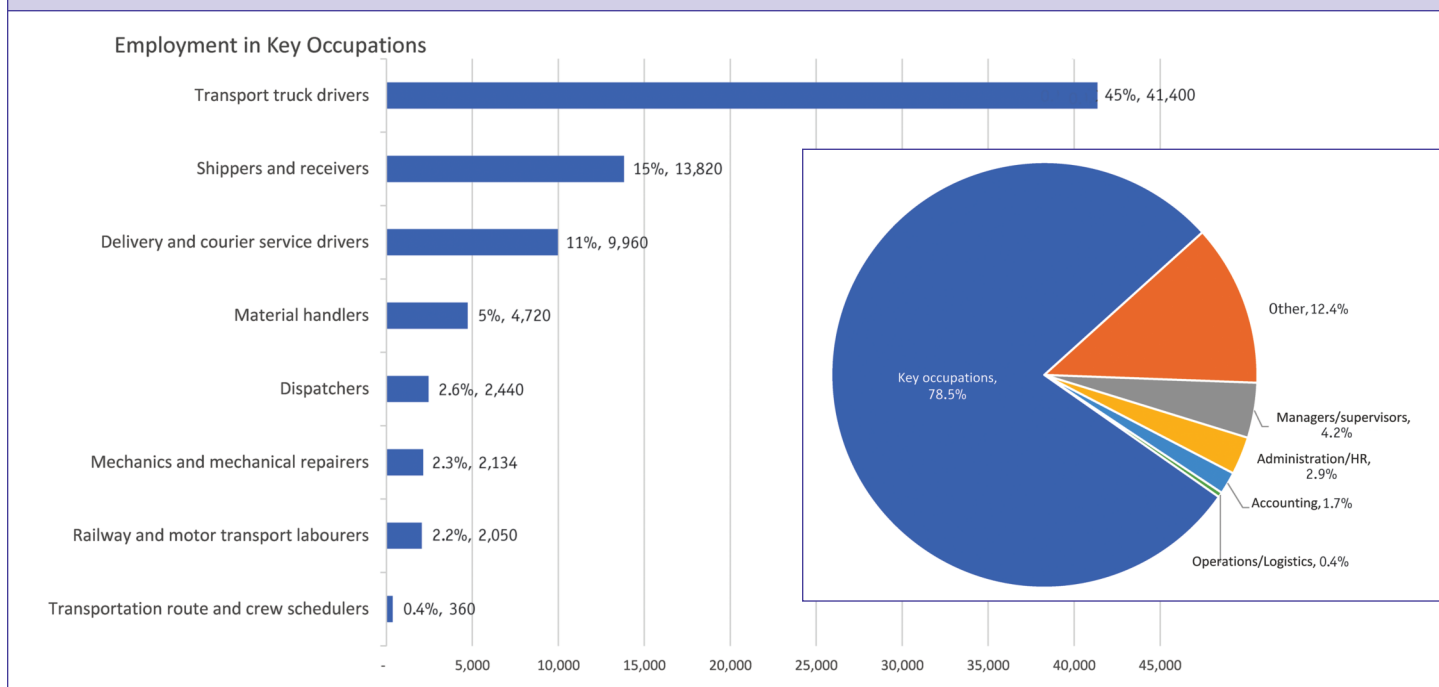
*** Note:** Data for Q2 and Q3 2020 have been estimated but are not considered reliable.

2.4 Truck Drivers Make Up Close to One Half of All Employees in Alberta's Trucking and Logistics Sector

Transport truck drivers (NOC 7511) account for about 45% of all employment within Alberta's trucking and logistics sector with an average employment of 41,400 drivers, based on the last five years (see Figure 5). The sector employed approximately 13,820 shippers and receivers or 15% of total employment in the sector. Delivery and Courier service drivers accounted for 11% of sector employment or just under 10,000 workers. Dispatchers make up about 2.6% of the sector's employment with 2,440 dispatchers working in trucking and logistics in Alberta.

⁴ Note: Statistics Canada temporarily suspended the Job Vacancy and Wage survey in Q2 and Q3 of 2020 and the data for the year 2020 is considered unreliable.

Figure 5: Employment by occupation, Alberta's trucking and logistics sector, five-year average, 2017 - 2021



Source: Trucking HR Canada, Statistics Canada, Labour Force Survey, custom data request, 2017-2021

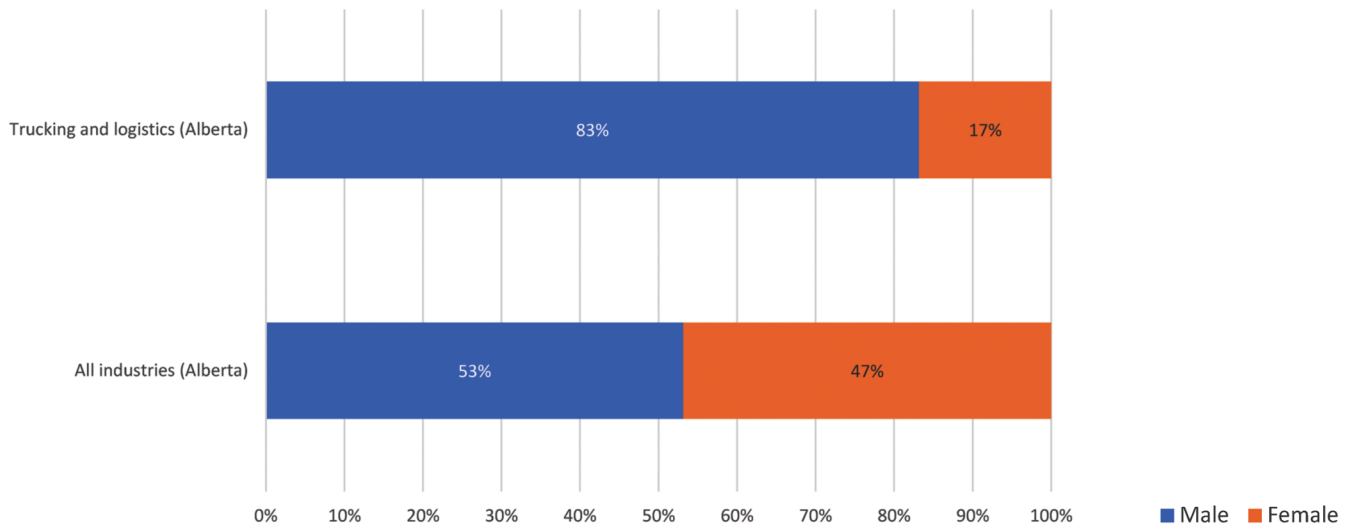
2.5 Demographics of the Trucking and Logistics Workforce

2.5.1 Women are Under-Represented, Especially in Key Occupations

The proportion of the trucking and logistics workforce that is female is 17%, well below the provincial average in all sectors of 47% female employees. See Figure 6. Women account for most of the trucking and logistics employees in occupations classified as general administration (90% female), accounting (87% female), and human resources (74% female).

The industry has been much less successful in attracting and retaining women in key occupations such as drivers (4% female), mechanics (3% female) and shippers and receivers (27%). By contrast, women make up 43% of the dispatchers working in trucking and logistics, almost as high as their representation across the provincial labour force (47%).

Figure 6: Gender and the trucking and logistics workforce, Alberta



Source: Trucking HR Canada, Demographic dashboard, 2020

2.5.2 Older than Average Trucking and Logistics Workforce

Alberta's trucking and logistics workforce is older than average, with 24% over the age of 54, compared with only 20% of the overall labour force. See Figure 7. The sector has also been less successful in attracting younger workers to the industry, with just 29% of the Trucking and Logistics workforce under the age of 35 compared with over 37% of Alberta's labour force.

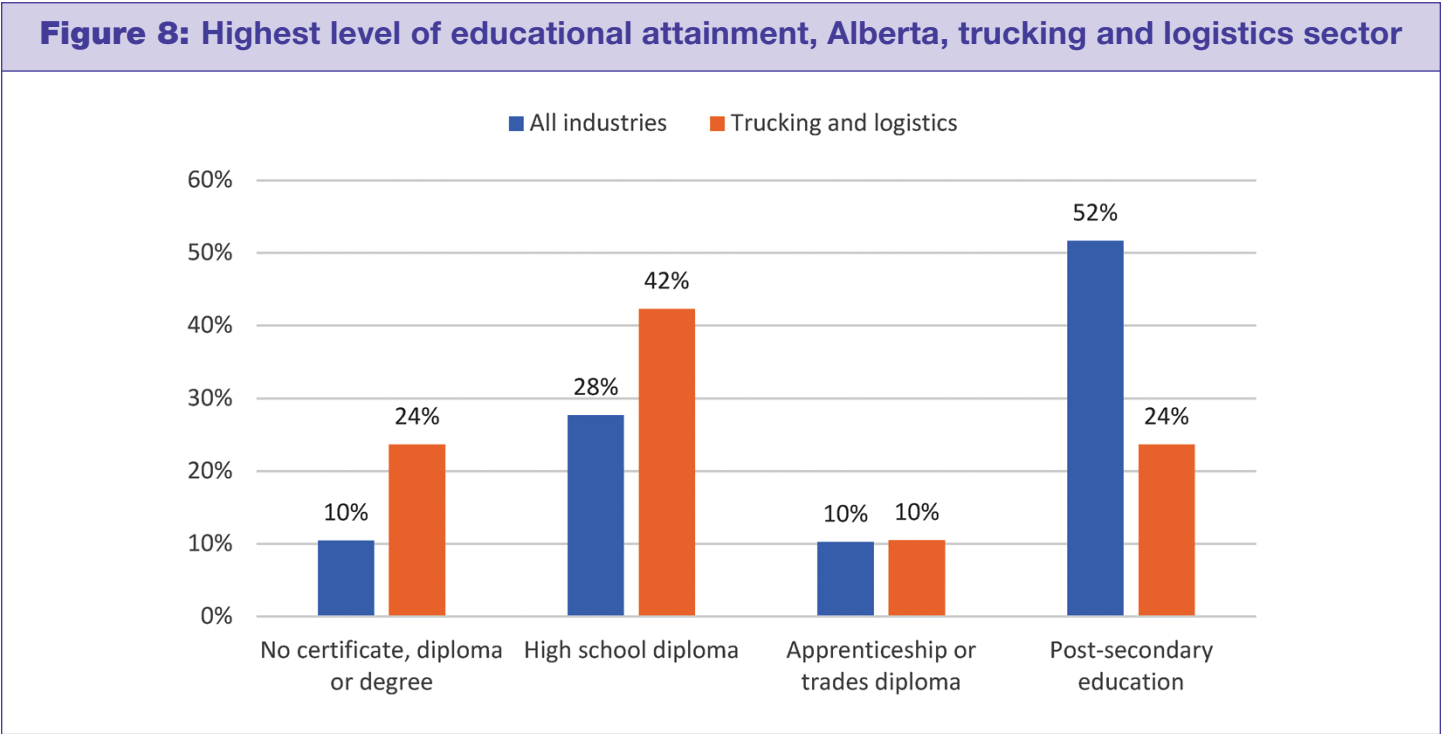
Figure 7: Age of workers, trucking and logistics sector, Alberta



Source: Trucking HR Canada, Demographic dashboard, 2020

2.5.3 Lower Levels of Educational Attainment

A larger proportion of Alberta’s trucking and logistics workforce have only a high school diploma, compared with the provincial labour force – 42% and 28%, respectively (see Figure 8). Almost one quarter (24%) of the trucking and logistics workforce hold no certificate, diploma or degree, compared to only 10% of the workforce across all sectors of the provincial economy. More than half (52%) of Alberta’s workforce but less than a quarter (24%) of the trucking and logistics workforce have post-secondary education.

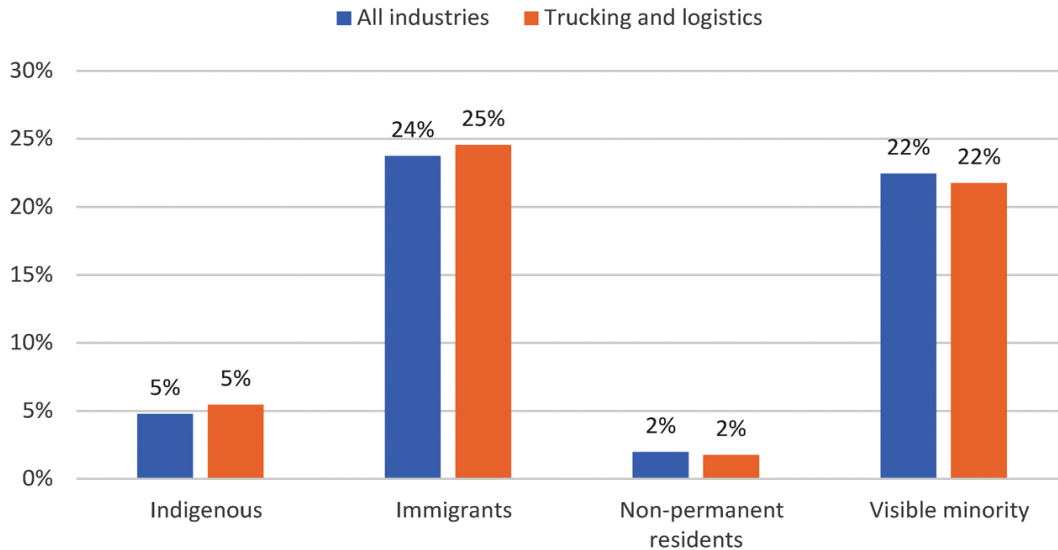


Source: Trucking HR Canada, Demographic dashboard, 2020

2.5.4 Diversity in the trucking and logistics workforce reflects provincial patterns

Workforce diversity in Alberta’s trucking and logistics sector closely mirrors the patterns in the provincial labour force with immigrants comprising close to a quarter of the labour force, Indigenous people making up about 5% and only 2% of the workforce comprised of non-permanent residents, including temporary foreign workers (see Figure 9). Approximately 22% of the trucking and logistics sector are visible minorities, which also aligns with the provincial average.

Figure 9: Diversity and trucking and logistics, Alberta

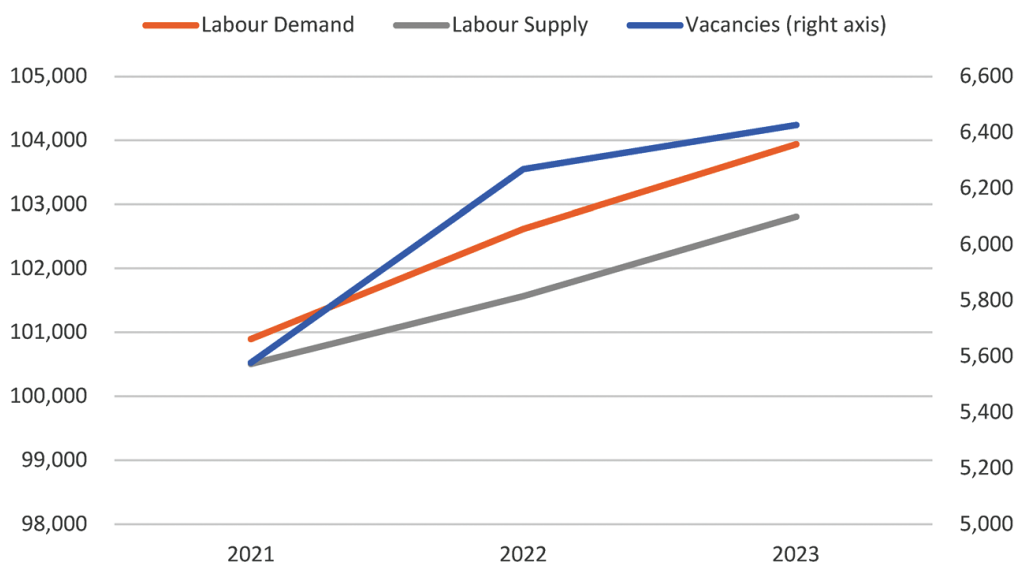


Source: Trucking HR Canada, Demographic dashboard, 2020

2.6 Looking Forward

In early 2020, just prior to the outbreak of the COVID-19 pandemic, Trucking HR Canada published a three year Canadian trucking and logistics labour market outlook to 2023. At that time, the outlook for Alberta suggested that labour demand in the sector would continue to rise, with total demand rising an estimated 7.8% over pre-pandemic (2019) levels to close at 104,000 jobs in 2023 (see Figure 10). This increase in demand was expected to be associated with a sharp increase in the number of vacant jobs in the sector, more than doubling to 6,450 vacancies by 2023. The vacancy rate in Alberta's trucking and logistics sector was expected to rise to 6.2% by 2023. In contrast, the forecast at the national level saw labour demand increasing much more slowly (3.8%) with the Canadian vacancy rate for trucking and logistics sitting at 5.2%.

Figure 10: Forecasted labour demand, labour supply and vacancies, Alberta trucking and logistics sector, 2021 – 2023



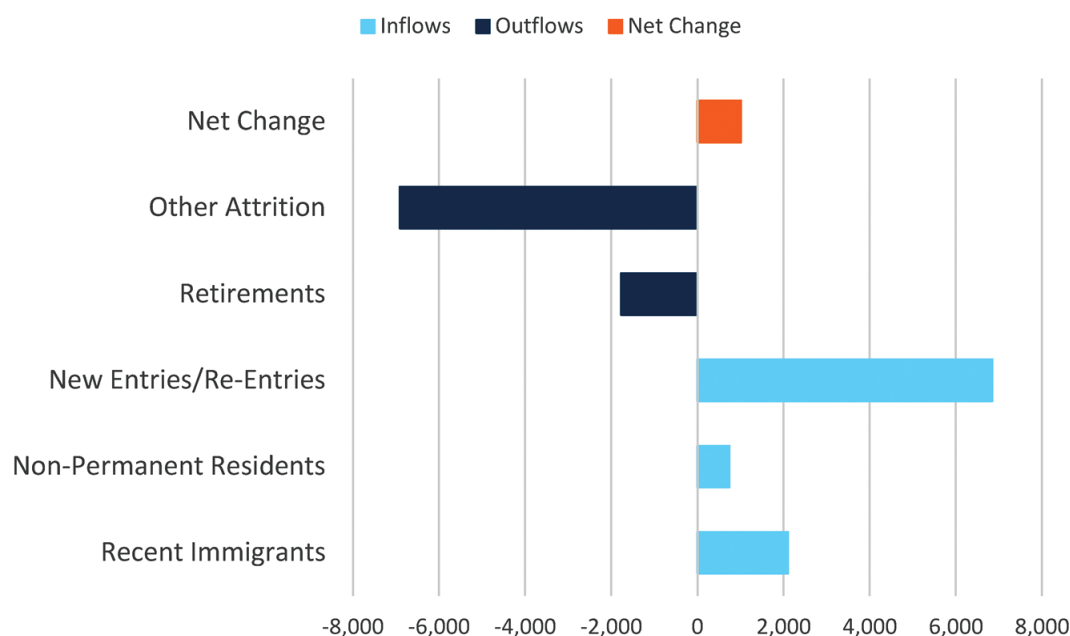
Source: *Trucking HR Canada, Model/forecasting dashboard, 2020*

Figure 10 also shows that the gap between labour supply and demand in Alberta’s trucking and logistics sector was forecasted to increase slightly between 2019 and 2023. The total supply of workers was projected to grow by only 3.8%, less than half as fast as predicted demand growth.

Figure 11 shows the relative importance of the various inflows and outflows that will impact the supply of labour in trucking and logistics for the 2021 to 2023 period. Labour supply in trucking and logistics is anticipated to grow by just over 1,000 workers per year, with the inflow of new workers (from new entrants, immigration and non-permanent residents) offsetting the outflow of workers from retirement and other attrition (both voluntary and involuntary turn-over). The chart shows that just over 6,900 workers will leave the sector either voluntarily or involuntarily and an additional 1,770 will retire per year.

New entrants and those who join the trucking and logistics workforce from other sectors account for the largest inflow of workers, together adding about 6,850 new workers per year. This is over two times the number of new immigrants (2,100) and non-permanent residents (750) anticipated to join the trucking and logistics labour force combined.

Figure 11: Effect of labour inflows and outflows on the supply of the labour to trucking and logistics Alberta, 2021 - 2023



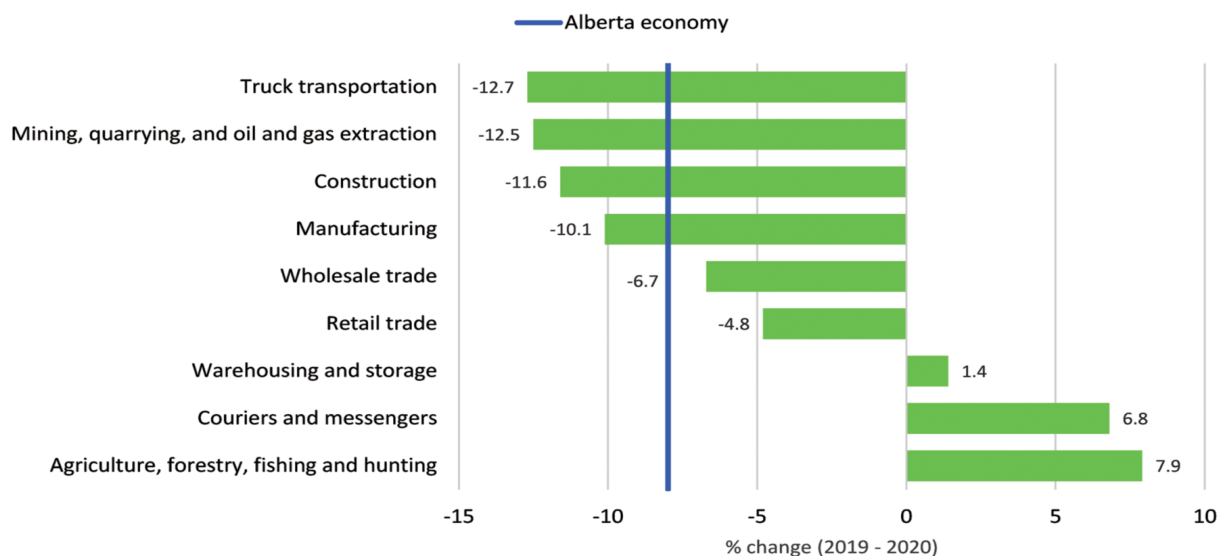
Source: Trucking HR Canada, Model/forecasting dashboard, 2020

2.6.1 Diversity in the trucking and logistics workforce reflects provincial patterns

Since the onset of COVID-19 in March 2020, Trucking HR Canada has undertaken additional LMI research to assess the impact of the pandemic on the trucking and logistics labour market in Canada. The research consisted of two additional employer surveys and re-forecasting labour demand for the sector to 2025, adding an additional two years to our demand projections. Trucking HR Canada's supply-side forecasting model uses demographic data from the Census since it is considered the most reliable data available. Our current supply-side forecasts are therefore based on Census 2016. Labour data from the 2021 Census data will not be released until November 30, 2022 and, as a result, we have not yet been able to update our labour supply projections.

Despite its critical role in supply chains, helping sustain the movement of essential goods during COVID-19, the trucking and logistics sector was not immune to the negative economic effects of the pandemic (see Figure 12). Industries such as mining and quarrying, construction and manufacturing experienced an above-average decline in GDP relative to the overall Alberta economy. Significant GDP losses were also felt in the wholesale and retail trade sectors. The interconnectedness of the trucking and logistics sector to industries that were significantly impacted in 2020 led to reduced demand for trucking services while some elements of the trucking and logistics industry including agriculture/forestry, couriers and messengers and warehousing and storage saw moderate to good growth in GDP.

Figure 12: Change in GDP, selected industries, Alberta

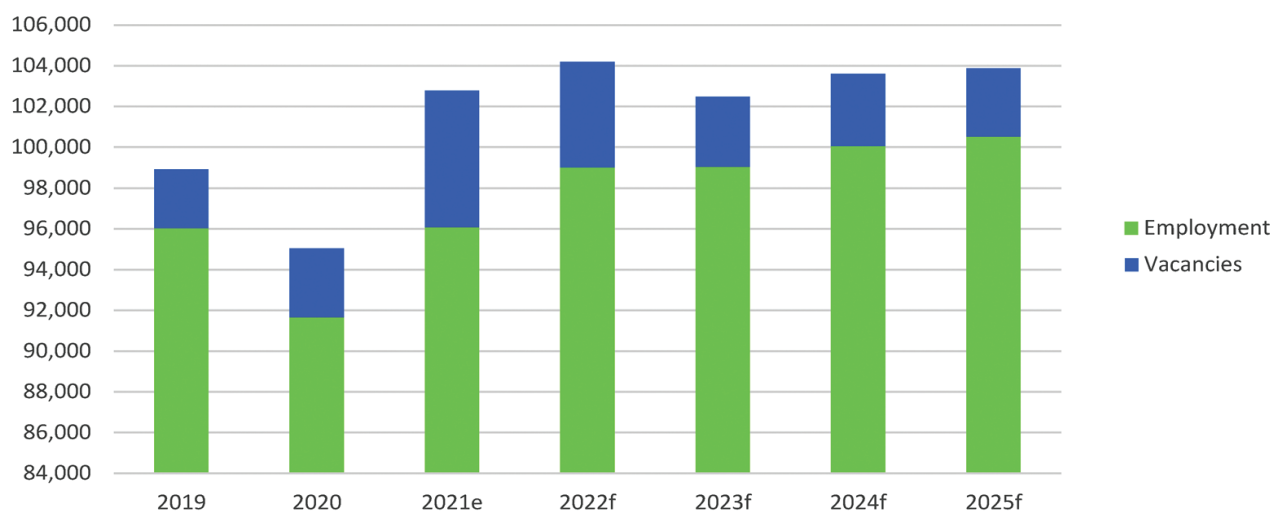


Source: Statistics Canada, Table 36-10-0434-01

2.6.2 Labour Demand in Trucking and Logistics is Projected to Recover and Moderate in the Medium Term

As described above, while employment in Alberta's trucking and logistics sector contracted in early 2020, it recovered rapidly with the reopening of the economy, adding back more jobs than it lost by 2021. Our new labour market forecast (see Figure 13) for trucking and logistics anticipates that employment in the sector will grow modestly from 2023 – 2025, averaging about 99,900 workers, with trucking and logistics vacancies moderating to about 3,500 vacancies per year as the economy settles into post-pandemic operations. Total demand for labour in Alberta's trucking and logistics sector is expected to reach almost 104,000, increasing 5% over pre-pandemic levels in 2019 (98,920).

Figure 13: Trucking and Logistics labour demand, Alberta, 2019 – 2025



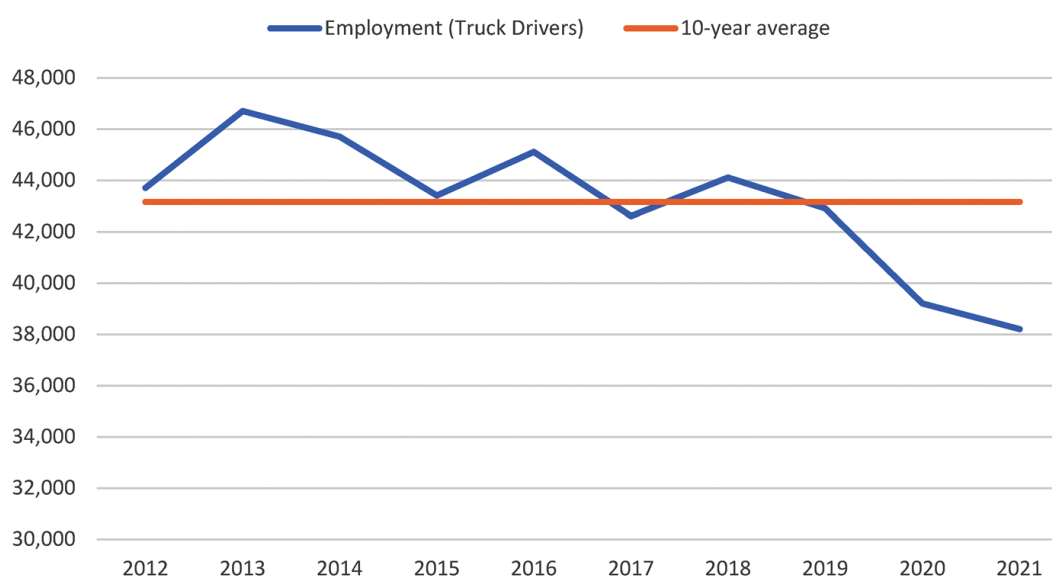
Source: Trucking HR Canada, COVID-19 labour market forecasts, 2021

3.0 Truck Driver Profile

3.1 Truck Driver Employment in Alberta Declines Over the Past 10 Years

Over the past decade, Alberta has employed an average of 43,160 drivers. According to Trucking HR Canada's 2019 employer survey, 69% of truck drivers are long-haul drivers and 31% drive short-haul routes. Most (95%) drivers work in the for-hire sector compared to only 5% working for private fleets. Employment of Truck Drivers in Alberta has shown a downward trend between 2013 and 2021, with a peak of 46,700 drivers in 2013 (see Figure 14). Employment hovered around the 10-year average in 2019 prior to the onset of the pandemic and then dropped sharply in 2020 and 2021.

Figure 14: Employment of Transport Truck Drivers (NOC 7511), Alberta, 2012 - 2022

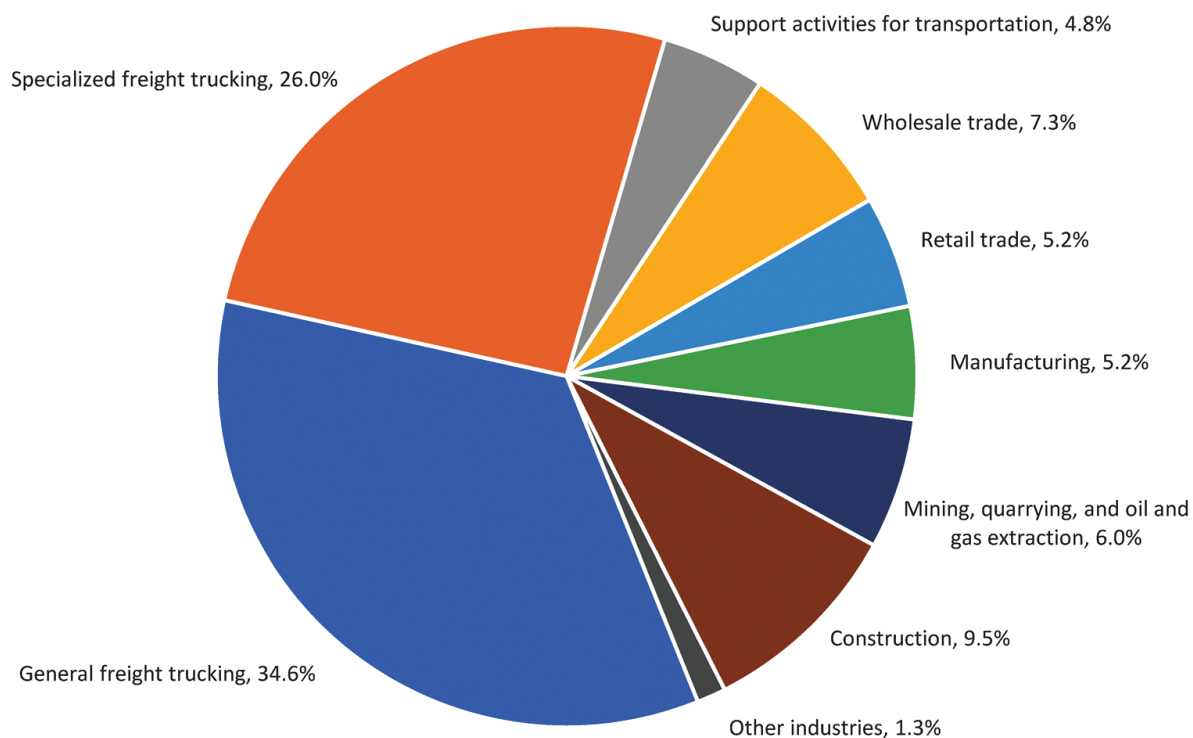


Source: Trucking HR Canada, Statistics Canada, Labour Force Survey, custom data request, 2012-2021

3.2 Truck Drivers Work in a Variety of Different Economic Sectors Including Construction, Trade and Natural Resource Extraction

About 35% of truck drivers in Alberta work in generalized freight and an additional 26% work in specialized freight (see Figure 15). However, almost 40% of truck drivers are employed by other key sectors in the province's economy, with the construction industry employing 9.5% of Alberta's truck drivers, followed by wholesale and retail trade which together employ 12.5%. The mining, oil and gas sector account for approximately 6% of truck drivers working in Alberta and another 5.2% of drivers work in the manufacturing sector.

Figure 15: Employment of Transport Truck Drivers (NOC 7511) by sector, Alberta



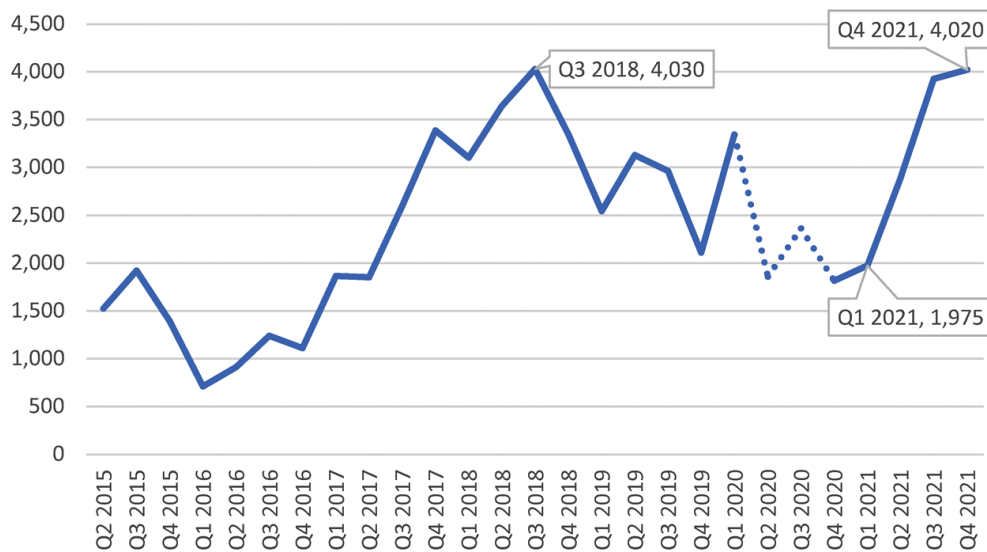
Source: Trucking HR Canada, Statistics Canada, Labour Force Survey, custom data request, 2012-2021

3.3 Vacancies for Truck Drivers are Soaring in Alberta

In 2021 there were, on average, over 3,200 truck driver vacancies in Alberta, up 19% from 2019 (pre-COVID). This is a significantly higher increase than at the national level where the number of vacancies increased by 3% compared to 2019. In fact, over the course of 2021, truck driver vacancies surged, increasing from 1,975 vacant positions in the first quarter Q1 to 4,020 vacancies by the end of the year. See Figure 16.

This is second highest number of vacancies in the occupation recorded since vacancy data became available from Statistics Canada.

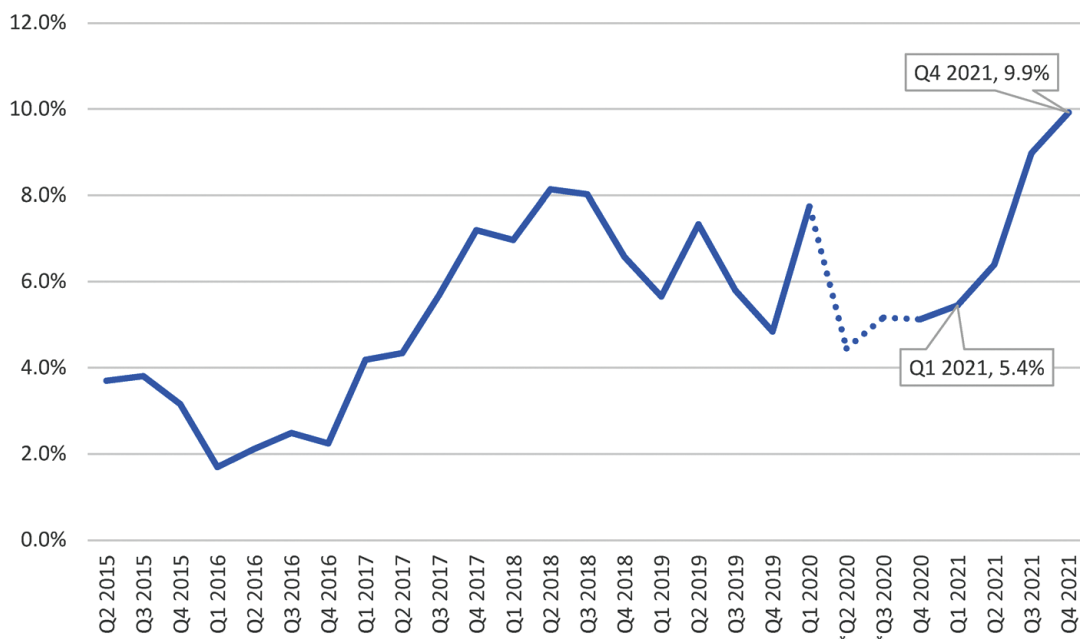
Figure 16: Number of vacancies, Transport Truck Drivers (NOC 7511), Alberta, 2015 -2021



Source: Table 14-10-0328-01 - Job vacancies, proportion of job vacancies and average offered hourly wage by selected characteristics, quarterly, unadjusted for seasonality

The vacancy rate for truck drivers followed a similar pattern where the vacancy rate increased rapidly over the course of 2021, reaching a record high vacancy rate of 9.9% in the last quarter of 2021 (see Figure 17). In comparison, the estimated vacancy rate across all occupations in Alberta's economy in Q4 of 2021 was 4.3%.

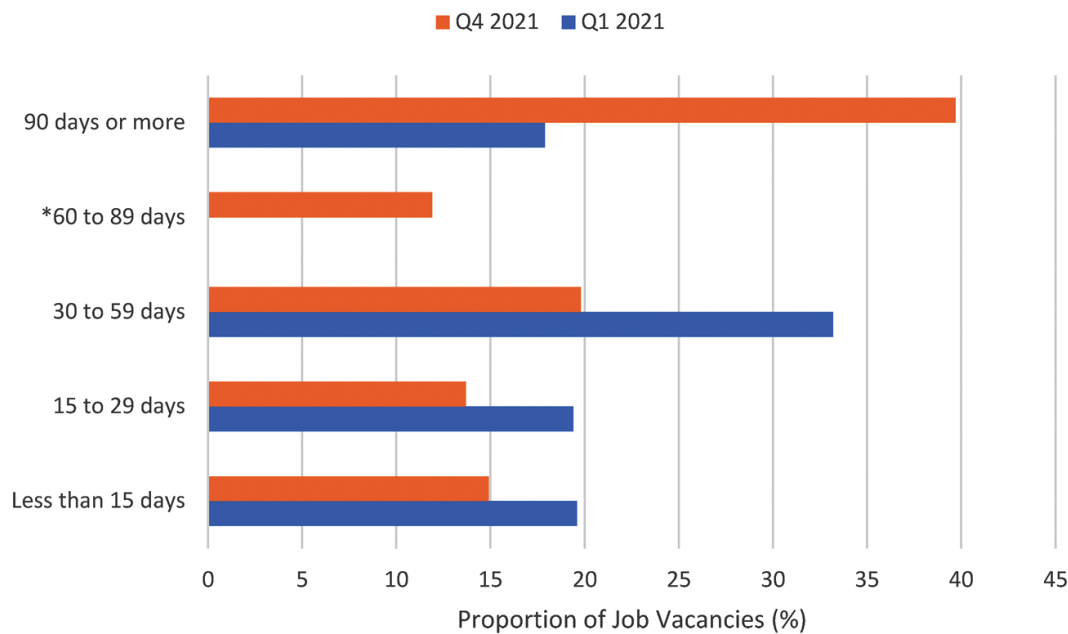
Figure 17: Vacancy rates, Transport Truck Drivers (NOC 7511), Alberta, 2015 – 2021, quarterly



Source: Trucking HR Canada, 2022, Statistics Canada: Labour force survey and Table 14-10-0328-01 – Job vacancies, proportion of job vacancies and average offered hourly wage by selected characteristics, quarterly, unadjusted for seasonality

A key indicator of labour market tightness is the length of time a position has been posted. Lengthy recruitment processes are costly to employers. The average duration of truck driver vacancies increased significantly in 2021, with only 18% of vacancies being posted for more than 90 days in Q1 whereas by Q4 roughly 40% of vacancies had been posted for 90 or more days. See Figure 18. An average of 65% of the vacant truck driver jobs in Alberta were being continuously recruited for in 2021.

Figure 18: Duration of Transport Truck Driver (NOC 7511) vacancies, Alberta, Q1 and Q4, 2021



Source: Statistics Canada. Table 14-10-0328-01 Job vacancies, proportion of job vacancies and average offered hourly wage by selected characteristics, quarterly, unadjusted for seasonality

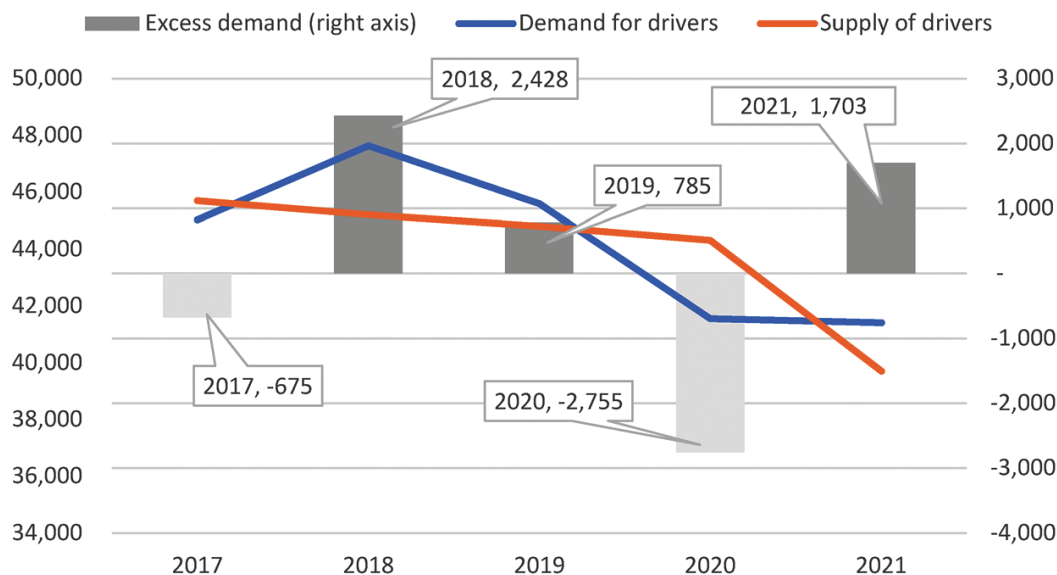
3.4 Demand for drivers has increased and the shortage is worsening

Most (63%) trucking and logistics employers in Alberta have stated that they were unable to fill all the driver positions needed in 2019 (LMI Employer Survey 2019). Even after the onset of COVID-19, more than half (52%) said they were still struggling to find the drivers they needed (LMI Survey 2021). If available, the 2021 survey respondents in Alberta would have hired another 297 additional drivers to meet the demand for their trucking services. Sixty percent also said that they anticipated the driver shortage would continue to be an issue in the coming years and over 38% said it was likely to be their top challenge (LMI Survey 2021). Almost seven in ten (68%) of Alberta-based respondents to our 2019 employer survey said that the major impacts of the driver shortage on their business were: 1) lost revenue/sales and 2) increased stress on existing employees. At a national level the estimated impact of the driver shortage on sales/revenues was a reduction of 4.7%. If that proportion is the same in Alberta, the potential cost of the driver shortage could be as much as \$173 million per year in lost revenues.

According to data from Statistics Canada’s Labour Force Survey and Job Vacancy and Wage Survey, the driver shortage in Alberta has indeed been getting worse over the past five years, with demand exceeding supply in three out of the last five years (see Figure 19).

In fact, the gap between demand for drivers⁵ and supply grew to almost 2,500 drivers in 2018, declining to a shortage⁶ of 785 drivers in 2019. The onset of COVID-19 in early 2020 saw an excess supply of truck drivers, associated with a decrease in demand and a sharp increase in unemployment due to temporary layoffs in the early stages of the pandemic. However, the driver shortage ramped up quickly with demand exceeding supply by over 1,700 drivers in 2021.

Figure 19: Truck Driver Shortage - demand and supply of truck drivers, Alberta, 2015 – 2021



Source: Trucking HR Canada, 2022 – Statistics Canada Labour Force Survey and Table 14-10-0328-01 - Job vacancies, proportion of job vacancies and average offered hourly wage by selected characteristics, quarterly, unadjusted for seasonality

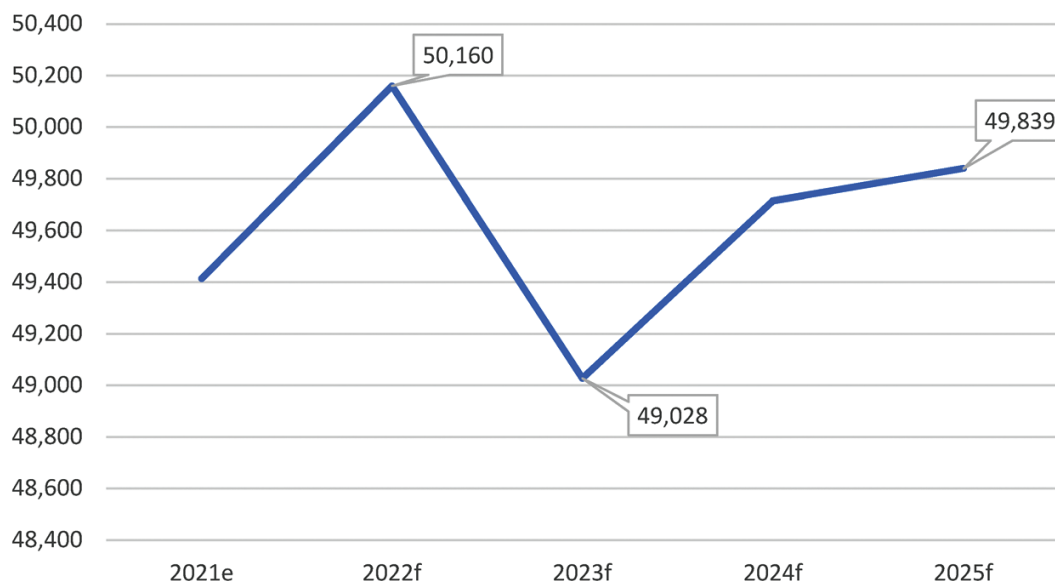
Trucking HR Canada's most recent forecasts anticipated the increase in demand for drivers in 2021 and predicted a tight labour market for drivers through to 2025 (see Figure 20). In 2022, demand for drivers in Alberta is expected to be over 50,000 positions and in subsequent years will remain above 49,000 drivers. This high demand, combined with the record high vacancy rates and longer posting periods experienced in late 2021, suggest the 2022 truck driver labour market may be extremely tight as trucking and logistics companies struggle to find all the drivers that are needed to meet resurging demand for trucking services. The tight labour market for drivers is expected to continue through to 2025, especially in the absence of concrete actions to address the gap between the demand for drivers by sustaining a net inflow of drivers⁷ to Alberta's labour market.

⁵ Demand is measured by the total number of jobs (both vacant and filled) and supply is measured by the total labour force (employed and unemployed but actively seeking work).

⁶ This calculation of the driver shortage measures the number of jobs that would remain unfilled, assuming that all unemployed drivers were suitable and able to undertake the available jobs. The actual shortage is likely significantly higher, given labour market frictions such as a mismatch between the skills/qualifications of job seekers and the requirements of the vacant position.

⁷ At the time of writing, the labour data from the 2021 Census are not yet available and Trucking HR Canada is unable to update our labour supply forecasts to 2025 until mid to late 2023. Our 2019 projections estimated a net outflow of workers in the truck driver occupation because attrition of workers from voluntary turnover and retirement outweighs the inflow of new workers and immigrants/non-permanent residents.

Figure 20: Forecast demand for truck drivers, Alberta, 2021 - 2025



Source: Trucking HR Canada, updated labour market demand forecasts, June 2021

3.5 Causes of the Driver Shortage

Alberta respondents to our 2019 employer LMI survey estimated that, at an individual firm level, turnover rates for drivers were as high as 25.8%, the majority of which is employee-initiated (leaving the company voluntarily for reasons other than retirement). In our follow-up survey in 2021, over 40% of respondents said that voluntary turn-over had increased and another 52% said that it had remained at the same (pre-pandemic) level.

Furthermore, given the older average age of the driving workforce in Alberta (see Figure 21), retirements are expected to increase over the coming years⁸. Over 28% of the driver workforce is over the age of 55 and will likely move to retire in the next few years. Our pre-pandemic labour supply projections estimated annual retirements would be approximately 1,000 drivers per year through 2023. Almost one in five (18%) of Alberta respondents to our 2021 (COVID) LMI survey, said that retirement rates had increased since the onset of the pandemic and another 77% said that the retirement rate had stayed the same.

⁸ Source: Statistics Canada. Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000). See Annex 1 for the definition of NAICS and NOCs that make up the trucking and logistics sector in Canada. Currently custom cross-tabulations of vacancy data are not available from Statistics Canada. As a result, vacancy data for NAICS 484 is used as a proxy for the broader trucking and logistics sector as described in Annex 1.

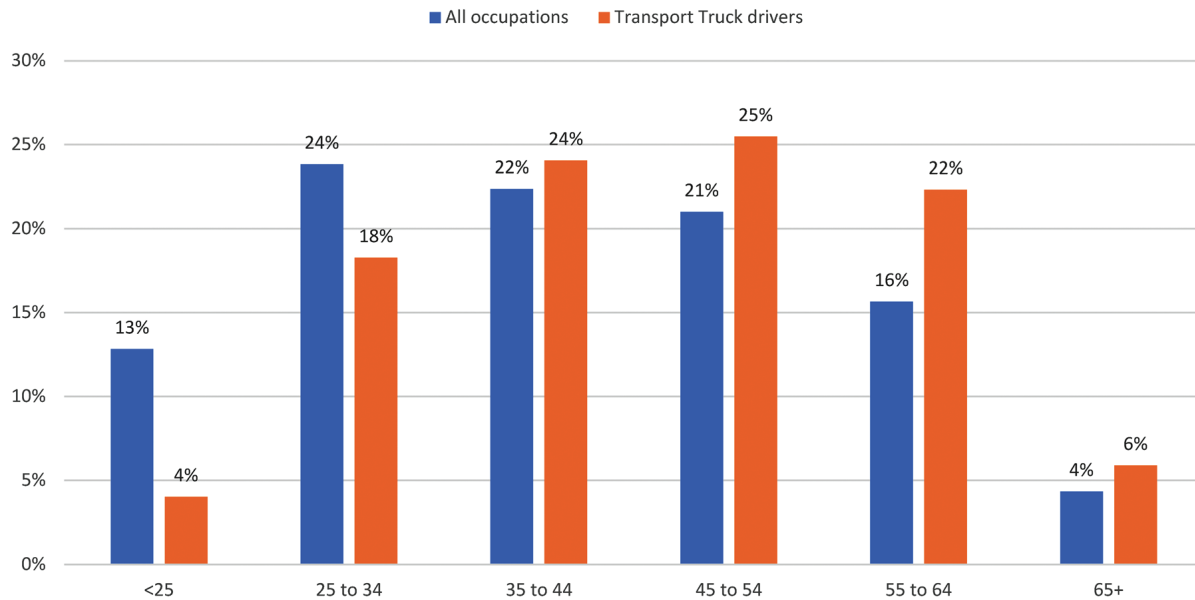
Note: Statistics Canada temporarily suspended the Job Vacancy and Wage survey in Q2 and Q3 of 2020 and the data for the year 2020 is considered unreliable.

Demand is measured by the total number of jobs (both vacant and filled) and supply is measured by the total labour force (employed and unemployed but actively seeking work).

This calculation of the driver shortage measures the number of jobs that would remain unfilled, assuming that all unemployed drivers were suitable and able to undertake the available jobs. The actual shortage is likely significantly higher, given labour market frictions such as a mismatch between the skills/qualifications of job seekers and the requirements of the vacant position.

At the time of writing, the labour data from the 2021 Census are not yet available and Trucking HR Canada is unable to update our labour supply forecasts to 2025 until mid to late 2023. Our 2019 projections estimated a net outflow of workers in the truck driver occupation because attrition of workers from voluntary turnover and retirement outweighs the inflow of new workers and immigrants/non-permanent residents.

Figure 21: Age of Transport Truck Drivers, Alberta



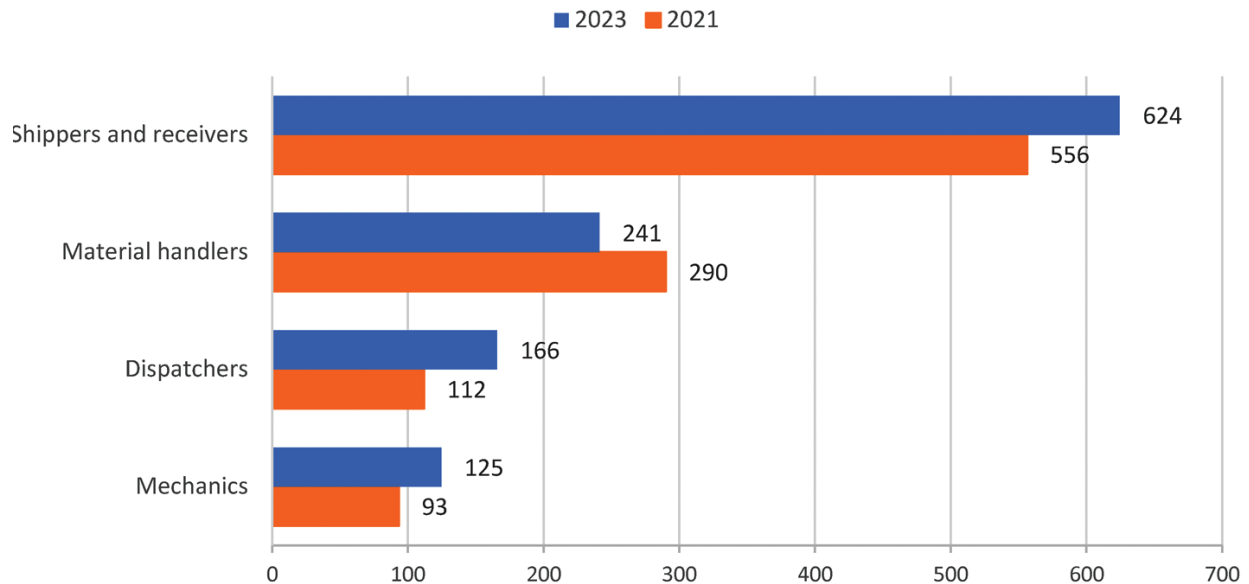
Source: *Trucking HR Canada, Demographic dashboard, 2020*

Attrition (voluntary turn-over for reasons other than retirement) is very high amongst truck drivers. Our pre-COVID forecasts, projected that an average of almost 4,200 drivers would leave their current jobs per year between 2021 and 2023. Forty percent of Alberta respondents to our 2021 employer survey stated that voluntary turn-over of drivers at their firms had increased since the onset of COVID-19.

4.0 Labour Market Challenges Among Other Key Occupations

While the worsening labour shortages may be most noticeable for truck drivers, the intensity of the search for qualified applicants is also projected to increase for other important occupations in the sector, including shippers and receivers, dispatchers and mechanics (see Figure 22). Although the number of vacancies for material handlers is expected to decrease slightly, the number of vacant positions in trucking and logistics will remain relatively high.

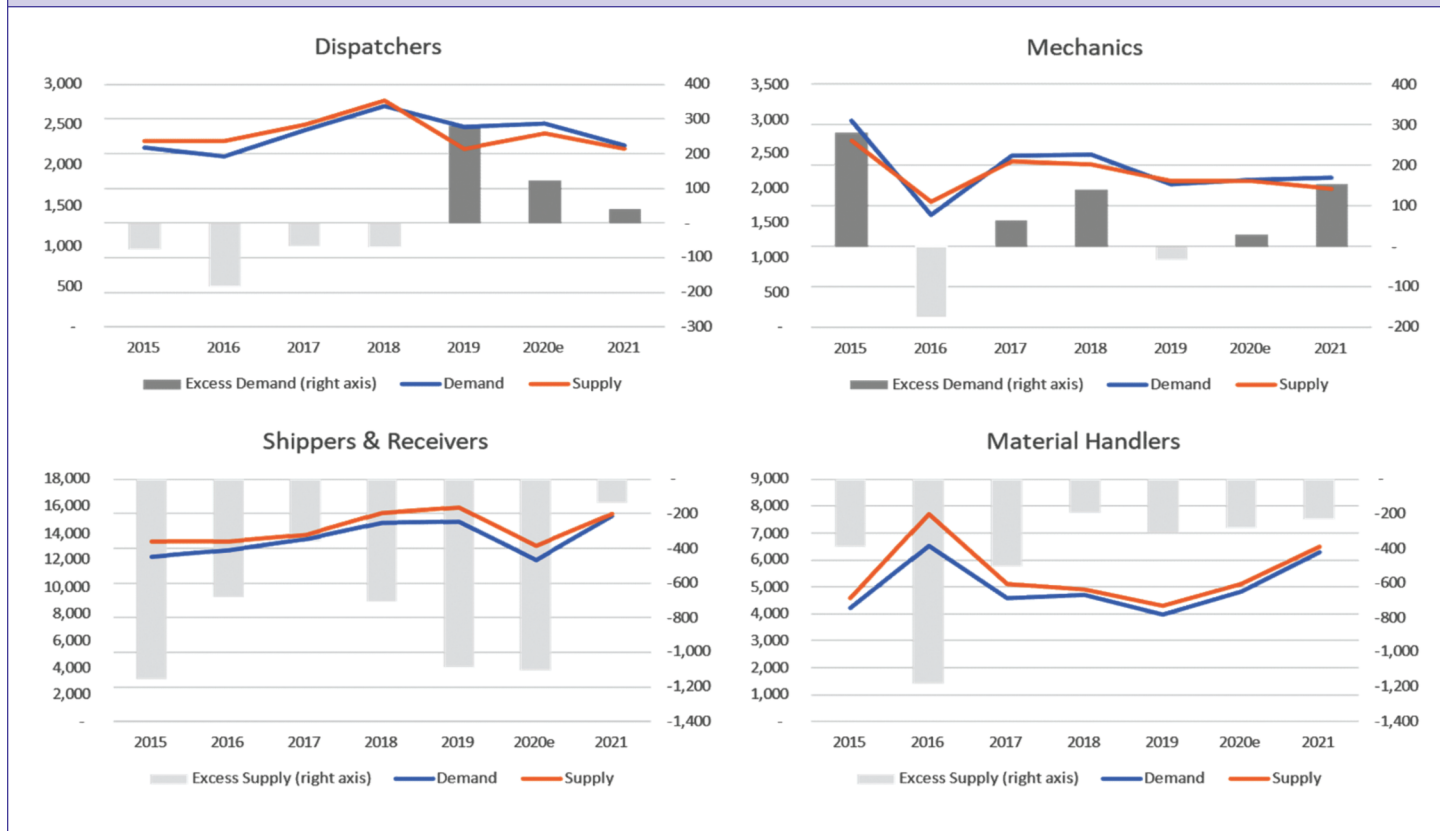
Figure 22: Forecasted vacancies among other key trucking and logistics occupations, Alberta, 2021 - 2023



Source: Trucking HR Canada, Model/forecasting dashboard, 2020

The analysis of demand and supply of workers in these four occupations is shown in Figure 23. Acute labour shortages (i.e. where available supply cannot fulfil the demand for workers) are observed in dispatchers and mechanics, while the analysis for shippers and receivers and material handlers show that the labour market is not clearing efficiently and the trucking and logistics sector is still struggling to fill vacant positions.

Figure 23: Labour supply and demand for other key trucking and logistics occupations, Alberta, 2015-2021



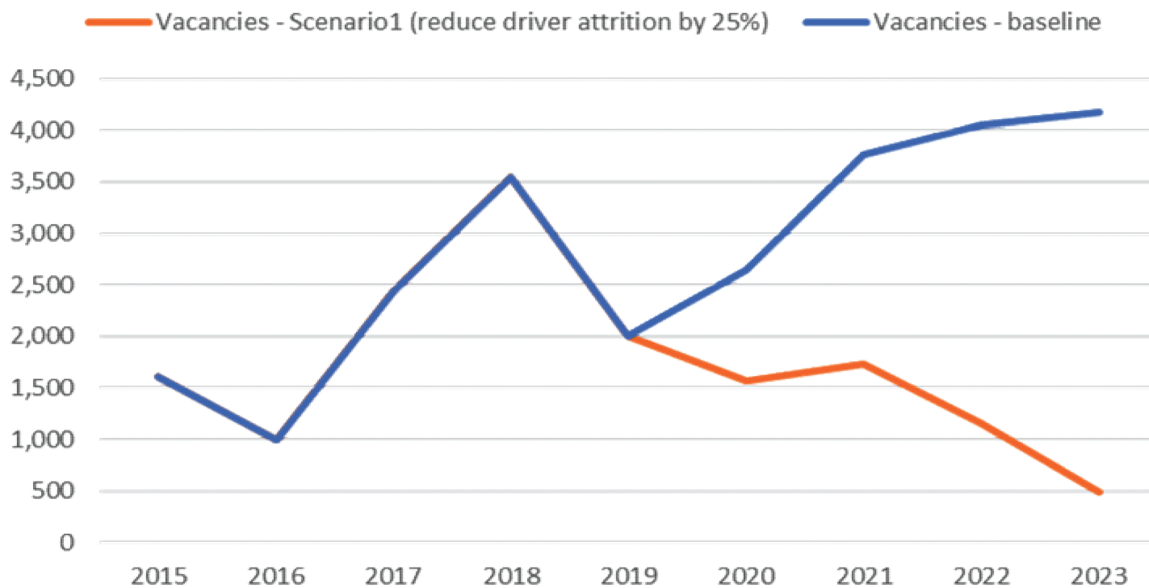
Source: Trucking HR Canada, 2022 – Statistics Canada Labour Force Survey, custom data request and Table 14-10-0328-01– Job vacancies, proportion of job vacancies, and average offered hourly wage by selected characteristics, quarterly, unadjusted for seasonality, 2017-2021.

5.0 Creating Workforce Solutions – The Potential Impact of Supply-Side Management Strategies

Trucking HR Canada’s labour market forecasting tool allows us to examine the impact of key labour market interventions on the shortage of workers in the sector. In particular, the tool provides two key labour supply management “levers”: 1) addressing truck driver turn-over and attrition and 2) attracting more entrants to jobs in the trucking and logistics sector.

In our first scenario, we estimate that reducing voluntary turn-over amongst drivers by 25% would drop the number of forecasted driver vacancies in 2023 by more than half, eliminating close to 3,700 vacancies in the occupation and bringing the supply of workers more in line with demand. See Figure 24.

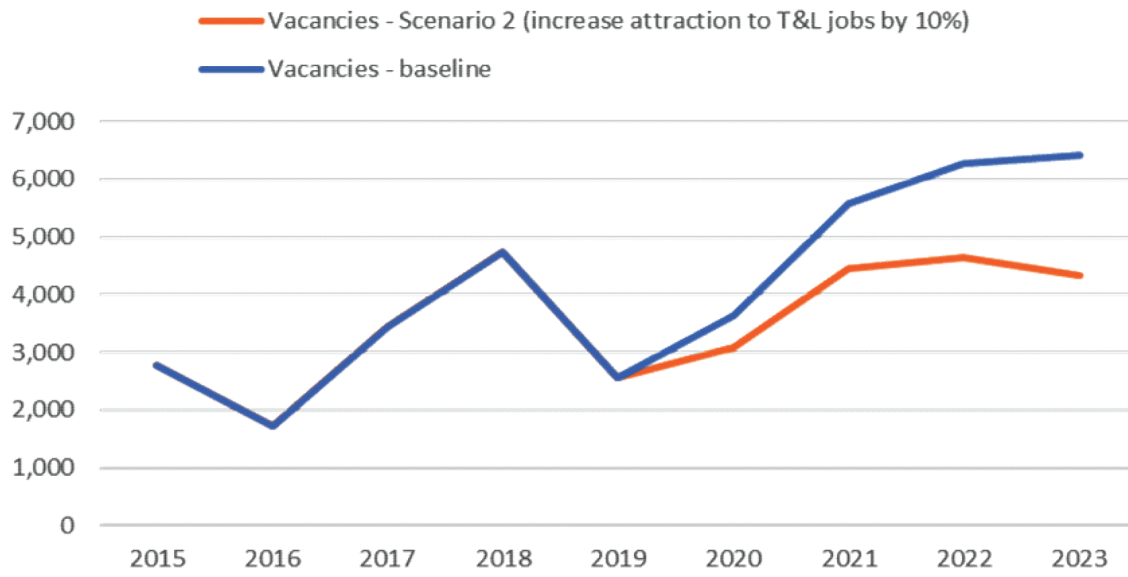
Figure 24: Forecasted truck driver vacancies under scenario 1 (reduce driver attrition by 25%), Alberta, 2020 - 2023



Source: Trucking HR Canada, Model/forecasting dashboard, 2020

Our second scenario looks at the impact of attracting more new entrants into the sector (including both recent school leavers and those coming from other occupations), across all occupations. Under this alternative scenario, we examine the impact of increasing interest among new entrants (recent school leavers) and those coming from other occupations by 10 per cent. The results from this modelling exercise (see Figure 25) suggest it could reduce vacancies in the trucking and logistics sector by nearly 2,100 in 2023—from a forecasted 6,426 under the baseline scenario to 4,330 under scenario #2.

Figure 25: Vacancies in the trucking and logistics sector under scenario 2 (increase occupational attraction by 10%)



Source: Trucking HR Canada, Model/forecasting dashboard, 2020

6.0 Recommendations

Based on this project work, Trucking HR Canada recommends that the shortage of drivers and other key occupations in the trucking and logistics sector be part of a province-wide strategy to support economic recovery in Alberta.

Having access to a cadre of skilled and experienced workers will help the trucking and logistics sector to fulfill the transportation needs of the province's most crucial economic sectors including but not limited to natural resources, agriculture, retail/wholesale trade and construction.

The need to address the industry's labour shortage is also echoed at a national level in recent Trucking HR Canada publications (<https://truckinghr.com/labour-market-information/>) as well as in the Government of Canada's recently published Final Report of the National Supply Chain Task Force 2022 report (https://tc.canada.ca/sites/default/files/2022-10/supply-chain-task-force-report_2022.pdf).

Employers in trucking and logistics have highlighted that their main challenges in finding enough drivers include, among others:

- Lack of a pool of experienced drivers who are actively seeking work.
- The high cost of training and on-boarding new drivers.
- The length of time it takes to get new drivers adequately road-ready.
- Limited interest from younger workers willing to enter the driving profession.
- Lack of standardized training programs, both pre-licensing and company-based on-boarding programs.
- The high cost of insuring new drivers.

Trucking HR Canada's forecasting model demonstrates that a supply management strategy can help address industry labour shortages.

The following strategies could help address the labour market gaps in Alberta's trucking and logistics labour market.

- 1) Subsidizing driver training, both entry-level as well as company-based on-the-job/workplace training.
- 2) Providing wage support to employers for hiring and retaining new workers, especially truck drivers.
- 3) Incentivizing employers by providing grants for student work placements.
- 4) Supporting the standardization of driver training programs including mandatory entry-level (MELT) programs and company-led occupational training.
- 5) Exploring the potential to link insurance rates for new drivers to the completion of approved or accredited MELT and occupational training.

- 6) Exploring the potential to link insurance rates for new drivers to the completion of approved or accredited MELT and occupational training.
- 7) On-going monitoring of the labour market for trucking and logistics to assess the impact of supply management programs and strategies.

Resources

Capitalizing on already existing Trucking HR Canada programs can be part of the solution:

- 1) **The Career Expressway Program** (<https://truckinghr.com/career-expressway-thrc/>) is a suite of financial incentives designed to help trucking and logistics employers recruit, train and retain talent. Employers nationally can access support for driver training, student internships and youth which has and continues to help employers with their recruitment and retention efforts.
- 2) **The HR Resource Library** (<https://truckinghr.com/hr-training-resources/>) is a comprehensive collection of free practical up-to-date guides, tools and templates designed for industry employers to support effective human resources management. The resources cover a number of topics including how to build inclusive workplaces. Through other project work, the Government of Alberta has funded the development of resources that are currently available in the library.
- 3) **Trucking Careers GPS** (<https://truckingcareersgps.com/>) is an interactive online resource where career-seekers can learn about the industry, careers offered, and how their skills can be put to work.
- 4) **National Occupational Level Training Standard for Truck Driver** is a new project beginning January 2023 that will develop a standard for driver onboarding/ finishing training programs deployed by employers and driver training schools. Trucking HR Canada will work with industry employers, driving schools and insurance to design a training standard that meets the needs of today's truck drivers and bridges the gap between MELT training and on the road readiness.
- 5) **Industry Labour Market Information** (<https://truckinghr.com/labour-market-information/>) – Trucking HR Canada continues to publish the most accurate and up to date industry LMI to help describe the labour market and facilitate better decision making by employers, workers, job seekers, policymakers, educators, academics, students, parents and more.

Trucking and logistics defined

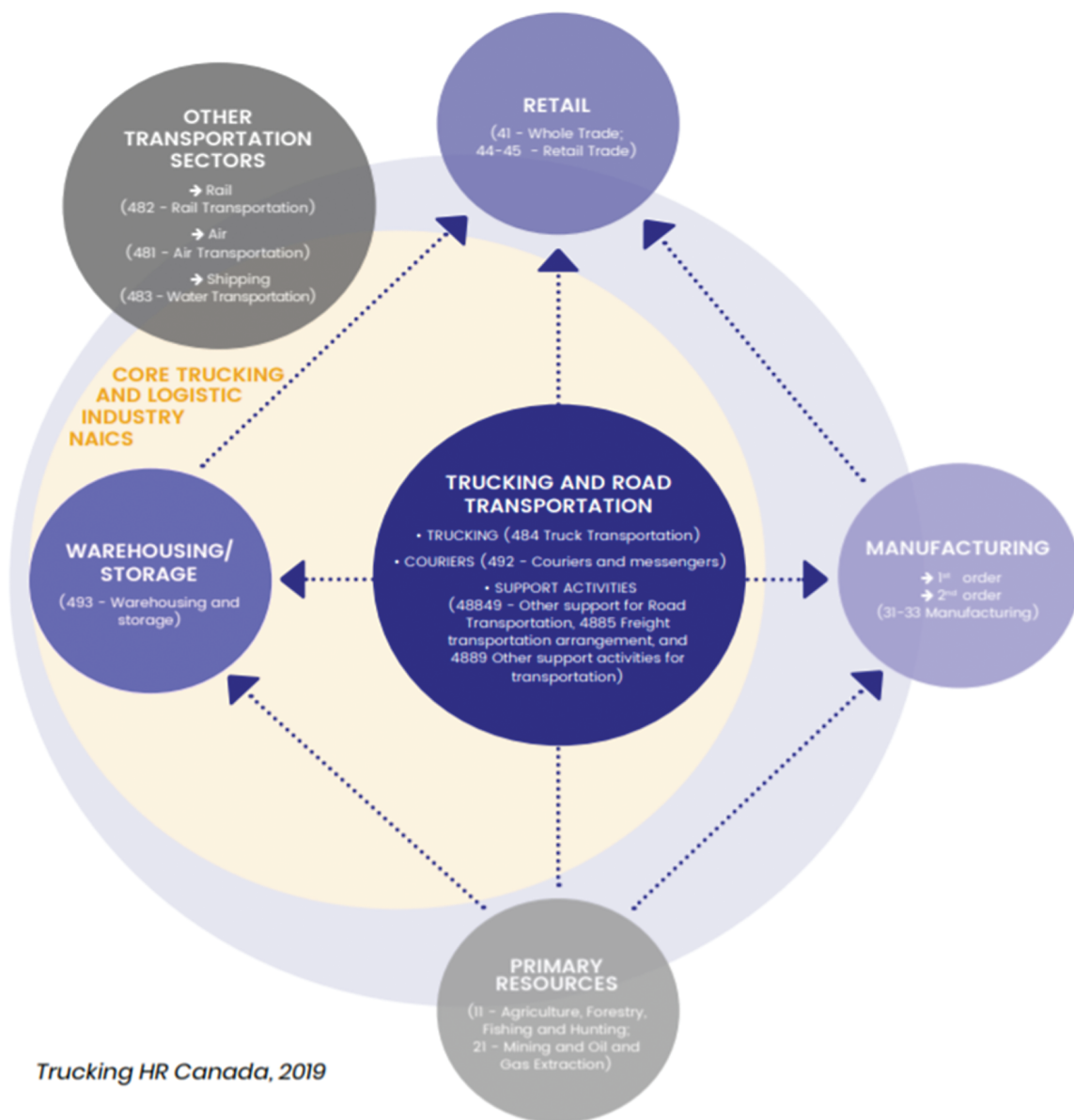
Statistics Canada organizes its published data through a series of classification systems. For example, the National Occupational Classification (NOC) is Canada's national system for describing occupations, and the North American Industry Classification System (NAICS) classifies industries. Generally, labour market analysis is centred around these pre-defined classifications, and thus straightforward. However, sometimes these categorizations need to be manipulated to capture more complex configurations such as the trucking and logistics sector.

Indeed, the trucking and logistics sector cannot be defined by one single industry within the NAICS framework. For example, truck transportation, which has its own NAICS code (industry 484), is a core part of the broader trucking and logistics sector, capturing both generalized and specialized freight trucking. However, this industry does not capture important logistics activities such as warehousing and storage or additional trucking activity that is measured in other sectors of the economy like the manufacturing sector.

Additionally, there is no grouping of occupations as defined by NOC that can accurately outline the sector's dimensions. For example, material handlers and mechanics are considered an important occupation within the trucking and logistics sector workforce. However, not all material handlers and mechanics across Canada are employed by the trucking and logistics sector.

In light of this, Trucking HR Canada developed a framework to define the overlap of industries and occupations that would comprise the trucking and logistics sector. The following diagram presents the framework for defining the trucking and logistics sector. This framework is the foundation for the analysis and modelling activities carried out under our labour market information (LMI) research. As a starting point, we identified core trucking and logistics industries. These include truck transportation (NAICS 484), couriers and messengers (NAICS 492), and warehousing and storage (NAICS 493). All workers employed across these three industries, independent of their occupation, are considered part of the trucking and logistics sector workforce.

Then, we identified key trucking and logistics occupations also employed outside of the above-stated core industries. They include truck drivers, delivery and courier service drivers, shippers and receivers, dispatchers, and mechanics. The industries that these occupations were employed in ultimately determined whether they were classified within the trucking and logistics sector.



For example, all truck drivers and delivery and courier service drivers working across all Canadian industries are considered part of the trucking and logistics sector workforce. In contrast, for mechanics, only those employed in support activities for transportation (NAICS 488) or one of the three core trucking and logistics industries (NAICS 484, 492, 493) are included in the trucking and logistics framework. As for shippers and receivers and dispatchers, those employed within agriculture, mining and oil and gas extraction, manufacturing, wholesale, retail, or one of the three core trucking and logistics industries are considered part of the trucking and logistics sector workforce.

Overall, a total of 30 occupations were identified as part of our LMI assessment. The following table summarizes the list of occupations included in the trucking and logistics sector, along with the industry coverage for each occupation. Occupations were organized around eight groupings: key occupations, managers and supervisors, general administration, accounting, human resources, information technology, operations and logistics, and other occupations.

	Occupation (NOC)		Selected NAICS
Key Occupations	1521	Shippers and receivers	11, 21, 31-33, 41, 44-45, 484, 488, 492, 493
	1525	Dispatchers	
	1526	Transportation route and crew schedulers	484, 492, 493
	7321	Automotive service technicians, truck and bus mechanics and mechanical repairers	484, 488, 492, 493
	7452	Material handlers	484, 492, 493
	7511	Transport truck drivers	All NAICS
	7514	Delivery and courier service drivers	
	7622	Railway and motor transport labourers	484, 492, 493
Managers & Supervisors	0016	Senior managers - construction, transportation, production and utilities	484, 492, 493
	0731	Managers in transportation	
	1215	Supervisors, supply chain, tracking and scheduling co-ordination occupations	
	7305	Supervisors, motor transport and other ground transit operators	
General Administration	1221	Administrative officers	484, 492, 493
	1241	Administrative assistants	
	1411	General office support workers	
Accounting	1111	Financial auditors and accountants	484, 492, 493
	1311	Accounting technicians and bookkeepers	
	1431	Accounting and related clerks	
Human Resources	0112	Human resources managers	484, 492, 493
	1121	Human resources professionals	
Information Technology (IT)	2171	Information systems analysts and consultants	484, 492, 493
	2174	Computer programmers and interactive media developers	
Operations and Logistics	1523	Production logistics co-ordinators	484, 492, 493
	1524	Purchasing and inventory control workers	
Other Occupations	1122	Professional occupations in business management consulting	484, 492, 493
	1315	Customs, ship and other brokers	
	1522	Storekeepers and parts persons	
	2233	Industrial engineering and manufacturing technologists and technicians	
	2262	Engineering inspectors and regulatory officers	
		Others	