AUTOMOTIVE INDUSTRY LABOUR MARKET ANALYSIS

REGIONAL AUTOMOTIVE MANUFACTURING PROFILE: **WINNIPEG**



The project is a collaboration of the Canadian Skills Training and Employment Coalition, Prism Economics and Analysis, and the Automotive Policy Research Centre.

October 2019

futureautolabourforce.ca



THIS PAPER was prepared for the Auto Labour Market Information (LMI) Project, now known as the Future of Canadian Automotive Labourforce (FOCAL) Initiative.

The goal of the project is to help stakeholders better understand the automotive labour market. The Project will create industry-validated, regional, occupational supply and demand analyses and forecasts and skill profiles for skilled trades and other key skilled occupations in the broader automotive sector including vehicle assemblers, parts manufacturers and technology companies that supply the industry. The project will also examine various labour market trends in the sector and facilitate discussions among stakeholders about how to address any forecasted skills shortages and other labour market challenges. The planned outcome of the project is enhanced regional labour market information that will support colleges, employers, policy makers and other stakeholders in taking practical steps to address skills shortages and other labour market challenges in the automotive sector.

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(FOCAL) Initiative, futureautolabourforce.ca

Canadian Skills Training and Employment Coalition, cstec.ca

Prism Economics and Analysis, prismeconomics.com

Automotive Policy Research Centre, automotive policy.ca

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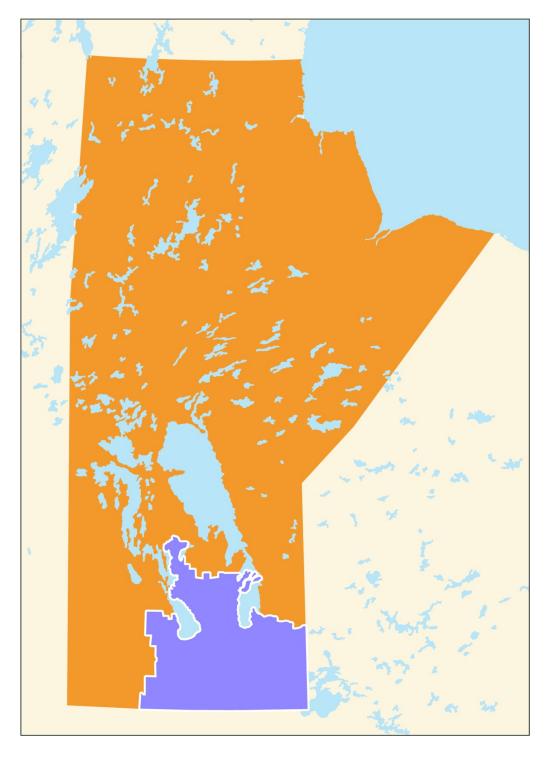




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EXECUTIVE SUMMARY



The Winnipeg region is comprised of five Economic Regions (ERs) as defined by Statistics Canada: South East Manitoba, South Central Manitoba, North Central Manitoba, Winnipeg, and Interlake. The region's GDP was an estimated \$49 billion in 2018, 11% of which was generated by the manufacturing sector. Manufacturing is also



a major employer in the region, accounting for 9% of the total labour force. The region has a positive economic outlook with annual GDP growth of at least 2.0% projected through 2029. However, the region's manufacturing sector is expected to see its GDP growth slow in the coming years.

The Winnipeg region's population was an estimated 1 million in 2018. Healthy population growth is expected in the region through 2025 before slowing in the latter half of the next decade. Population growth will likely be driven primarily by migration into the region as a declining birth rate means little natural population change. The region is expected to see an aging trend in its population, with the share of the population aged 65 years and over projected to increase from 16% in 2016 to 18% by 2030. The region is also expected to see its unemployment fall from 6.3% in 2016 to 5% by 2020 before stabilizing over the coming decade.

The Winnipeg region's automotive manufacturing industry employed an estimated 3,700 workers across 12 businesses in 2018, based on findings from industry contacts, company websites, industry literature and other sources of publicly available data. Employment in the past five years is estimated to have ranged from a low of 3,500 in 2013 to its peak in 2018. The region is home to three OEM bus assembly plants that employ an estimated 2,300 employees. A total of 9 parts suppliers located in the region employ an additional 1,300 workers.



PROJECT BACKGROUND

The automotive industry is critically important to Canada's economic well-being. Despite a declining trend over the past decade, Canada still produced over 2 million vehicles in 2018. Furthermore, vehicle assembly plants have the capacity to build over 2.3 million vehicles annually. The industry directly accounted for over 8% of Canada's manufacturing GDP and 17% of Ontario's manufacturing GDP in 2017. The industry also contributes to Canada's economy through expenditures on capital, which totaled \$1.7 billion as of 2017, and research & development, where businesses spent an additional \$265 million in 2018. However, expenditure levels in both cases have dropped off since the early to mid-2000s. Finally, Canada's automotive industry is deeply tied to the global market through foreign trade. The majority of vehicles produced in Canada are exported, mostly to the United States. The U.S. is also the top export destination for automotive parts and components manufactured domestically. Canada also imports vehicles and parts, mainly from the U.S. and Mexico but also from Japan, Germany, South Korea and China. Although Canada has historically maintained a trade surplus in vehicles despite a trade deficit in parts it faced a deficit in both sub-sectors in 2018, leading to a total automotive trade deficit of \$24.6 billion.

The automotive industry is one of the key drivers of innovation in the advanced manufacturing sector and it increasingly spurs innovation across a wide range of industries. In addition to developing new manufacturing technologies and production systems that will increase productivity and competitiveness, the industry is developing innovative solutions to challenges in vehicle connectivity and advanced driver assistance systems and is breaking new ground in vehicle light-weighting and alternative propulsion to reduce greenhouse gas (GHG) emissions. A recent automotive advisory report outlined how the industry can achieve its future goals. It identified talent and skills development as key to industry's success going forward and recommended a detailed analysis of the industry's workforce¹. Similarly, the Canadian Automotive Partnership Council (CAPC) encouraged industry to work with government and its agencies to invest in both current and future workforces in its most recent "Call for Action" report².

Since talent and skills will be a driving force in enabling this innovation and facilitating the industry's future prosperity, it is important to undertake a comprehensive analysis of the workforce required to design and build the new technology intensive vehicles, parts, and systems of today and tomorrow. Accordingly, the Canadian Skills Training and Employment Coalition (CSTEC) and the Automotive Policy Research Centre (APRC) are undertaking a comprehensive labour market analysis of the automotive industry and its supply chain. The project is funded by the Government of Canada's Sectoral Initiatives Program (SIP) and will be completed over a three-year period.

¹ Tanguay, "Drive to Win"

² Canadian Automotive Partnership Council (CAPC), "A Call for Action: II



Under the North American Industry Classification System (NAICS) automotive manufacturing is traditionally defined as being comprised of two main sub-sectors: motor vehicle assembly (NAICS 3361), which includes chassis manufacturing, and motor vehicle parts manufacturing (NAICS 3363). These sub-sectors directly employ a combined 125,000 Canadians, based on data collected through the 2016 Census. However, this definition of the industry understates the workforce because it excludes establishments that have been misclassified by Statistics Canada as belonging to a non-automotive NAICS code. Misclassification occurs because many of these establishments dedicate only a portion of their output to automotive-related activities and are not always present within the automotive supply chain³. A 2017 report by the APRC profiling the automotive manufacturing industry in Canada identified over 200 automotive parts manufacturing establishments that were assigned a NAICS industry code other than 3361 or 33634. The APRC's estimates of automotive manufacturing employment, which supplemented Statistics Canada data with establishment-level estimates for businesses that have been misclassified, placed the industry's workforce at over 140,000 people as of 2016.

Rather than limiting automotive manufacturing to Statistics Canada's two main automotive manufacturing NAICS codes, this project will instead broaden the definition of the sector to include producers in the supply chain that have been classified in non-automotive industries. This broader definition of automotive manufacturing will include establishments in the following categories:

- 1. **OEM Vehicle Assembly** Car and light-duty truck assembly plants owned by Original Equipment Manufacturers (OEMs) including Ford, Fiat Chrysler Automobiles (FCA), Toyota, Honda and General Motors.
- OEM Parts Suppliers Motor vehicle parts and components manufacturing plants owned by OEMs. These include facilities that produce internal combustion engines, transmissions, cast wheels and other structural metal components, and plastic or composite interior or exterior trim and mouldings.
- 3. **Primary Independent Parts Suppliers** Establishments whose primary purpose is to supply parts and components or provide value-added services (e.g. sub-assembly, sequencing) to the supply chain of OEMs.
- 4. **Diversified Independent Parts Suppliers** Establishments that supply OEMs or primary parts suppliers but who also supply a number of other industries.
- 5. **Automotive Tooling and Automation** Establishments that provide machine tools, dies, moulds and/or automation equipment (e.g. welding cells, presses, complete assembly lines) to OEMs and parts suppliers.
- 6. **Bus and Heavy Truck** Establishments that manufacture buses, medium-duty trucks and/or heavy-duty trucks, or whose primary purpose is to supply parts and components to busy and heavy truck manufacturers.

³ Sweeney & Mordue, "The Restructuring of Canada's Automotive Industry, 2005-2014"

⁴ Sweeney, "A Profile of the Automotive Manufacturing Industry in Canada, 2012-2016"



- 7. **Automotive Technology** Establishments that build or develop automotive technologies, including those that are included in the vehicle (e.g. embedded software), in the production process (e.g. systems that monitor the assembly line) and/or in infrastructure (e.g. electric vehicle charging stations).
- 8. **Raw Materials** Establishments that are primarily engaged in the production and processing of raw materials (e.g. steel, rubber, glass) used in automotive manufacturing.

It should be noted that while some establishments could be included within more than one of these categories, they are ultimately assigned to only one. Establishments are classified based on the research and expertise of the project team.

The following industries will be included as part of the broader definition of the sector, in addition to the two main automotive manufacturing NAICS codes:

- Paint, coating and adhesive manufacturing (NAICS 3255)
- Coating, engraving, cold and heat treating and allied activities (NAICS 3328)
- Plastic product manufacturing (NAICS 3261)
- Computer and peripheral equipment manufacturing (NAICS 3341)
- Rubber product manufacturing (NAICS 3262)
- Communications equipment manufacturing (NAICS 3342)
- Glass and glass product manufacturing (NAICS 3272)
- Semiconductor and other electronic component manufacturing (NAICS 3344)
- Iron and steel mills and ferro-alloy manufacturing (NAICS 3311)
- Navigational, measuring, medical and control instruments manufacturing (NAICS 3345)
- Steel product manufacturing from purchased steel (NAICS 3312)
- Electric lighting equipment manufacturing (NAICS 3351)
- Foundries (NAICS 3315)
- Electrical equipment manufacturing (NAICS 3353)
- Forging and stamping (NAICS 3321)
- Other electrical equipment and component manufacturing (NAICS 3359)
- Cutlery and hand tool manufacturing (NAICS 3322)
- Architectural, engineering and related services (NAICS 5413)
- Architectural and structural metals manufacturing (NAICS 3323)
- Computer systems design and related services (NAICS 5415)
- Hardware manufacturing (NAICS 3325)
- Management, scientific and technical consulting services (NAICS 5416)
- Machine shops, turned product, and screw, nut and bolt manufacturing (NAICS 3327)
- Motor vehicle and motor vehicle parts and accessories merchant wholesalers (NAICS 415)

One of the central challenges of this project will be to understand the links between companies in these industries and those included in the primary automotive NAICS



codes. A two-pronged approach will be used to ensure the broader definition of the sector closely reflects the true profile of the Canadian automotive industry:

- 1. A <u>bottom up</u> approach will use an establishment-level database to identify individual producers that are involved in the automotive supply chain.
- 2. A <u>top down</u> approach will use Statistics Canada's input-output tables, which track inter-industry transactions, to better understand the contributions to employment and output that establishments from non-automotive NAICS codes make to the sector.

Preliminary estimates based on this approach indicate the broader automotive manufacturing sector employed roughly 177,000 workers in Canada as of 2015.



INTRODUCTION

The Winnipeg region is an aggregate region comprised of five Economic Regions (ERs) as defined by Statistics Canada: Southeast, South Central, North Central, Winnipeg, and Interlake. The Winnipeg ER is the larger of the five regions and includes the cities of Winnipeg and Headlingley. The Winnipeg region is home to approximately 78% of Manitoba's population and cover a land area of nearly 58,000 square kilometers. The region includes major trade routes between Canada and the United States.

This regional profile includes three main sections. First, a discussion of the regional economy, including outlooks for GDP. Next, a section outlining trends in the region's population, demographic characteristics and overall workforce. Finally, an overview of the region's automotive manufacturing industry, including key employers and occupations.

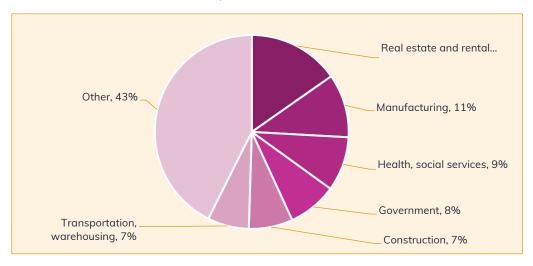
All regional data presented in this profile are aggregates (or weighted averages where appropriate) of ER-level data for the Winnipeg region. Except where noted, data on the automotive manufacturing industry refers to Statistics Canada's two main industry codes for motor vehicle assembly (NAICS 3361) and parts manufacturing (NAICS 3363).



REGIONAL ECONOMY

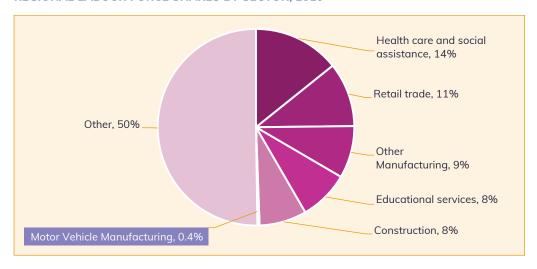
The Winnipeg region's GDP totaled an estimated \$49 billion dollars in 2018. Real estate, rental, and leasing was the largest single contributor to the region's GDP of any sector, accounting for nearly one-fifth (15%) or approximately \$7.4 billion. Manufacturing was the next largest sector, comprising 11% of the regional economy or approximately \$5.1 billion. Other major sectors in the region include healthcare and social services (9% of GDP), government services (8%), and construction and social services (8%).

REGIONAL GDP SHARES BY SECTOR, 2018



The Winnipeg region's largest sectors by workforce size include manufacturing (14% of total regional labour force), health care and social assistance (13%) and retail trade (11%). The region's workforce is highly diversified and also includes high make-ups of other key occupations such as: wholesale and trade (6%), retail trade (6%), finance and insurance (5%), and education (5%).

REGIONAL LABOUR FORCE SHARES BY SECTOR, 2016



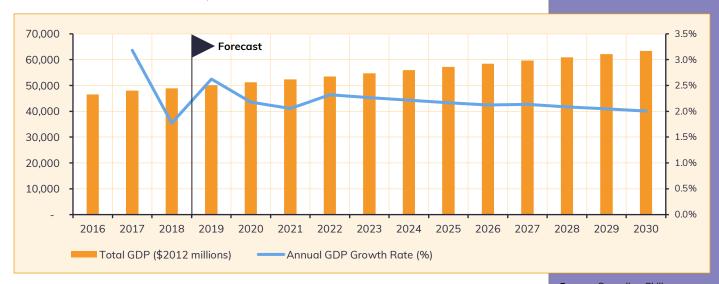
Source: Canadian Skills Training & Employment Coalition, Metro Economics

Source: Canadian Skills Training & Employment Coalition, Statistics Canada



The region's economic outlook is expected to be positive over the coming decade. Regional GDP is expected to grow 2.6% in 2019 and 2.1% in 2020, surpassing \$51 billion. Furthermore, annual GDP growth of at least 2.0% is projected for every year from 2019 to 2030, surpassing \$63 billion.

TOTAL REGIONAL GDP OUTLOOK, 2016-2030

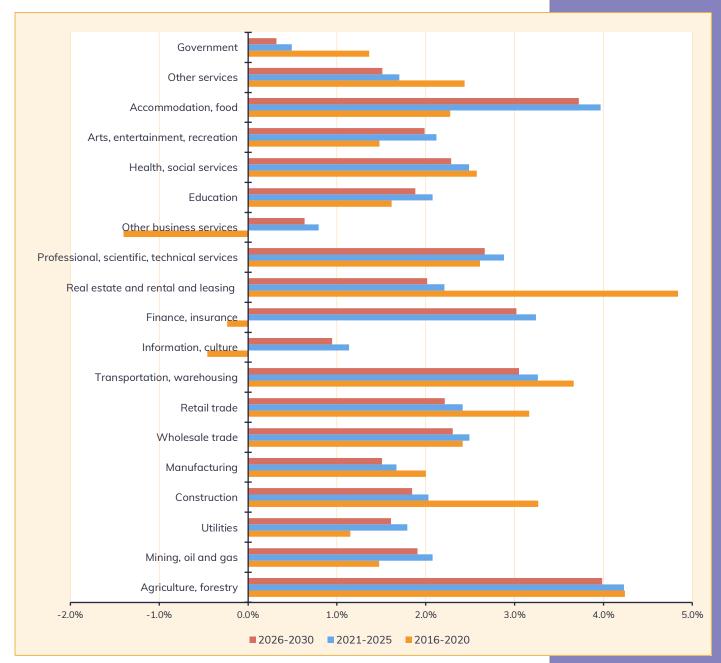


While the region's overall GDP growth outlook is healthy, projections by sector vary significantly. In the near term, industries such as real estate, rental, and leasing (4.8%) and agriculture (4.2%) experienced strong GDP growth and will continue to do so through 2020. Information and culture (-0.5%) and finance and insurance (-0.2%) will experience decline during this period. Agriculture, forestry, fishing and hunting (4.6%) is expected to experience the strongest growth between 2021 and 2025, while utilities (1.8%) and government services (0.5%) are expected to see little growth during the same period. Agriculture continues its strong growth (4.4%), while accommodation and food services (3.7%) is projected to continue its strong growth over the 2026 to 2030 period. The manufacturing sector, which includes automotive manufacturing, is expected to see its GDP growth slow in the coming years. While the sector's GDP is expected to be 2.0% larger in 2020 than 2016, growth is projected to fall to 1.8% for the 2021-2025 period and 1.6% for the 2026-2030 period.

Source: Canadian Skills Training & Employment Coalition, Metro Economics



ANNUAL AVERAGE REGIONAL GDP GROWTH BY SECTOR, 2016-2030



Source: Canadian Skills Training & Employment Coalition, Metro Economics



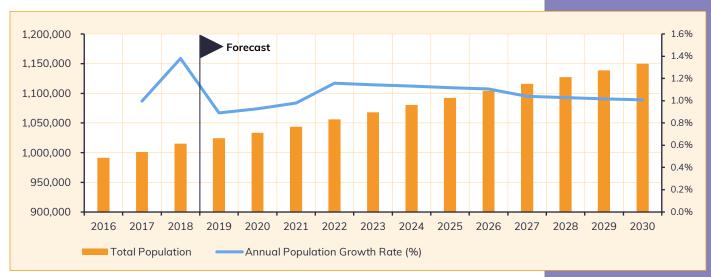
REGIONAL LABOUR CONSIDERATIONS

POPULATION, AGE DISTRIBUTION AND REGIONAL DIVERSITY

The Winnipeg region is the most populous region in Manitoba, with approximately 78% of the total provincial population residing in the region. The principal population centre of the region is the Winnipeg ER.

The region's population was estimated at just under 1.00 million people in 2016, approximately 71% of whom resided in the Winnipeg ER. Looking ahead, the region's population is expected to reach 1.03 million people by 2020. The population is then expected to grow by 5.0% between 2021 and 2025 to 1.10 million. However, population growth is expected to slow to 4.0% over the latter half of the next decade, reaching 1.51 million by 2030.

TOTAL REGIONAL POPULATION OUTLOOK, 2016-2030



Changes in total population occur through net natural population change (i.e. the difference between the number of births and deaths in a region) and net migration (i.e. the difference between the number of people moving in and out of a region). Categorizing a region's total population change based on these components can be useful in identifying whether its future population growth will be driven by natural means or through drawing people in from outside the region.

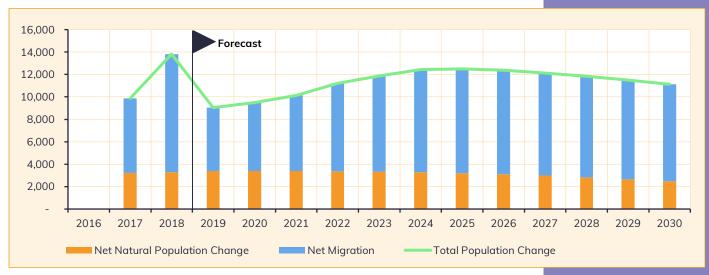
In the case of the Winnipeg region population change is predominantly a result of net migration, which was responsible for nearly 76% of the region's population growth in 2018. This share is expected to increase over the next decade as natural population change shrinks. The annual growth rate in the number of births in the region is projected

Source: Canadian Skills Training & Employment Coalition, Metro Economics



to decline and be outpaced by the growth rate of deaths. In contrast, net migration growth is expected to be consistent over the next several years and into the next decade. Overall, the region is expected to add an average of nearly 11,000 people to its population annually through 2030.

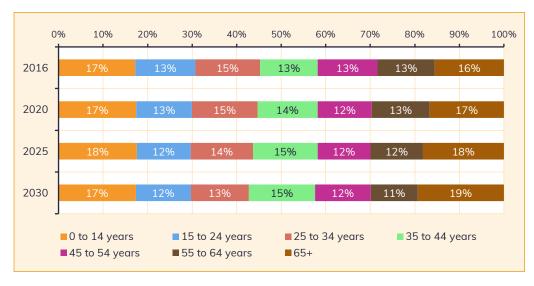
TOTAL REGIONAL POPULATION CHANGE OUTLOOK, 2016-2030



The Winnipeg region's age distribution is also expected to remain stable in the coming years. In 2016, an estimated 16% of the region's population were 65 years of age or older - that proportion is expected to rise to 19% by 2030. Among younger age cohorts, the population share of the 15-24 age cohort is projected to remain stable around 17% during the period.

Source: Canadian Skills Training & Employment Coalition, Metro Economics

REGIONAL POPULATION OUTLOOK BY AGE DISTRIBUTION, 2016-2030



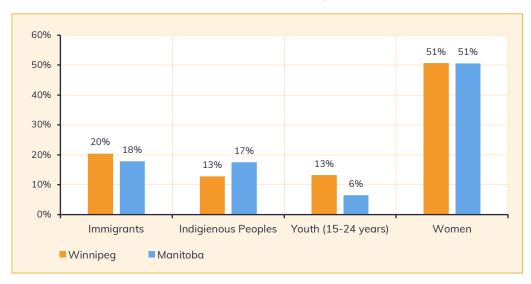
Some portions of society are likely underrepresented in the automotive manufacturing workforce. Examining their population shares in the region's total population can illustrate the magnitude of the untapped potential for the industry. The shares of these

Source: Canadian Skills Training & Employment Coalition, Metro Economics



groups in the Winnipeg region's population are generally on par with those of Manitoba as a whole. The region had similar shares of Indigenous peoples and immigrants as the provincial population in 2016. One notable exception is in the share of the population who are youth (15-24 years). In the Winnipeg ER, this share was double (13%) that of the provincial average (6%).

REGIONAL AND PROVINCIAL POPULATION DIVERSITY, 2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada

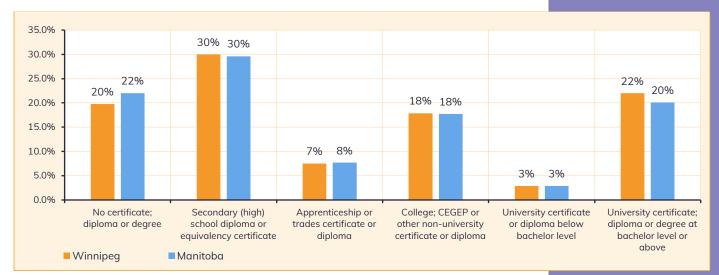
EDUCATIONAL ATTAINMENT

Educational attainment among the population aged 15 years and over provides important insights into workforce qualifications and potential labour supply for the automotive industry. Comparing regional educational attainment rates to provincial averages can help identify what skills the region needs to cultivate internally or attract externally.

50% of people in the Winnipeg region had either a high school diploma or no certificate, diploma or degree of any kind as of 2016. The share of the same group was 52% for Manitoba as a whole. The region also had similar shares of people with college degrees (18%) than the provincial average (18%). Moreover, 22% of people in the Winnipeg region had a university degree at bachelor level or above, compared to 20% for Manitoba.



REGIONAL AND PROVINCIAL EDUCATIONAL ATTAINMENT, 2016

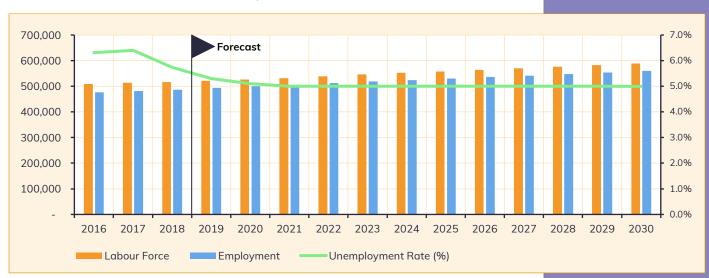


LABOUR MARKET ACTIVITY

Total employment in the Winnipeg region was an estimated 486,000 in 2018, while the region's labour force, including both the employed and those who are unemployed and actively seeking work, totaled 516,000. The unemployment rate, or the proportion of unemployed persons in the labour force, was 5.7%. This was a sharp decline from both 2016 and 2017, when the unemployment rate was 6.3% and 6.4% respectively. The region's unemployment rate is projected to continue this trend going forward, falling to 5.1% by 2020 before stabilizing to 5.0% over the coming decade.

Source: Canadian Skills Training & Employment Coalition, Statistics Canada

TOTAL REGIONAL EMPLOYMENT OUTLOOK, 2016-2030



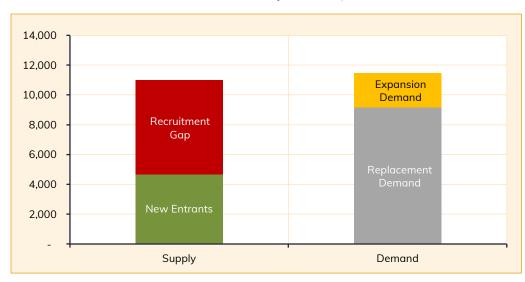
A forecast of the region's manufacturing hiring requirements can provide additional insights into labour market trends for the automotive manufacturing sub-sector. Total manufacturing hiring requirement is comprised of expansion demand (additional jobs as

Source: Canadian Skills Training & Employment Coalition, Metro Economics



a result of industry growth) and replacement demand (workers needed to replace exits from the labour force due to deaths and retirements). To meet the hiring requirement, the industry relies on individuals entering the workforce for the first time (i.e. new entrants) and workers entering from other regions or industries (i.e. recruitment gap). Projections for the Winnipeg Region (CMA) indicate that new entrants will cover only 42% of the region's manufacturing hiring requirement between 2016 and 2025. The remaining 58% is the industry's recruitment gap in the region.

WINNIPEG CMA MANUFACTURING HIRING REQUIREMENT, 2016-2025



Source: Canadian Skills Training & Employment Coalition, Prism Economics and Analysis

The industry's hiring requirements vary significantly between occupations based on labour demand. Manufacturing occupations with the largest hiring requirements tend to be skilled trades and technical occupations, such as welders or millwrights. The following table lists the occupations with the largest hiring requirements:

WINNIPEG CMA MANUFACTURING HIRING REQUIREMENT BY OCCUPATION, 2016-2025

Occupations	Total Hiring Requirement 2016 - 2025	Share of 2016 Employment
All Occupations in Manufacturing	10,990	30.1%
Manufacturing managers	451	32%
Welders and related machine operators	365	23%
Labourers in food, beverage and associated products processing	335	27%
Motor vehicle assemblers, inspectors and testers	265	35%
Machinists and machining and tooling inspectors	245	23%
Material handlers	234	29%
Other labourers in processing, manufacturing and utilities	233	29%
Furniture and fixture assemblers and inspectors	228	32%
Plastics processing machine operators	194	23%



Occupations	Total Hiring Requirement 2016 - 2025	Share of 2016 Employment
Industrial sewing machine operators	193	47%
Industrial engineering and manufacturing technologists and technicians	190	31%
Construction millwrights and industrial mechanics	167	37%
Senior managers - construction, transportation, production and utilities	167	38%
Mechanical engineers	133	26%
Process control and machine operators, food, beverage and associated products processing	131	31%
Mechanical engineering technologists and technicians	115	30%
Industrial and manufacturing engineers	84	30%
Sheet metal workers	84	26%
Contractors and supervisors, machining, metal forming, shaping and erecting trades	79	32%
Industrial electricians	64	38%
Transport truck drivers	45	30%
Labourers in wood, pulp and paper processing	42	46%
Electrical and electronics engineering technologists and technicians	40	39%

Source: Canadian Skills Training & Employment Coalition, Prism Economics and Analysis



REGIONAL AUTOMOTIVE MANUFACTURING ANALYSIS

The following sections use data based on a broader definition of the automotive manufacturing industry where applicable, including the traditional industry codes (NAICS 3361 and 3363) as well as an additional set of industries. Please refer to the Project Background section of this report for more details.

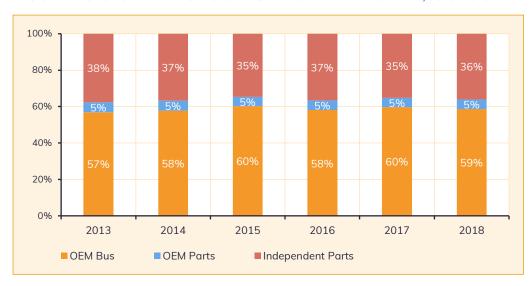
PROFILE OF AUTOMOTIVE MANUFACTURING EMPLOYMENT

Total automotive manufacturing employment in the region, including Original Equipment Manufacturer (OEM) plants and parts suppliers, was an estimated 3,700 workers across 12 establishments in 2018, based on findings from industry contacts, company websites, industry literature and other sources of publicly available data. Employment in the five years prior is estimated to have ranged from a low of 3,500 in 2013 to its peak of 2017 and 2018. In comparison, data from Statistics Canada's 2016 Census reports the region's automotive manufacturing employment as totaling 1,850 workers.

The Winnipeg region is home to three OEM bus assemblies owned and operated by New Flyer. These plants employed an estimated 2,300 employees combined in 2018. Notably, employment at OEM plants has remained level in recent years, reaching a high of 2,400 in 2015.

There are an estimated 9 parts suppliers in the region. These establishments are located in the Winnipeg CD. There are multiple establishments working in plastics, seating, sub-assembly and suspension manufacturing. Employment across all parts suppliers in the Winnipeg CD is estimated at nearly 1,300 in 2018.

REGIONAL AUTOMOTIVE MANUFACTURING EMPLOYMENT BY ACTIVITY. 2013-2018



Source: Canadian Skills Training & Employment Coalition, Automotive Policy Research Centre



PROFILE OF AUTOMOTIVE MANUFACTURING EMPLOYERS

Statistics Canada's business counts data provides insights into the mix of business types present in the Winnipeg region's automotive manufacturing industry. A comparison of data from 2013 and 2016 reveals that the proportions of manufacturing establishments by employment size has remained unchanged.

REGIONAL AUTOMOTIVE MANUFACTURING ESTABLISHMENTS BY EMPLOYMENT SIZE, 2013-2016



The largest automotive manufacturing-related employers in the Winnipeg region include New Flyer and MCI. Taken together, the region's top employers employed 1,200 people in 2018, based on findings from industry contacts, company websites, industry literature and other sources of publicly available data.

LARGEST REGIONAL AUTOMOTIVE MANUFACTURING-RELATED EMPLOYERS, 2018

Employer	Establishments	Employment
New Flyer	1	1110
MCI (NFI)	1	1040
Parker Vansco	1	510
Acrylon Plastics	3	240
Carfair Composites (NFI)	1	190

AUTOMOTIVE MANUFACTURING LABOUR MARKET

Workers in the Winnipeg region's automotive manufacturing industry can be classified by job family, which indicates the broad area of work in which they are employed.

Source: Canadian Skills Training & Employment Coalition, Statistics Canada

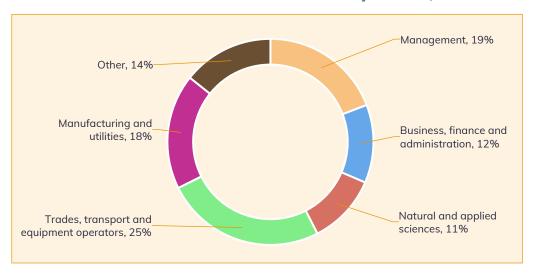
Source: Canadian Skills Training & Employment Coalition, Automotive Policy Research Centre



Employees in each of these occupational groups play distinct roles in contributing to the industry's success.

Trades, transportation, and equipment operators account for 25% of the region's automotive manufacturing workforce. A further 18% is accounted by manufacturing and utilities. The remaining workers are split between natural science occupations (11%); management occupations (19%); business and finance (12%); and all other occupation types (14%).

REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE BY JOB FAMILY, 2016



A more granular analysis of the region's automotive manufacturing workforce shows that over 6.0% of the industry's workforce are classified by Statistics Canada as mechanical assemblers and inspectors (NOC 9526). This occupational code covers a range of activities, as described by Statistics Canada, including:⁵

- Assemble, fit and install prefabricated parts to form subassemblies or finish products using hand power tools.
- Position, align and adjust parts for proper fit and assembly and connect cables, tubes and wires.
- Fasten parts together using bolts and riveting equipment or other fastening and joining techniques.
- Operate or tend automated assembling equipment, such as robotics and fixed automation equipment.

Other key occupations in the region's automotive manufacturing workforce include welders and related machine operators (NOC 7237), manufacturing managers (NOC 0911), mechanical engineers (NOC 2132), and industrial painters, coaters and metal finishing process operators (NOC 9536). The following table lists the occupations that account for at least 1.0% of the region's automotive manufacturing workforce:

Source: Canadian Skills
Training & Employment
Coalition, Statistics Canada

⁵ http://noc.esdc.gc.ca/English/NOC/QuickSearch.aspx?ver=&val65=9522



KEY REGIONAL AUTOMOTIVE MANUFACTURING OCCUPATIONS AND TRADES, 2016

Occupation	Automotive Manufacturing Employment	Share of Automotive Manufacturing Employment
Mechanical assemblers and inspectors (NOC 9526)	220	6.3%
Welders and related machine operators (NOC 7237)	120	3.5%
Manufacturing managers (NOC 0911)	100	2.9%
Mechanical engineers (NOC 2132)	60	1.7%
Material handlers (NOC 7452)	60	1.7%
Plastics processing machine operators (NOC 9422)	55	1.6%
Industrial painters, coaters and metal finishing process operators (NOC 9536)	50	1.5%
Motor vehicle assemblers, inspectors and testers (NOC 9522)	50	1.4%
Construction millwrights and industrial mechanics (NOC 7311)	45	1.4%
Machinists and machining and tooling inspectors (NOC 7231)	45	1.3%
Shippers and receivers (NOC 1521)	45	1.3%
Electronics assemblers, fabricators, inspectors and testers (NOC 9523)	40	1.1%
Foundry workers (NOC 9412)	40	1.1%
Plastic products assemblers, finishers and inspectors (NOC 9535)	40	1.1%
Electrical and electronics engineers (NOC 2133)	35	1.0%

COMPETITION FROM OTHER INDUSTRIES

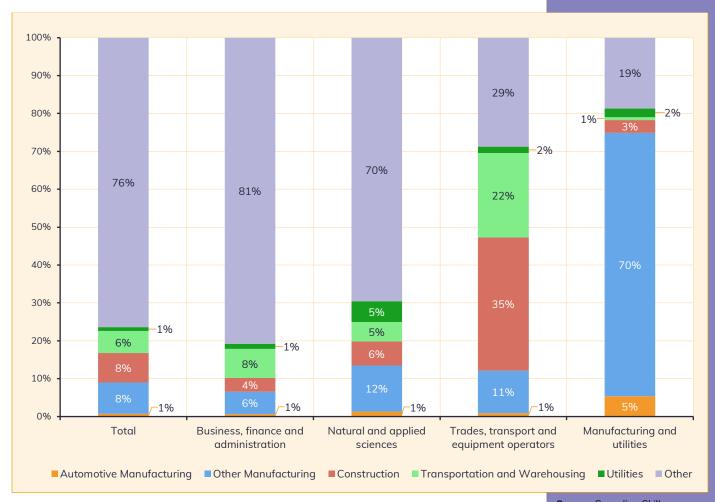
While the automotive manufacturing industry remains a premier employer, competing employment demands from other industries are worth analyzing for their potential impact on hiring decisions for key trades and occupations.

Overall, automotive manufacturing accounted for 1% of the Winnipeg region's total workforce in 2016. Among manufacturing and utilities occupations, however, the industry accounted for 5% of the workforce. The primary competition for these occupations comes from other manufacturing employers (70%). Greater regional competition exists within other job families. For example, the construction industry accounted for 35% of region's workforce employed in trades, transport and equipment operator positions. Regional growth in this industry could impact the availability of workers in this job family for automotive manufacturing employers.

Source: Canadian Skills Training & Employment Coalition, Statistics Canada



REGIONAL WORKFORCE DISTRIBUTION BY JOB FAMILY AND SECTOR, 2016



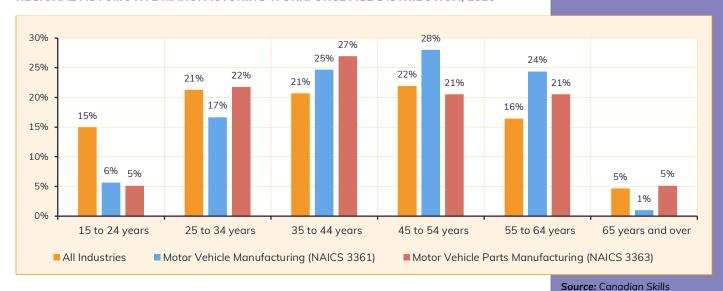
AUTOMOTIVE MANUFACTURING DEMOGRAPHICS

The age distribution of the Winnipeg region's automotive manufacturing workforce is distinct from that of the region's total workforce across all industries. Notably, 6% of motor vehicle manufacturing workers and 5% of motor vehicle parts manufacturing workers were between the ages of 15 and 24 as of 2016. In contrast, 15% of the region's total workforce belonged to the 15-24 age cohort. New entrants to the workforce are critical for sustaining long-term growth for the industry. The region's automotive manufacturing workforce consists of more mid-career workers, with higher proportions of the workforce belonging to the 35-44 and 45-54 age cohorts. The region's total workforce of workers aged 55+ (21%) is less than both motor vehicle manufacturing (25%) and motor vehicle parts manufacturing (26%).

Source: Canadian Skills
Training & Employment
Coalition, Statistics Canada



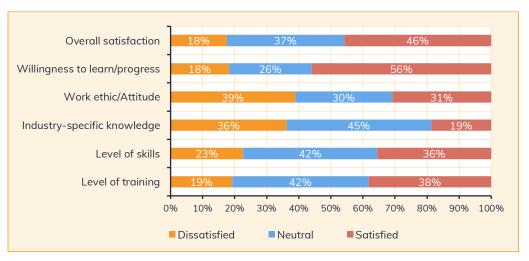
REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE AGE DISTRIBUTION, 2016



As older workers move into retirement it will be essential to replenish the region's automotive manufacturing workforce with the next generation of skilled workers. A recent survey of Canadian manufacturers examined the level of satisfaction with the young workers they employ. Overall, manufacturers were only moderately satisfied, with just 46% of respondents indicating that they are satisfied with their young workers. 39% of employers were dissatisfied with their work ethic and attitude, while 56% were dissatisfied with their industry specific knowledge. However, 56% of employers were satisfied with their willingness to learn.

Training & Employment Coalition, Statistics Canada

CANADIAN MANUFACTURING EMPLOYER SATISFACTION WITH YOUNG WORKERS, 2016



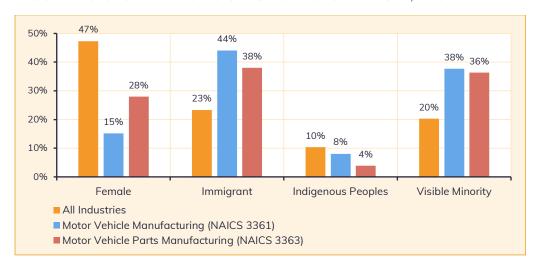
The region's automotive manufacturing workforce also differs from the total workforce in terms of its diversity. The biggest difference is with respect to the proportion of women in the workforce. The female share of the region's total workforce was 47% as of 2016, on par with their population share. However, the proportions of women working in motor vehicle manufacturing (15%) and motor vehicle parts manufacturing (28%) were well-below average. Elsewhere, foreign-born workers account for 23% of

Source: Canadian Skills Training & Employment Coalition, Prism Economics and Analysis



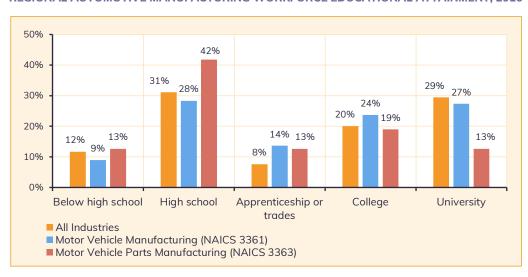
the region's total workforce, which was significantly lower than the share found in motor vehicle manufacturing (44%) but and motor vehicle parts manufacturing (38%). A similar trend is observed with regard to the share of workers who are visible minorities. While motor vehicle manufacturing (8%) and the region's total workforce (10%) have similar make up of Indigenous Peoples, motor vehicle parts manufacturing share was significantly lower (4%).

REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE DIVERSITY, 2016



Educational attainment is yet another dimension where the region's automotive manufacturing workforce diverges from the total regional workforce. In this region, 37% of motor vehicle manufacturing workers and 54% of motor vehicle parts manufacturing workers in the region have no more than a high school diploma as of 2016, compared to 43% for the total regional workforce. Conversely, the motor vehicle parts manufacturing workforce (13%) has a much lower than average proportion of workers with a university degree compared to motor vehicle manufacturing (27%) and the regional workforce (29%).

REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE EDUCATIONAL ATTAINMENT, 2016



Source: Canadian Skills
Training & Employment
Coalition, Statistics Canada

Source: Canadian Skills Training & Employment Coalition, Statistics Canada