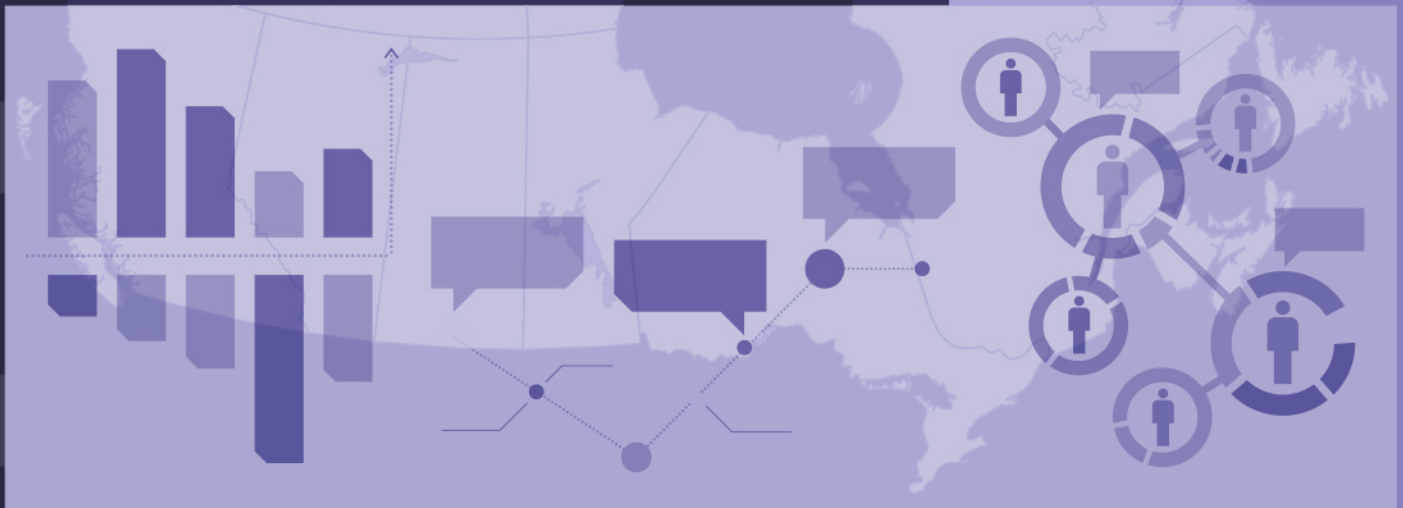


AUTOMOTIVE INDUSTRY LABOUR MARKET ANALYSIS

REGIONAL AUTOMOTIVE MANUFACTURING PROFILE: **LONDON/STRATFORD- BRUCE PENINSULA**



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.

This project is funded by the Government of Canada’s Sectoral Initiatives Program. The opinions and interpretations in this publication are those of the author(s) and do not necessarily reflect those of the Government of Canada.

(FOCAL) Initiative, futureautolabourforce.ca

Canadian Skills Training and Employment Coalition, cstec.ca

Prism Economics and Analysis, prismeconomics.com

Automotive Policy Research Centre, automotivepolicy.ca

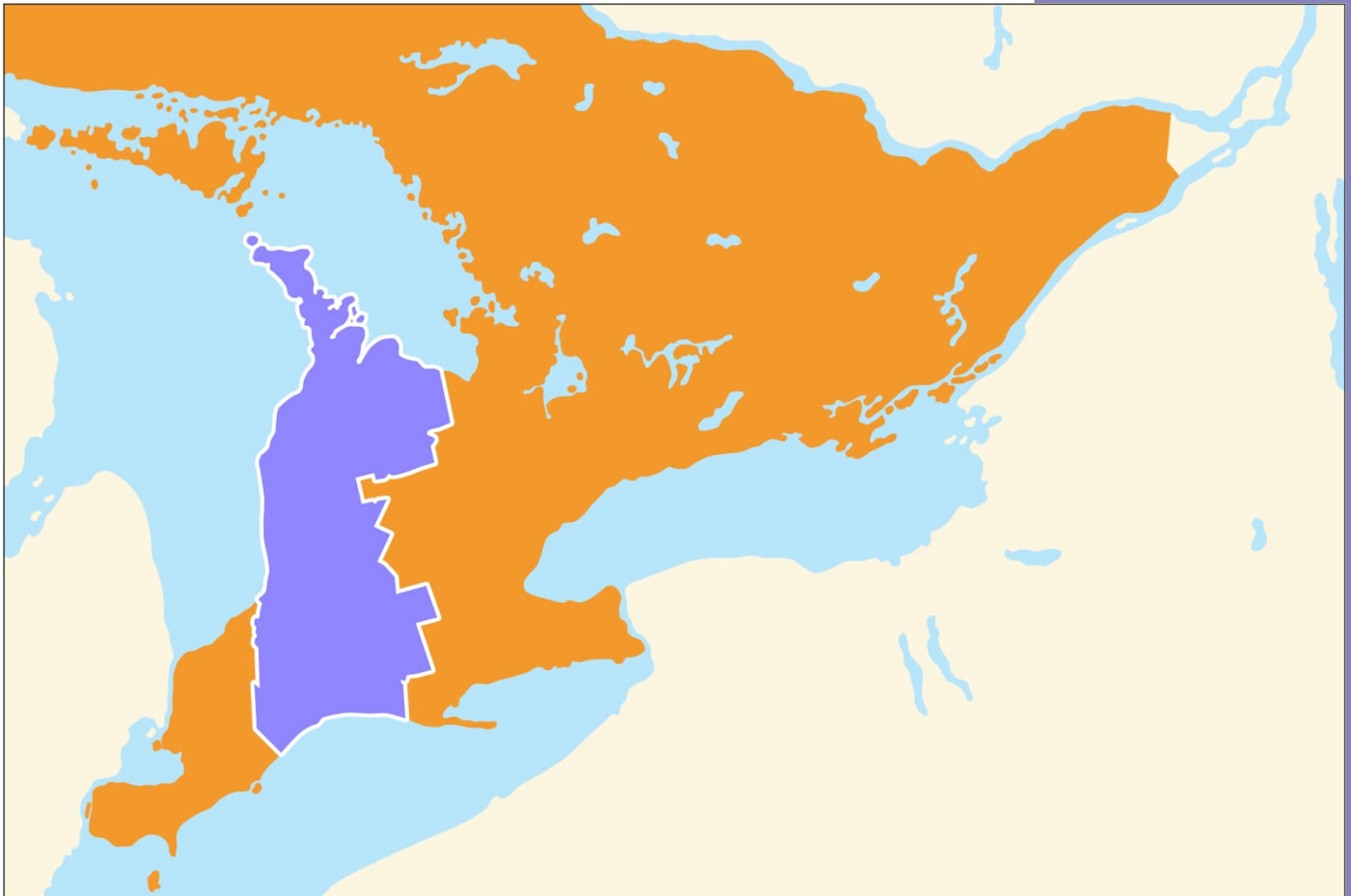
Month, 2020



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EXECUTIVE SUMMARY



The London/Stratford-Bruce Peninsula region is comprised of the Economics Regions (ERs) of London and Stratford-Bruce Peninsula. The region's GDP was an estimated \$48 billion in 2018, 18% of which was generated by the manufacturing sector. Manufacturing is also a major employer in the region, accounting for 14% of the total labour force, including 4% from automotive manufacturing. 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 London/Stratford-Bruce Peninsula 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 18% in 2016 to 24% by 2030. The region is also expected to see its unemployment fall from 6.7% in 2016 to 5.5% by 2020 before stabilizing over the coming decade.

The London/Stratford-Bruce Peninsula region's automotive manufacturing industry employed an estimated 24,200 workers across 93 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 22,600 in 2013 to a peak of 24,400 in 2017. The region is home to three assembly plants that employed an estimated 5,900 workers in 2018. A total 64 parts suppliers located in the London ER employed nearly 12,000 workers while 26 suppliers in the Stratford-Bruce Peninsula employed an additional 6,300. The region's largest automotive manufacturing-related employers include Toyota, General Motors and Magna International.

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.
2. **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 bus 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 bottom up approach will use an establishment-level database to identify individual producers that are involved in the automotive supply chain.
2. A top down 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 London/Stratford-Bruce Peninsula region is an aggregate region comprised of two Economic Regions (ERs) as defined by Statistics Canada: the London ER and the Stratford-Bruce Peninsula ER. The London ER is the larger of the two regions and includes the cities of London and St. Thomas. The Stratford-Bruce Peninsula ER includes the Perth, Huron, Bruce and Grey counties. Taken together they are home to approximately 7% of Ontario's population and cover a land area of nearly 21,500 square kilometers. The region includes Highways 401 and 402, major trade routes between Canada and the United States.

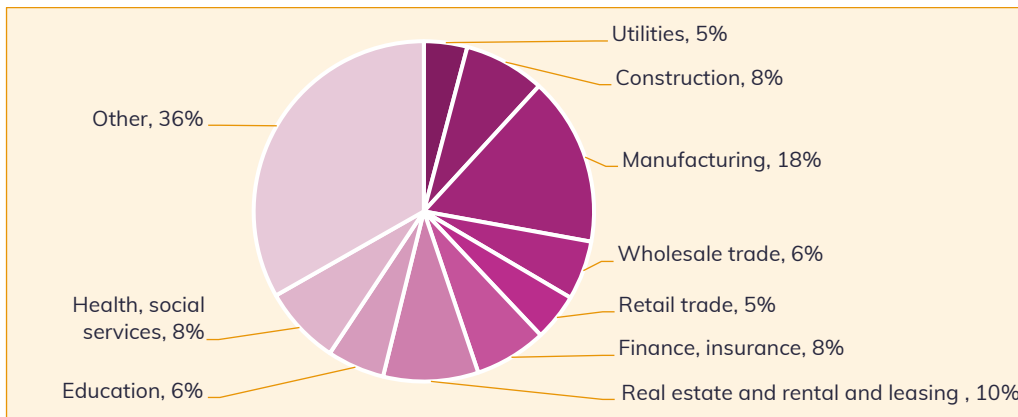
This regional profile includes three main sections. First, a discussion of the regional economy, including outlooks for GDP. Next, a section outlining trends in the region's population, demographic characteristics and overall workforce. Finally, an overview of the region's automotive manufacturing industry,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

All regional data presented in this profile are aggregates (or weighted averages where appropriate) of ER-level data for London and Stratford-Bruce Peninsula. 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 London/Stratford-Bruce Peninsula region’s GDP totaled an estimated \$48 billion dollars in 2018. Manufacturing was the largest single contributor to the region’s GDP of any sector, accounting for nearly one-fifth (18%) or approximately \$8.7 billion. The next largest sector, real estate and rental and leasing, accounted for 10% of the regional economy. Other major sectors in the region include construction (8% of GDP), finance and insurance (8%), and health care and social services (8%).

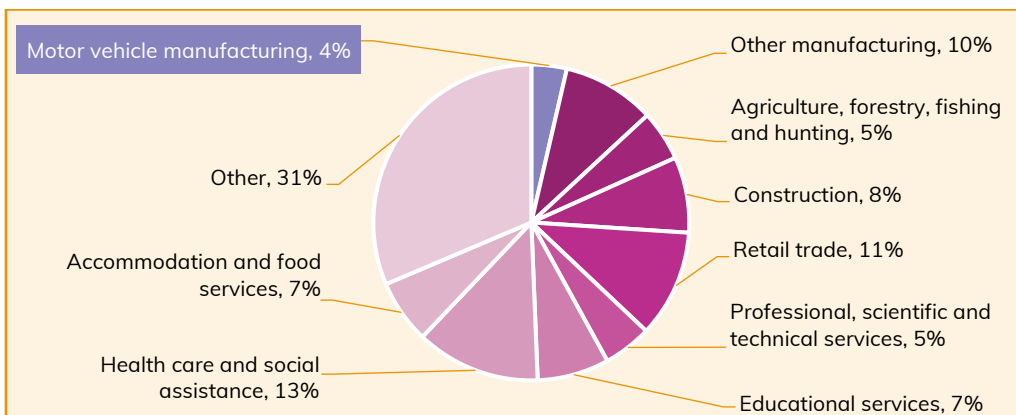
REGIONAL GDP SHARES BY SECTOR, 2018



Source: Canadian Skills Training & Employment Coalition, Metro Economics

The 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%). While these industries are prominent in both the London and Stratford-Bruce Peninsula ERs there are noticeable differences in the distribution of their workforces. The London ER workforce is concentrated in services sectors such as education and accommodation and food services, which account for 8% and 7% of the region’s labour force respectively. Conversely, the workforce in the Stratford-Bruce Peninsula ER is built on goods-producing sectors such as agriculture and construction, each of which accounts for 9% of the region’s labour force.

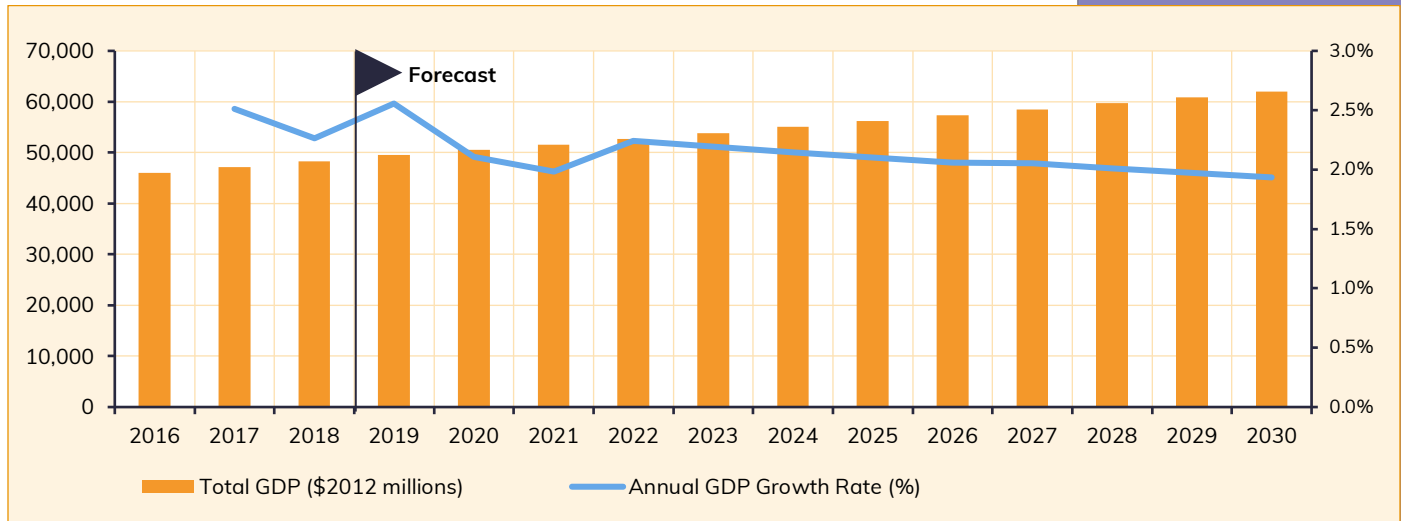
REGIONAL LABOUR FORCE SHARES BY SECTOR, 2016



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 2.0% in 2020, surpassing \$50 billion. Furthermore, annual GDP growth of at least 2.0% is projected for every year from 2019 to 2029, surpassing \$60 billion, with 1.9% growth projected in 2030.

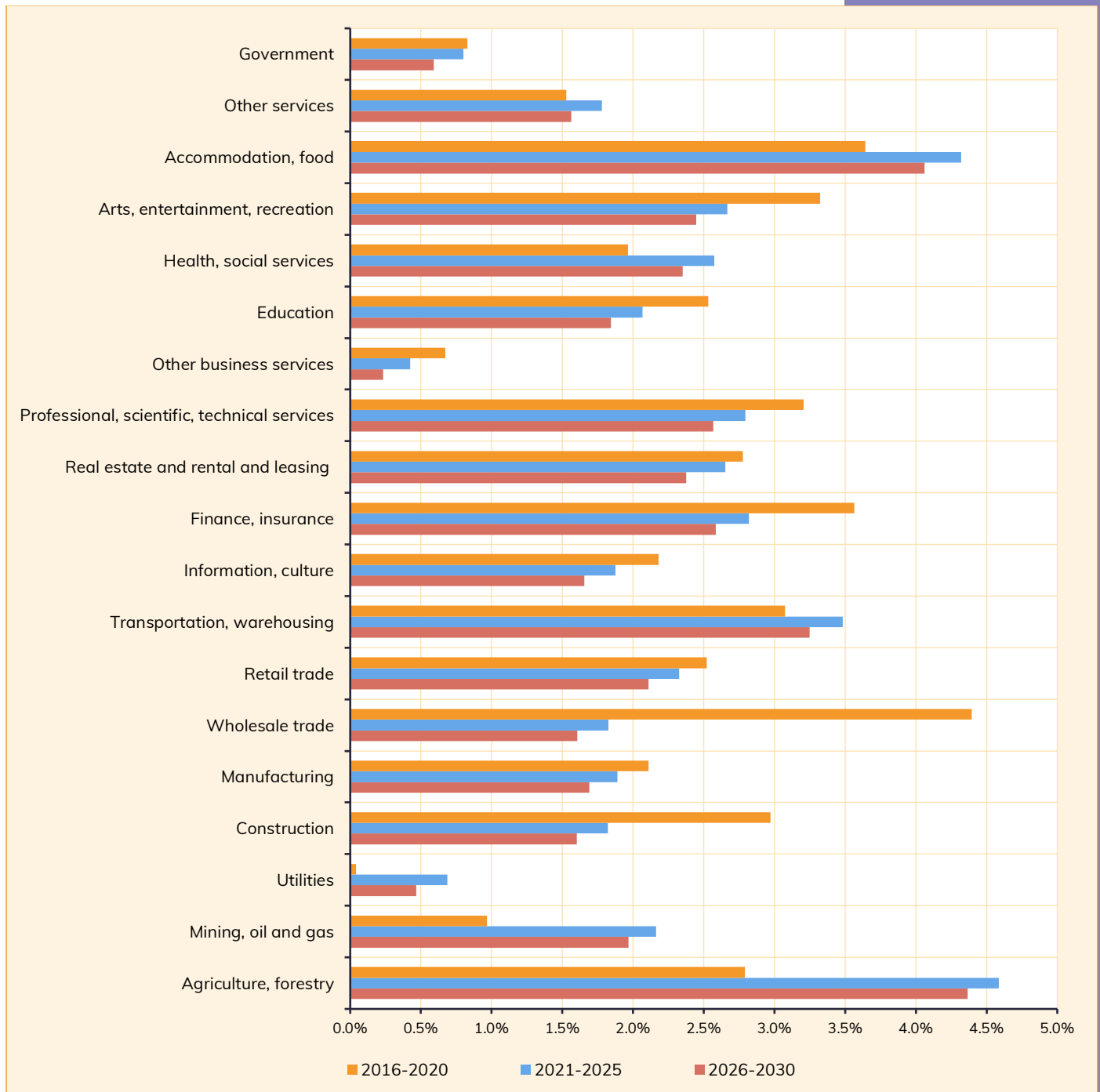
TOTAL REGIONAL GDP OUTLOOK, 2016-2030



While the region's overall GDP growth outlook is healthy, projections by sector vary significantly. In the near term, industries such as wholesale trade (4.4%), finance and insurance (3.6%), and accommodation and food services (3.6%) have experienced strong GDP growth and will continue to do so through 2020. Agriculture, forestry, fishing and hunting (4.6%) is expected to experience the strongest growth between 2021 and 2025, while utilities (0.7%) and government services (0.8%) are expected to see little growth during the same period. Both agriculture (4.4%) and food services (4.1%) are projected to continue their 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 2.1% larger in 2020 than 2016, growth is projected to fall to 1.9% for the 2021-2025 period and 1.7% 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

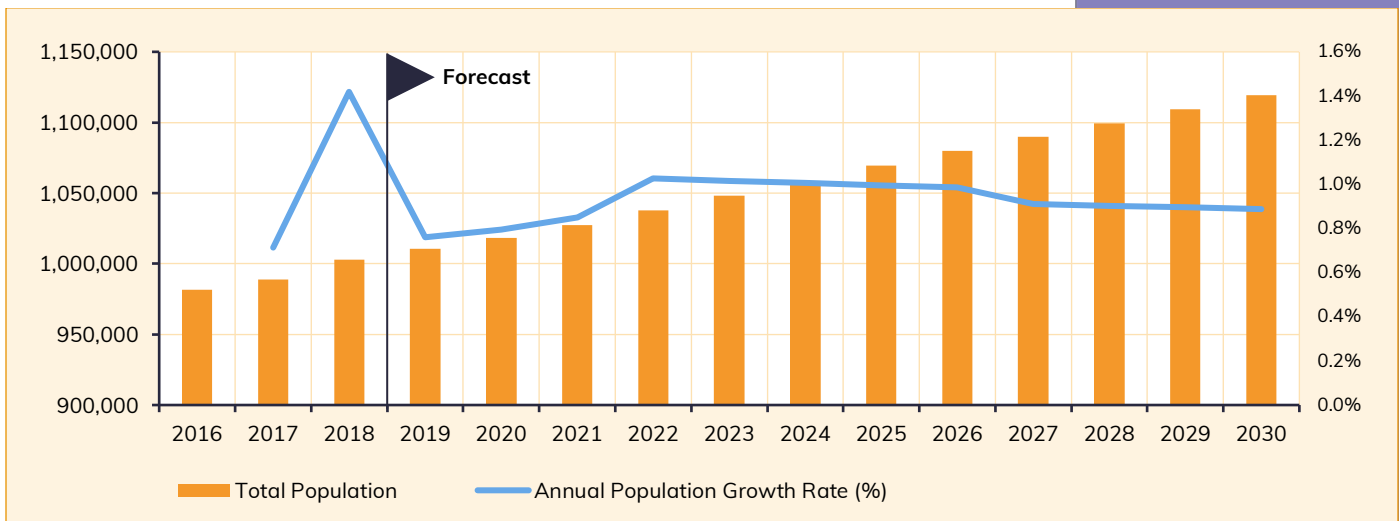
REGIONAL LABOUR CONSIDERATIONS

POPULATION, AGE DISTRIBUTION AND REGIONAL DIVERSITY

The London/Stratford-Bruce Peninsula region is one of the most populous regions in Ontario, with approximately 7% of the total provincial population residing in the region. The principal population centre of the region is the London ER, which includes the cities of London and St. Thomas. The region also includes the Stratford-Bruce Peninsula ER, which covers the Perth, Huron, Bruce and Grey counties.

The region's population was estimated at just over 1.00 million people in 2018, approximately 70% of whom reside in the London ER. Looking ahead, the region's population is expected to reach 1.02 million people by 2020. The population is then expected to grow by 5.0% between 2021 and 2025 to 1.07 million. However, population growth is expected to slow to 3.6% over the latter half of the next decade, reaching 1.1 million by 2030.

TOTAL REGIONAL POPULATION OUTLOOK, 2016-2030



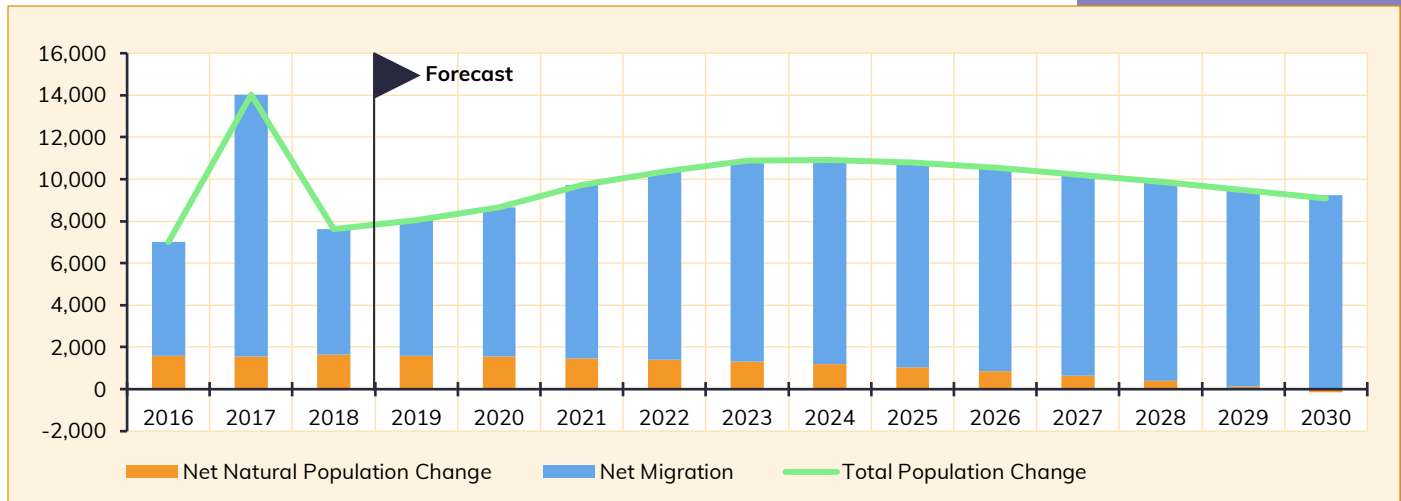
Changes in total population occur through net natural population change (i.e. the difference between the number of births and deaths in a region) and net migration (i.e. the difference between the number of people moving in and out of a region). Categorizing a region's total population change based on 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 London/Stratford-Bruce Peninsula region population change is predominantly a result of net migration, which was responsible for nearly 80% of the

Source: Canadian Skills Training & Employment Coalition, Metro Economics

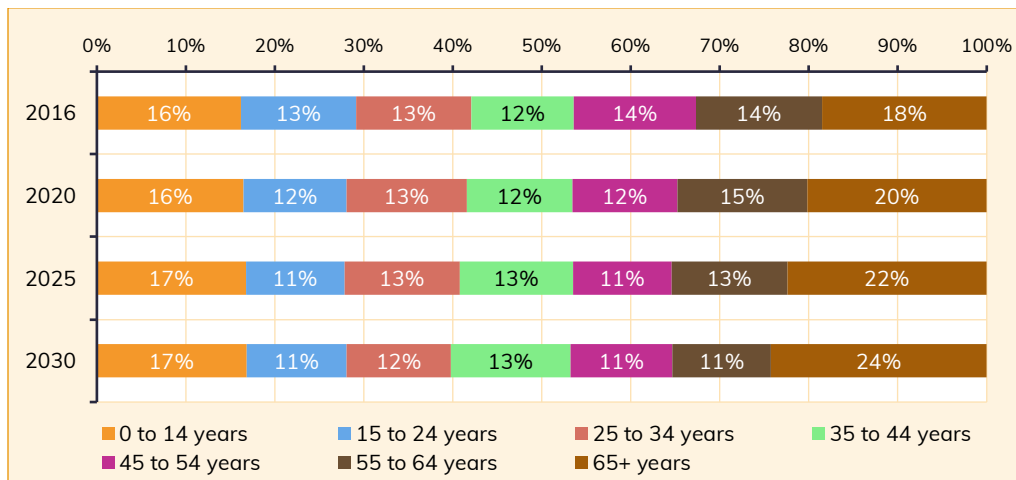
region's population growth in 2018. This share is expected to increase over the next decade as natural population change shrinks. The annual growth rate in the number of births in the region is projected to decline and be outpaced by the growth rate of deaths. Births and deaths in the region are expected to be nearly equal by 2030. In contrast, net migration is expected to increase annually over the next several years before beginning to decline over the latter half of the next decade. Overall, the region is expected to add an average of nearly 10,000 people to its population annually through 2030.

TOTAL REGIONAL POPULATION CHANGE OUTLOOK, 2016-2030



The London/Stratford-Bruce Peninsula region's age distribution is also expected to shift in the coming years. In 2018, an estimated 18% of the region's population were 65 years of age or older; that proportion is expected to rise to 24% by 2030. The region will also see concurrent declines in the population shares of the 45-54 and 55-64 age cohorts as part of the aging trend. Among younger age cohorts, the population share of the 15-24 age cohort is projected to fall from 13% to 11% during the period. This is notable as this cohort is traditionally the largest source of new entrants to the labour force.

REGIONAL POPULATION OUTLOOK BY AGE DISTRIBUTION, 2016-2030

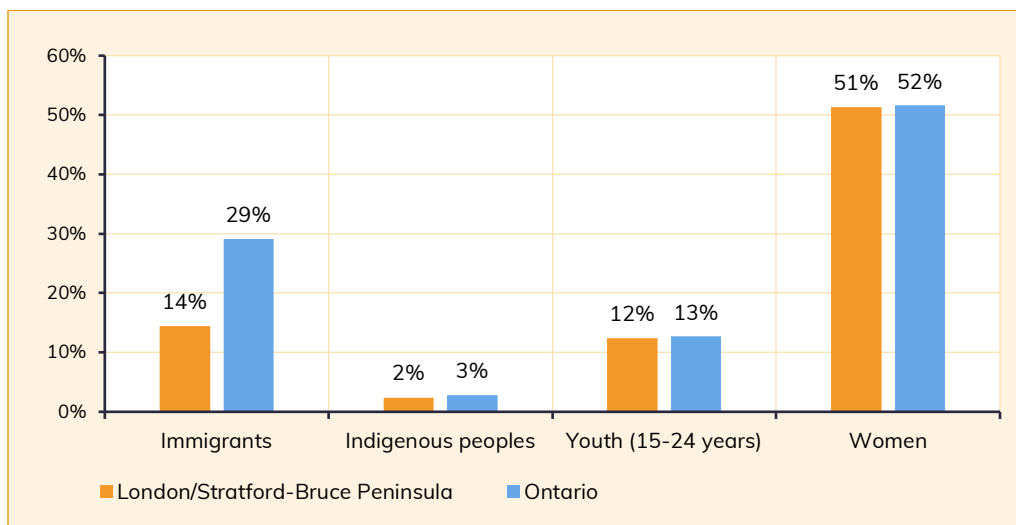


Source: Canadian Skills Training & Employment Coalition, Metro Economics

Source: Canadian Skills Training & Employment Coalition, Metro

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 groups in the London/Stratford-Bruce Peninsula region's population are generally on par with those of Ontario as a whole. The region had similar shares of Indigenous peoples, youth and women as the provincial population as of 2016. One notable exception is in the share of the population who are immigrants; in the London/Stratford-Bruce Peninsula region, this share was 14%, less than half that of the provincial average (29%).

REGIONAL AND PROVINCIAL POPULATION DIVERSITY, 2016



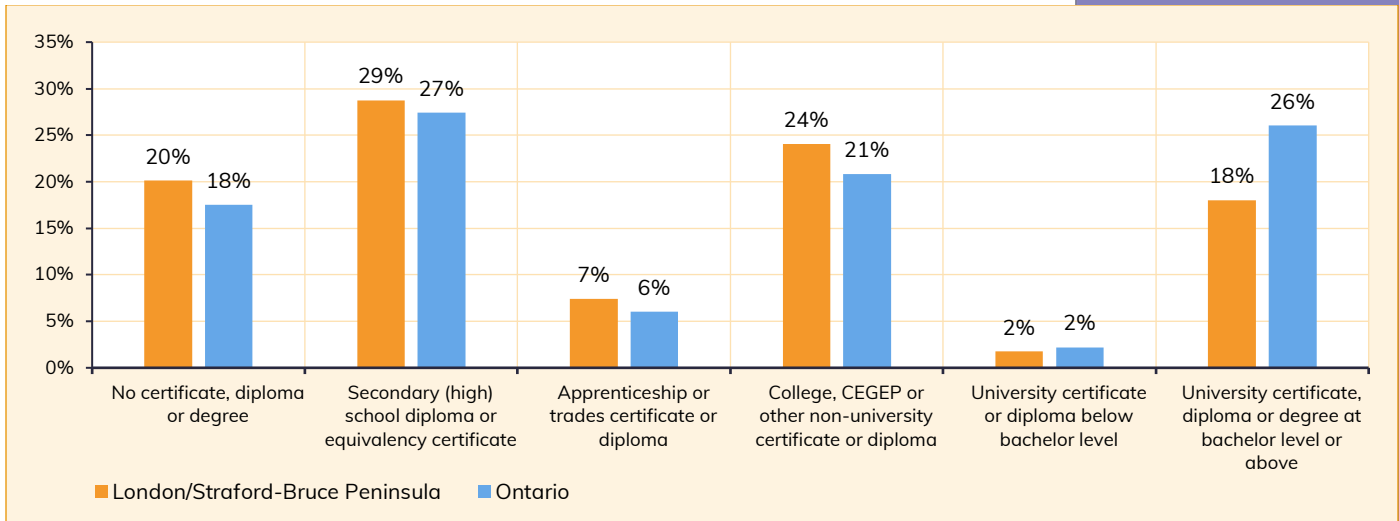
Source: Canadian Skills Training & Employment Coalition, Statistics Canada

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.

Just under half (49%) of people in the London/Stratford-Bruce Peninsula 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 45% for Ontario as a whole. The region also had a slightly higher share of people with college degrees (24%) than the provincial average (21%). Conversely, 18% of the London/Stratford-Bruce Peninsula region had a university degree at bachelor level or above, compared to 26% for Ontario.

REGIONAL AND PROVINCIAL EDUCATIONAL ATTAINMENT, 2016

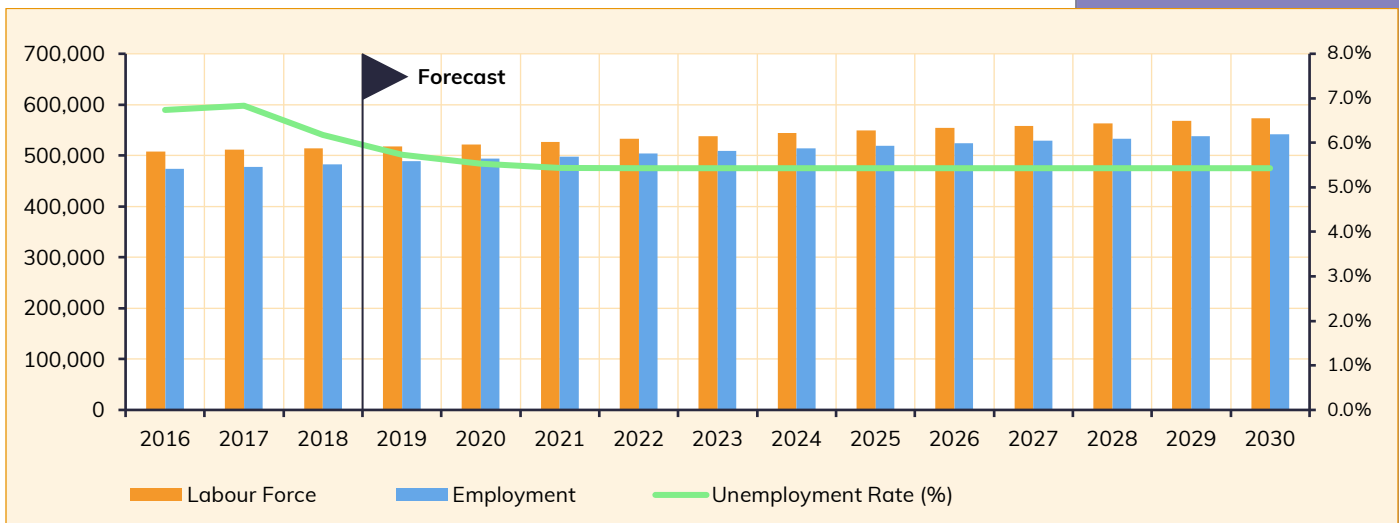


Source: Canadian Skills Training & Employment Coalition, Statistics Canada

LABOUR MARKET ACTIVITY

Total employment in the London/Stratford-Bruce Peninsula region was an estimated 483,000 in 2018, while the region’s labour force, including both the employed and those who are unemployed and actively seeking work, totaled 514,000. The unemployment rate, or the proportion of unemployed persons in the labour force, was 6.2%. This was a sharp decline from both 2016 and 2017, when the unemployment rate was 6.7% and 6.8% respectively. The region’s unemployment rate is projected to continue this trend going forward, falling to 5.5% by 2020 before stabilizing over the coming decade.

TOTAL REGIONAL EMPLOYMENT OUTLOOK, 2016-2030

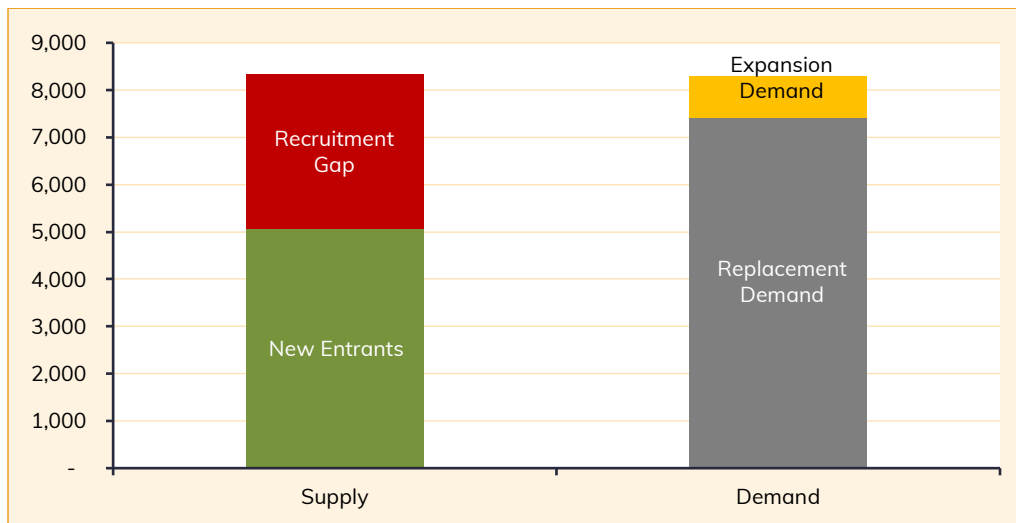


Source: Canadian Skills Training & Employment Coalition, Metro Economics

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 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 London Census Metropolitan Area (CMA) indicate that new entrants will cover only 61% of the region’s manufacturing hiring requirement between 2016 and 2025. The remaining 39% is the industry’s recruitment gap in the region.

LONDON 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:

LONDON CMA MANUFACTURING HIRING REQUIREMENT BY OCCUPATION, 2016-2025

Occupations	Total Hiring Requirement 2016 - 2025	Share of 2016 Employment
Motor vehicle assemblers, inspectors and testers	934	23%
Labourers in food, beverage and associated products processing	427	34%
Material handlers	289	31%
Manufacturing managers	330	36%
Welders and related machine operators	210	28%
Construction millwrights and industrial mechanics	216	38%
Other labourers in processing, manufacturing and utilities	175	31%
Process control and machine operators, food, beverage and associated products processing	129	23%
Mechanical engineers	118	22%

Occupations	Total Hiring Requirement 2016 - 2025	Share of 2016 Employment
Shippers and receivers	167	32%
Machinists and machining and tooling inspectors	155	31%
Senior managers - construction, transportation, production and utilities	144	40%
Industrial electricians	115	34%
Industrial engineering and manufacturing technologists and technicians	63	22%
Industrial and manufacturing engineers	75	28%
Sheet metal workers	72	30%
Mechanical engineering technologists and technicians	53	25%
Electrical and electronics engineering technologists and technicians	46	24%
Contractors and supervisors, machining, metal forming, shaping and erecting trades	55	31%
Electrical and electronics engineers	37	21%
Transport truck drivers	78	52%
Chemical technologists and technicians	23	23%
Industrial sewing machine operators	42	42%
Labourers in wood, pulp and paper processing	39	43%
Plastics processing machine operators	31	40%
Furniture and fixture assemblers and inspectors	26	34%

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.

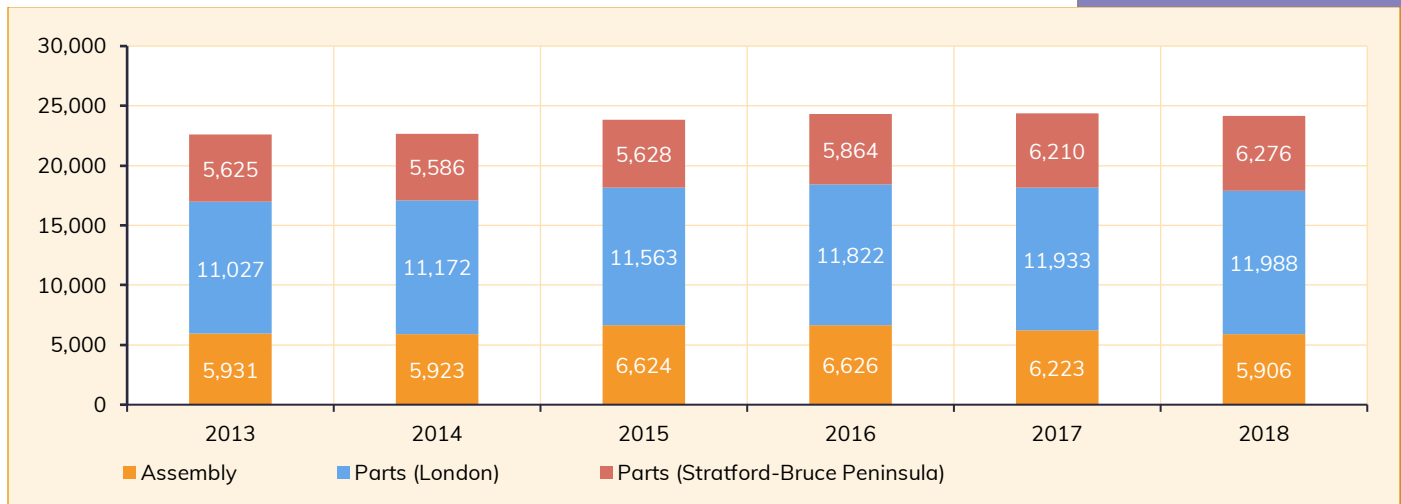
PROFILE OF AUTOMOTIVE MANUFACTURING EMPLOYMENT

Total automotive manufacturing employment in the region, including Original Equipment Manufacturer (OEM) plants and parts suppliers, was an estimated 24,200 workers across 93 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 22,600 in 2013 to a peak of 24,400 in 2017. In comparison, data from Statistics Canada's 2016 Census reports the region's automotive manufacturing employment as totaling 16,840 workers.

The London/Stratford-Bruce Peninsula region is home to two large OEM assembly plants: a General Motors plant in Ingersoll that produces the Chevrolet Equinox and a Toyota plant in Woodstock that produces the Toyota RAV4. There is an additional Toyota-owned assembly plant in Woodstock, Hino Canada, that produces light and medium-duty trucks. These plants employed an estimated 5,900 workers combined in 2018. Notably, employment at OEM plants has declined in recent years, having reached as high 6,600 in 2016.

There are an estimated 90 parts suppliers in the region. 64 of these establishments are located in the London ER, the majority of which are dedicated to metal stamping and related manufacturing. There are also multiple establishments working in plastics, seating, sub-assembly and suspension manufacturing. Employment across all parts suppliers in the London ER is estimated at nearly 12,000 in 2018. The remaining 26 parts suppliers reside in the Stratford-Bruce Peninsula ER. The most common establishment types among them are metal stamping, plastics, propulsion and rubber product manufacturing. Estimated total parts employment in the Stratford-Bruce Peninsula ER was 6,300 in 2018.

REGIONAL AUTOMOTIVE MANUFACTURING EMPLOYMENT BY ACTIVITY, 2013-2018

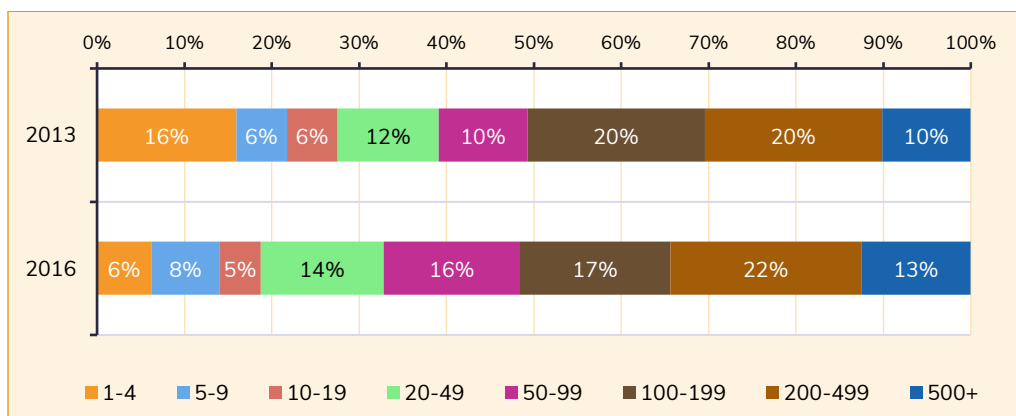


Source: Canadian Skills Training & Employment Coalition, Automotive Policy Research Centre

PROFILE OF AUTOMOTIVE MANUFACTURING EMPLOYERS

Statistics Canada's business counts data provides insights into the mix of business types present in the London/Stratford-Bruce Peninsula region's automotive manufacturing industry. A comparison of data from 2013 and 2016 reveals that while the proportion of small-sized automotive manufacturing establishments (i.e. 1 to 99 employees) remained stable there was a noticeable decline among very small businesses. 16% of automotive manufacturing establishments in the region had between 1 and 4 employees in 2013, compared to just 6% in 2016. The region also saw the share of medium-sized automotive manufacturing establishments (i.e. 100 to 199 employees) fall from 20% in 2013 to 17% in 2016. The largest gains during the period were seen among large-sized automotive manufacturing establishments (i.e. 500+ employees) and establishments with 50-99 employees.

REGIONAL AUTOMOTIVE MANUFACTURING ESTABLISHMENTS BY EMPLOYMENT SIZE, 2013-2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada

The largest automotive manufacturing-related employers in the London/Stratford-Bruce Peninsula region include Toyota and General Motors, which each have one plant in the region, and Magna International, which has three plants in the region. Taken together, the region's top employers employed 14,200 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

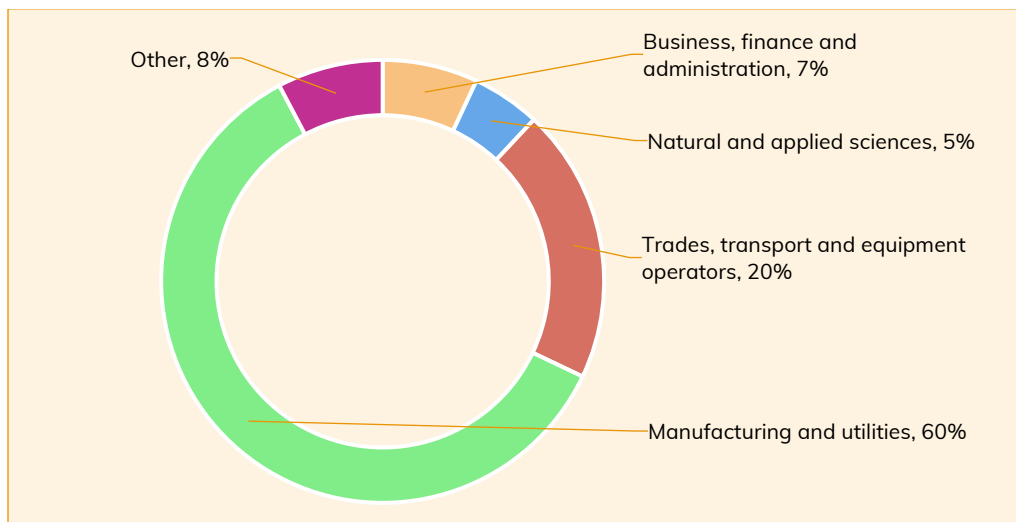
Employer	Plants	Employees
Toyota	1	3,000
General Motors	1	2,800
Magna International	3	2,540
DYNA-MIG	1	900
Vuteq	1	730
Brose Canada	1	700
Autoneum	2	685
Cooper-Standard Automotive Canada	3	650
Stackpole International	1	600
Meridian Lightweight Technologies	2	560
Listowel Technology	1	510
Wescast Industries	3	500

AUTOMOTIVE MANUFACTURING LABOUR MARKET

Workers in the London/Stratford-Bruce Peninsula region's automotive manufacturing industry can be classified by job family, which indicates the broad area of work in which they are employed. Employees in each of these occupational groups play distinct roles in contributing to the industry's success.

Unsurprisingly, manufacturing and utilities occupations account for 60% of the region's automotive manufacturing workforce. A further 20% is accounted for by trades, transport and equipment operators. The remaining workers are split between business, finance and administration occupations (7%); natural and applied sciences occupations (5%); and all other occupation types (8%).

REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE BY JOB FAMILY, 2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada

A more granular analysis of the region’s automotive manufacturing workforce shows that over two-fifths (41%) of the industry’s workers are classified by Statistics Canada as motor vehicle assemblers, inspectors and testers (NOC 9522). This occupational code covers a range of activities including⁵:

- connecting cables, tubes and wires to complete assemblies and installations;
- positioning and installing parts, subassemblies and accessories such as engines, transmissions, door panels or instrument panels;
- driving and testing motor vehicles on roll testing devices to ensure proper functioning;
- and fitting and adjusting parts such as doors, hoods and trunk lids
-

Other key occupations among the region’s automotive manufacturing workers include motor vehicle assembling supervisors (NOC 9221); material handlers (NOC 7452); welders and related machine operators (NOC 7237); 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:

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
Motor vehicle assemblers, inspectors and testers (NOC 9522)	7,345	40.8%
Supervisors, motor vehicle assembling (NOC 9221)	1,065	5.9%
Material handlers (NOC 7452)	1,060	5.9%
Welders and related machine operators (NOC 7237)	635	3.5%
Industrial painters, coaters and metal finishing process operators (NOC 9536)	525	2.9%
Manufacturing managers (NOC 0911)	460	2.6%
Construction millwrights and industrial mechanics (NOC 7311)	455	2.5%
Other labourers in processing, manufacturing and utilities (NOC 9619)	325	1.8%
Metalworking and forging machine operators (NOC 9416)	275	1.5%
Industrial electricians (NOC 7242)	270	1.5%
Tool and die makers (NOC 7232)	220	1.2%
Automotive service technicians, truck and bus mechanics and mechanical repairers (NOC 7231)	215	1.2%
Shippers and receivers (NOC 1521)	210	1.2%
Mechanical assemblers and inspectors (NOC 9526)	205	1.1%
Machinists and machining and tooling inspectors (NOC 7231)	200	1.1%
Mechanical engineers (NOC 2132)	185	1.0%

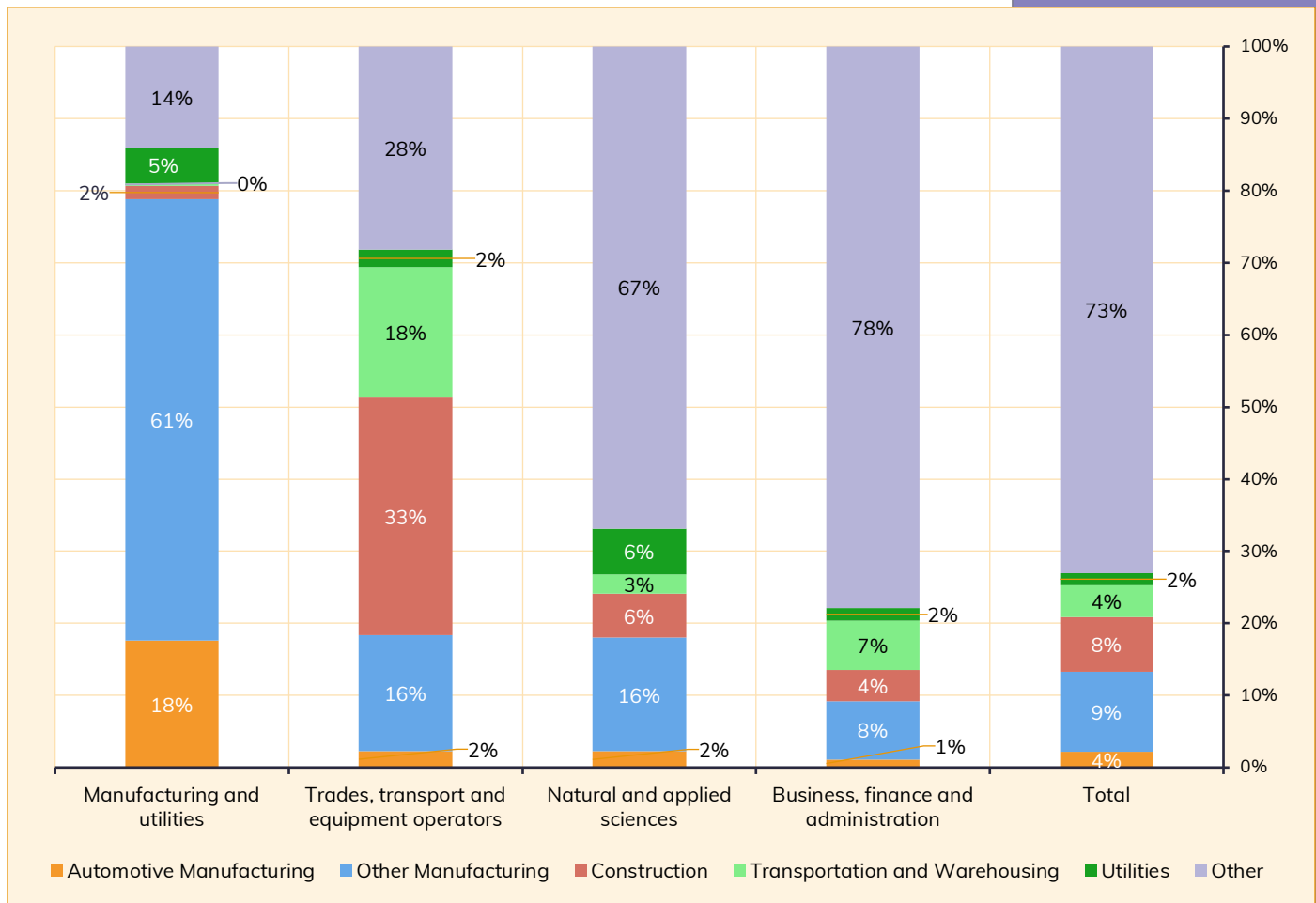
Source: Canadian Skills Training & Employment Coalition, Statistics Canada

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 4% of the London/Stratford-Bruce Peninsula region’s total employment in 2016. Among manufacturing and utilities occupations, however, the industry accounted for 18% of total employment. The primary competition for these occupations comes from other manufacturing employers (61%). Greater regional competition exists within other job families. For example, the construction industry accounted for 33% 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.

REGIONAL EMPLOYMENT DISTRIBUTION BY JOB FAMILY AND SECTOR, 2016

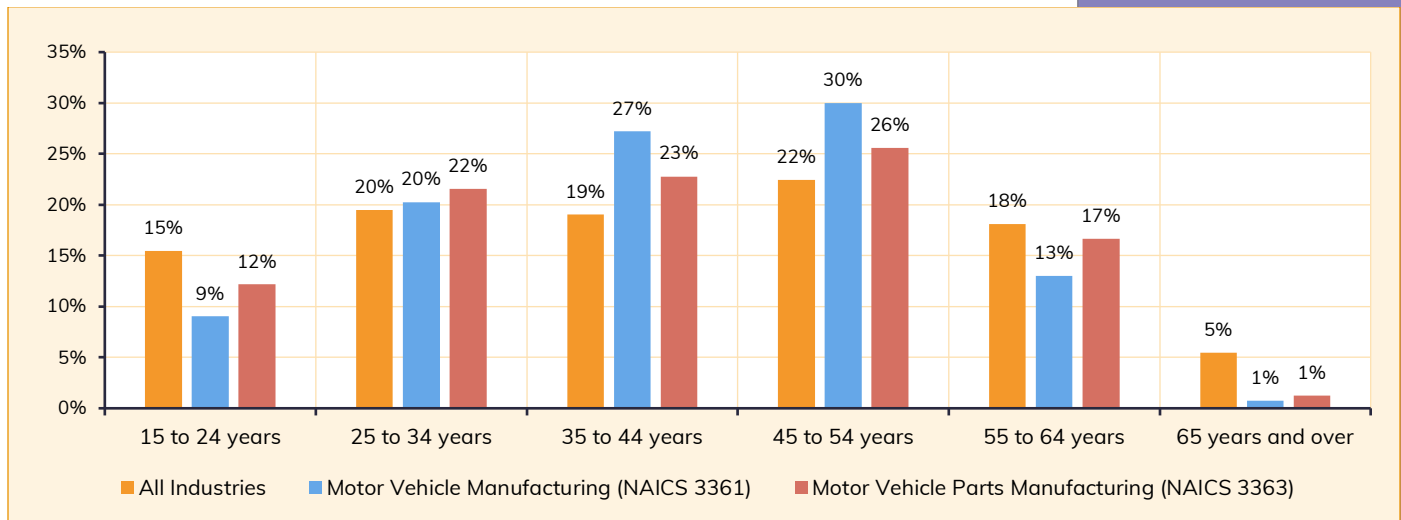


Source: Canadian Skills Training & Employment Coalition, Statistics Canada

AUTOMOTIVE MANUFACTURING DEMOGRAPHICS

The age distribution of the London/Stratford-Bruce Peninsula region’s automotive manufacturing workforce is distinct from that of the region’s total workforce across all industries. Notably, just 9% of motor vehicle manufacturing workers and 12% of motor vehicle parts manufacturing workers were between the ages of 15 and 25 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. Somewhat surprisingly, the region’s total workforce has a larger share of workers aged 55+ (23%) than either motor vehicle manufacturing (14%) or motor vehicle parts manufacturing (18%).

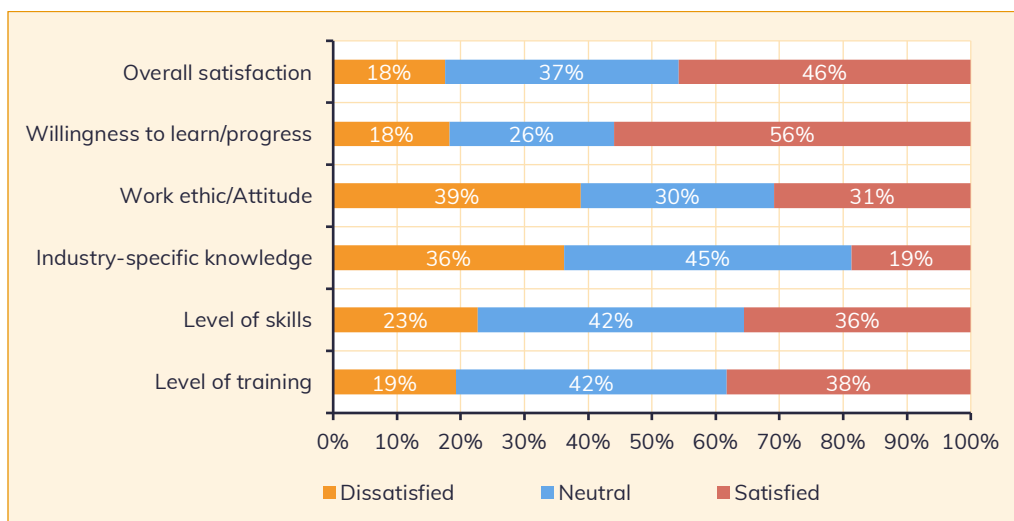
REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE AGE DISTRIBUTION, 2016



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.

Source: Canadian Skills Training & Employment Coalition, Statistics Canada

CANADIAN MANUFACTURING EMPLOYER SATISFACTION WITH YOUNG WORKERS, 2016

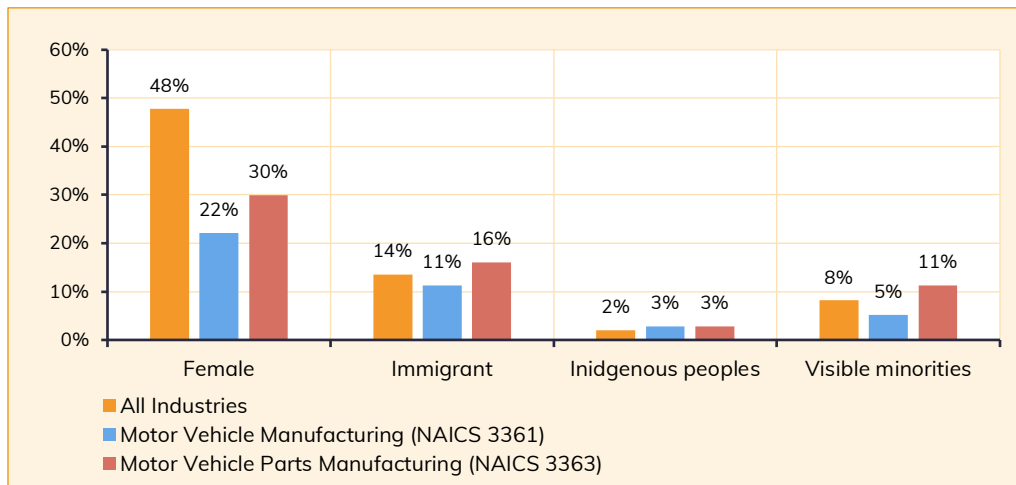


Source: Canadian Skills Training & Employment Coalition, Prism Economics and Analysis

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 48% as of 2016, on par with their population share. However, the proportions of women

working in motor vehicle manufacturing (22%) and motor vehicle parts manufacturing (30%) were well-below average. Elsewhere, foreign-born workers account for 14% of the region's total workforce, slightly higher than the share found in motor vehicle manufacturing (11%) but slightly lower than the share found in motor vehicle parts manufacturing (16%). A similar trend is observed with regard to the share of workers who are visible minorities. There is no notable difference in the proportion of the workforce who are Indigenous peoples between automotive manufacturing and the total regional workforce.

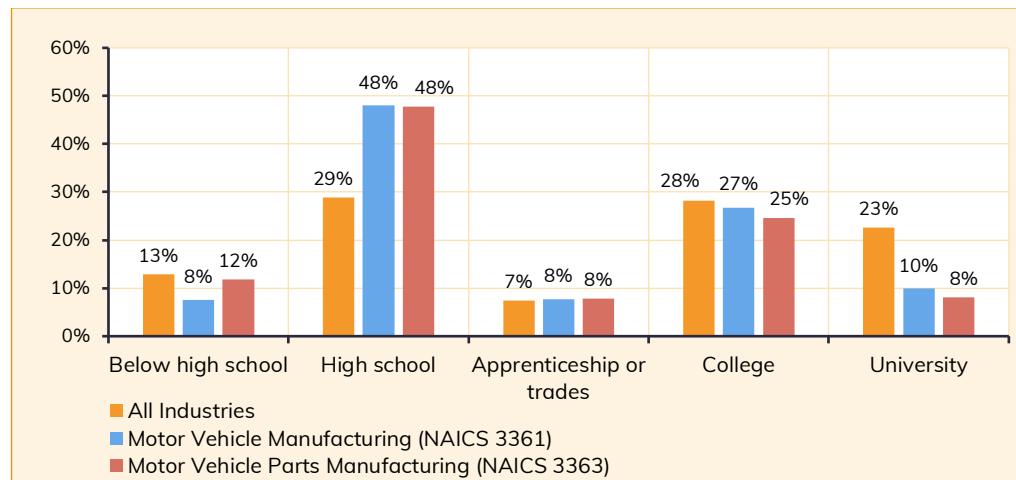
REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE DIVERSITY, 2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada

Educational attainment is yet another dimension where the region's automotive manufacturing workforce diverges from the total regional workforce. 56% of motor vehicle manufacturing workers and 60% of motor vehicle parts manufacturing workers in the region have no more than a high school diploma as of 2016, compared to 42% for the total regional workforce. Conversely, the automotive manufacturing workforce has a much lower than average proportion of workers with a university degree.

REGIONAL AUTOMOTIVE MANUFACTURING WORKFORCE EDUCATIONAL ATTAINMENT, 2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada