

REGIONAL AUTOMOTIVE MANUFACTURING PROFILE: Kitchener-Waterloo-Barrie

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

This report was prepared for the Auto Labour Market Information (LMI) Project.

The goal of the Auto LMI 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 LMI 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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Canadian Skills Training and Employment Coalition, cstec.ca

Prism Economics and Analysis, prismeconomics.com

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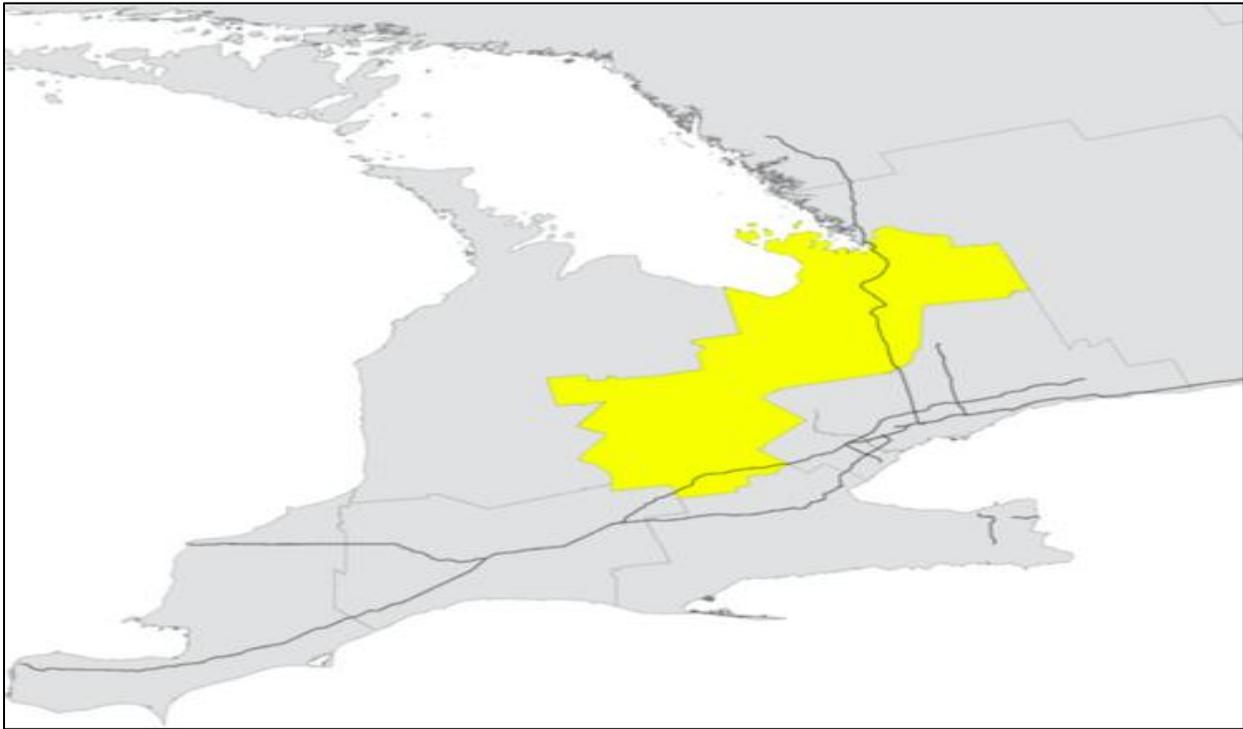
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Executive Summary



The Kitchener – Waterloo – Barrie Economic Region (ER) is comprised of four Census Divisions (CD): Waterloo, Wellington, Dufferin, and Simcoe. The region’s GDP was an estimated \$67 billion in 2018, 19% of which was generated by the manufacturing sector. Manufacturing is also a major employer in the region, accounting for 14.3% of the total labour force, including 5% from automotive manufacturing. The region has a positive economic outlook, with annual GDP growth of at least 2.5% projected through 2029. However, the region’s manufacturing sector is expected to see its GDP growth slow in the coming years.

The Kitchener – Waterloo – Barrie region’s population was an estimated 1.38 million in 2018. Healthy population growth is expected in the region through 2025 before leveling off 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 22% by 2030. The region is also expected to see its unemployment fall from 6.3% in 2016 to 5.1% by 2020 before stabilizing over the coming decade.

The Kitchener – Waterloo – Barrie region’s automotive manufacturing industry employed an estimated 33,000 workers across 91 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 has remained relatively stable with a height of 33,000 in 2018. The region is home to two assembly plants that employed an estimated 9,600 workers in 2018. A total 56 parts suppliers located in Waterloo and Wellington CDs employs nearly 17,100 workers, while 19 suppliers in Simcoe and Dufferin employ an additional 5,000 workers. The region’s largest automotive manufacturing-related employers include Toyota, Honda, Linamar, 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.

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

¹ Tanguay, "Drive to Win"

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

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.
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.

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"

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

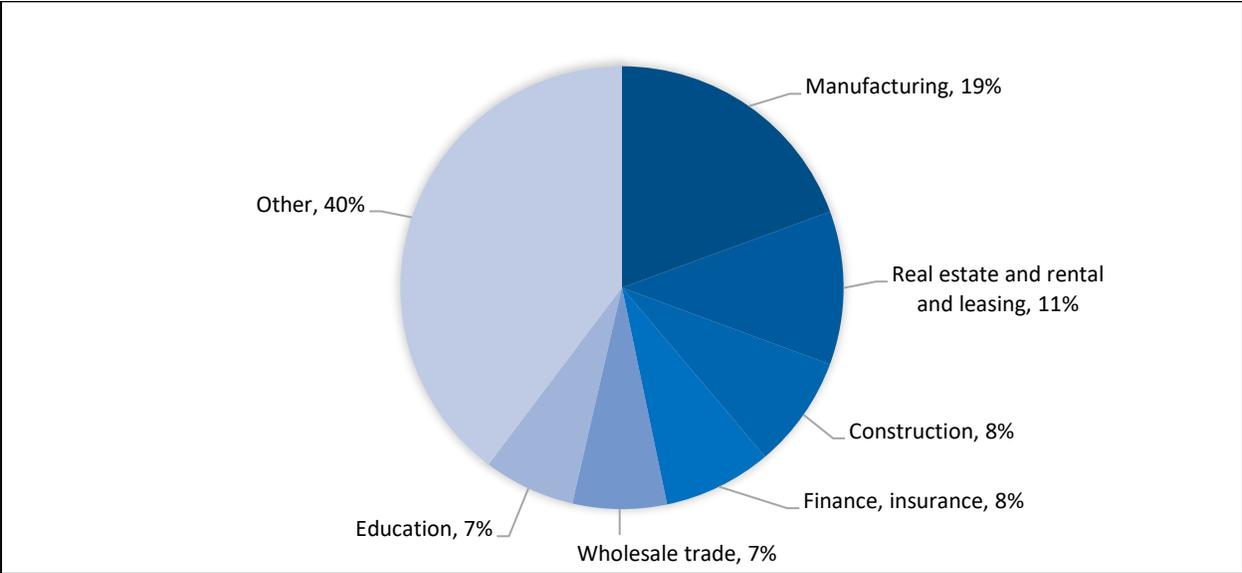
The Kitchener – Waterloo – Barrie region is a single Economic Region (ER) and is an aggregate region comprised of four Census Divisions (CDs) as defined by Statistics Canada: Wellington, Dufferin, Waterloo, and Simcoe. The Waterloo CD is the largest of the four divisions and includes the cities of Cambridge, Kitchener, and Waterloo. This ER is home to approximately 10% of Ontario’s population and covers a land area of nearly 10,400 square kilometers. The region includes Highways 400 and 401, and 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 & CD level data for Kitchener – Waterloo – Barrie. 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 Kitchener – Waterloo – Barrie region’s GDP totaled an estimated \$67 billion dollars in 2018. Manufacturing was the largest single contributor to the region’s GDP of any sector, accounting for nearly one-fifth (19%) or approximately \$13.1 billion. The next largest sector, real estate and rental and leasing, accounted for 11% of the regional economy. Other major sectors in the region include construction (8 of GDP%), finance and insurance (8%), and wholesale trade (7%).

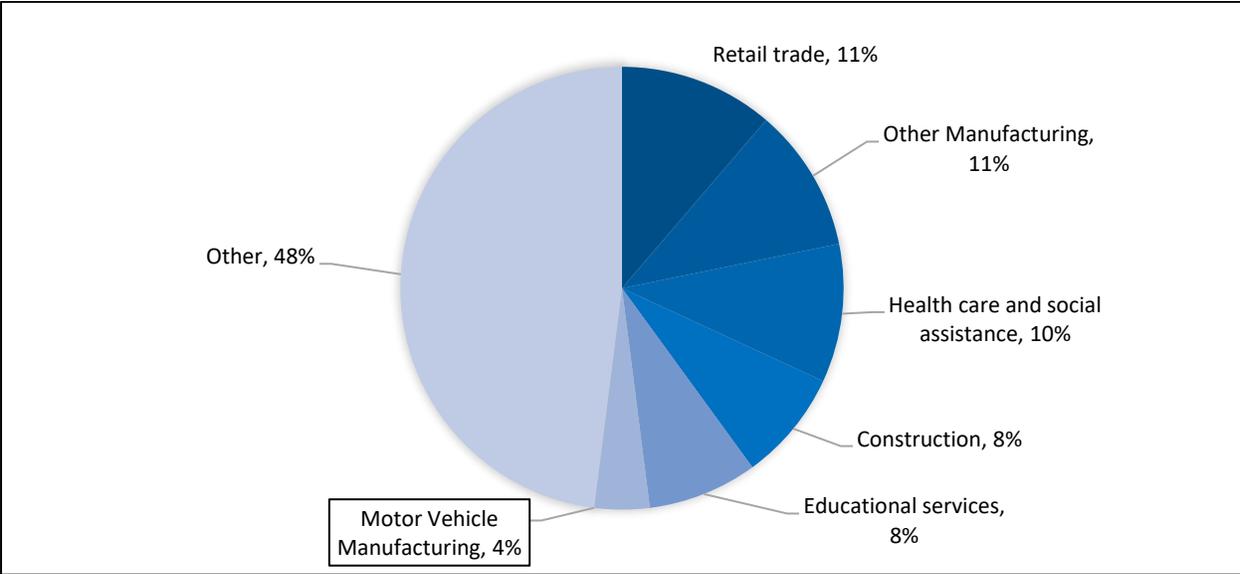
Regional GDP Shares by Sector, 2018



Source: Canadian Skills Training & Employment Coalition, Metro Economics

The region's largest sectors by workforce size include retail trade (11% of total regional workforce), other manufacturing (11%), and health care and social assistance (10%). Motor vehicle manufacturing accounts for 4% of the region's total workforce. Manufacturing is a major employer in all parts of the region. In particular, manufacturing makes up 29% of the workforce in Wellington and 19% of the labour force in Waterloo.

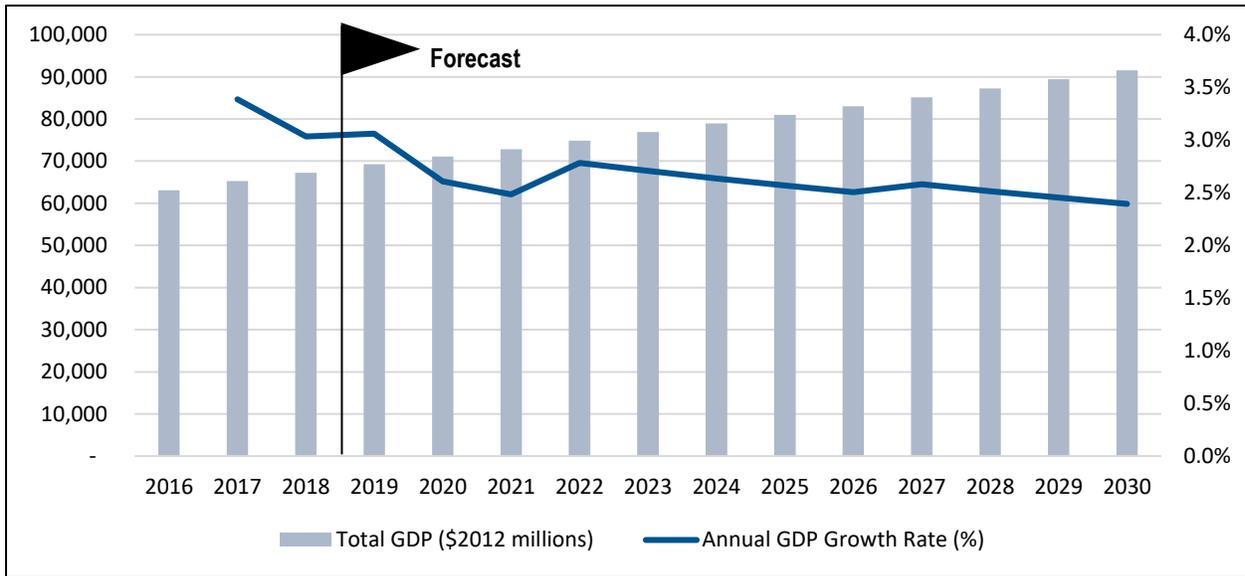
Regional Labour Force Shares by Sector, 2016



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 3.1% in 2019 and 2.78% in 2021, surpassing \$72 billion. Furthermore, annual GDP growth of at least 2.5% is projected for every year from 2019 to 2029, surpassing \$89 billion, with 2.4% growth projected in 2030.

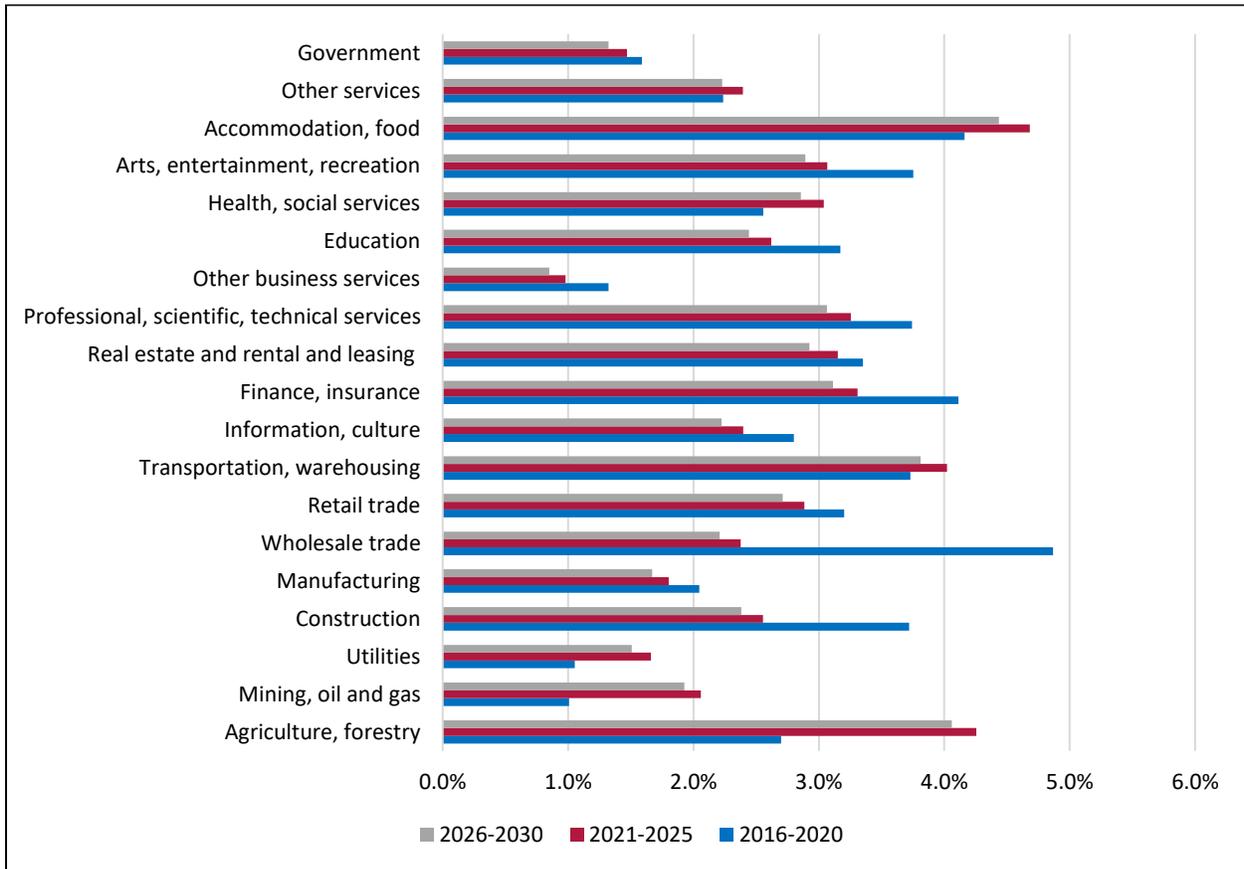
Total Regional GDP Outlook, 2016-2030



Source: Canadian Skills Training & Employment Coalition, Metro Economics

While the region’s overall GDP growth outlook is healthy, projections by sector vary significantly. In the near term, industries such as whole sale and trade (4.9%), accommodation and food services (4.2%), and finance and insurance (4.1%) have experienced strong GDP growth and will continue to do so through 2020. Accommodation and food services (4.7%) is expected to experience the strongest growth between 2021 and 2025, while utilities (1.7%) and government services (1.5%) are expected to see little growth during the same period. Both accommodation and food services (4.4%) and agriculture and food (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. Growth is projected to fall to 1.8% for the 2021-2025 period and 1.7% for the 2026-2030 period.

Annual Average Regional GDP Growth by Sector, 2016-2030



Source: Canadian Skills Training & Employment Coalition, Metro Economics

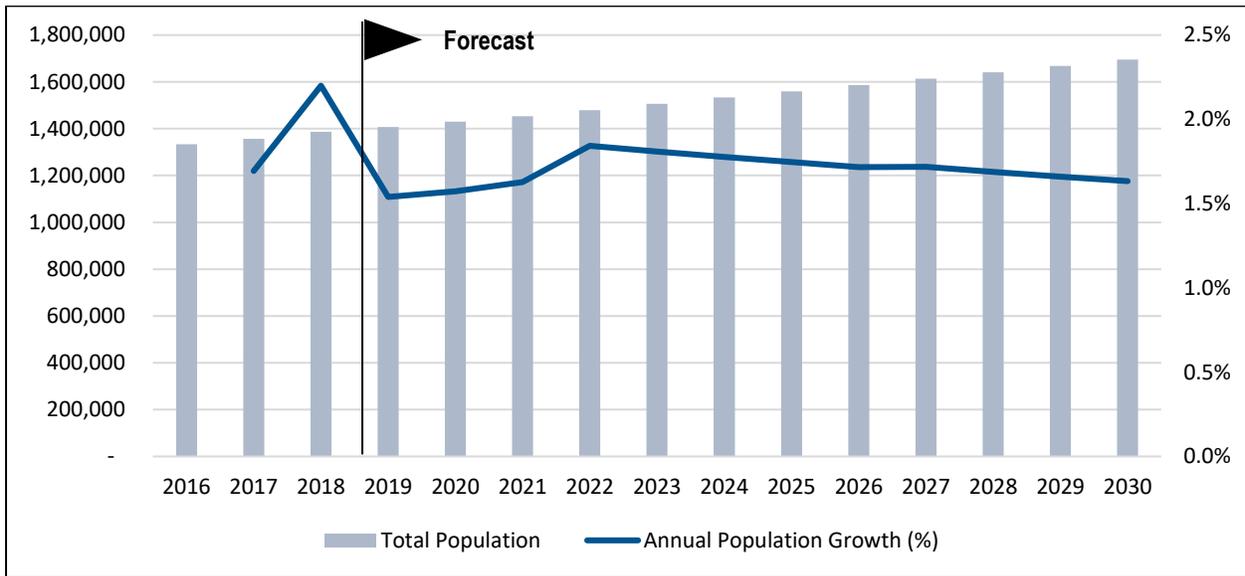
Regional Labour Considerations

Population, Age Distribution and Regional Diversity

The Kitchener – Waterloo – Barrie region is among the most populous regions in Ontario, with approximately 10% of the total provincial population residing in the region. The principal population centre is Waterloo CD, which includes the cities of Cambridge, Kitchener, and Waterloo. The region also includes Wellington CD, which covers the city of Guelph.

The region’s population was estimated at just over 1.4 million people in 2019, approximately 41% of whom reside in the Waterloo CD. Looking ahead, the region’s population is expected to reach 1.42 million people by 2020. The population is then expected to grow by 4.7% between 2021 and 2025 to 1.56 million. However, population growth is expected to slow to 6.9% over the latter half of the next decade, reaching 1.69 million by 2030.

Total Regional Population Outlook, 2016-2030

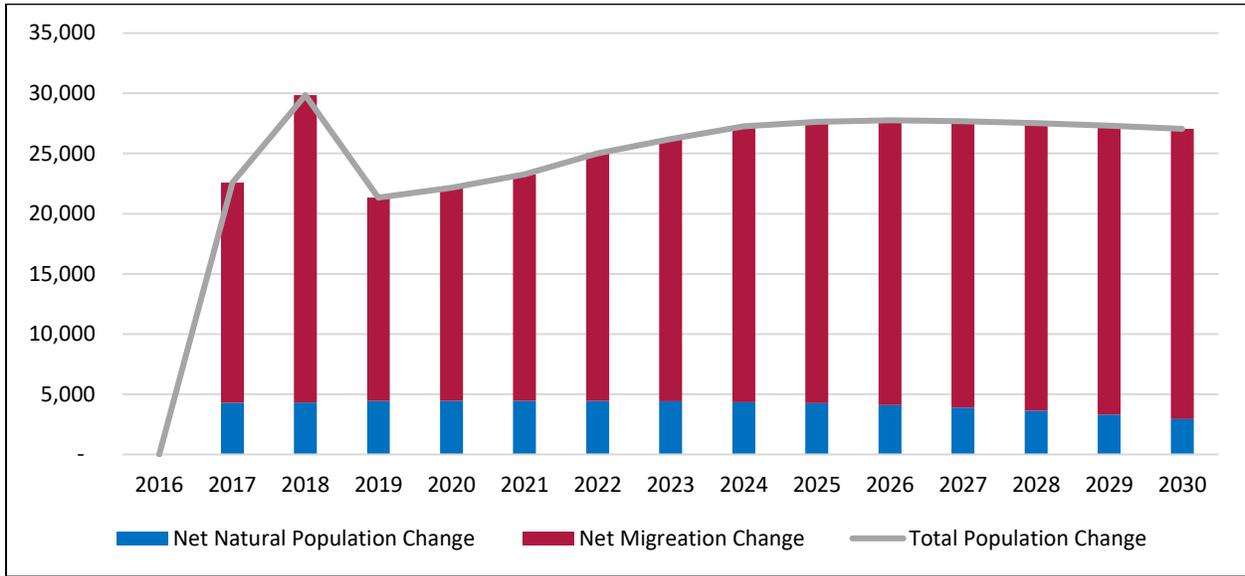


Source: Canadian Skills Training & Employment Coalition, Metro Economics

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 Kitchener – Waterloo – Barrie population change is predominantly a result of net migration, which was responsible for 86% of the region’s population growth in 2018. This share is expected to decrease between 2019 – 2021, then increase between 2022 - 2030 as net natural population growth declines. Overall, the region is expected to add an average of nearly 26,000 people to its population annually through 2030.

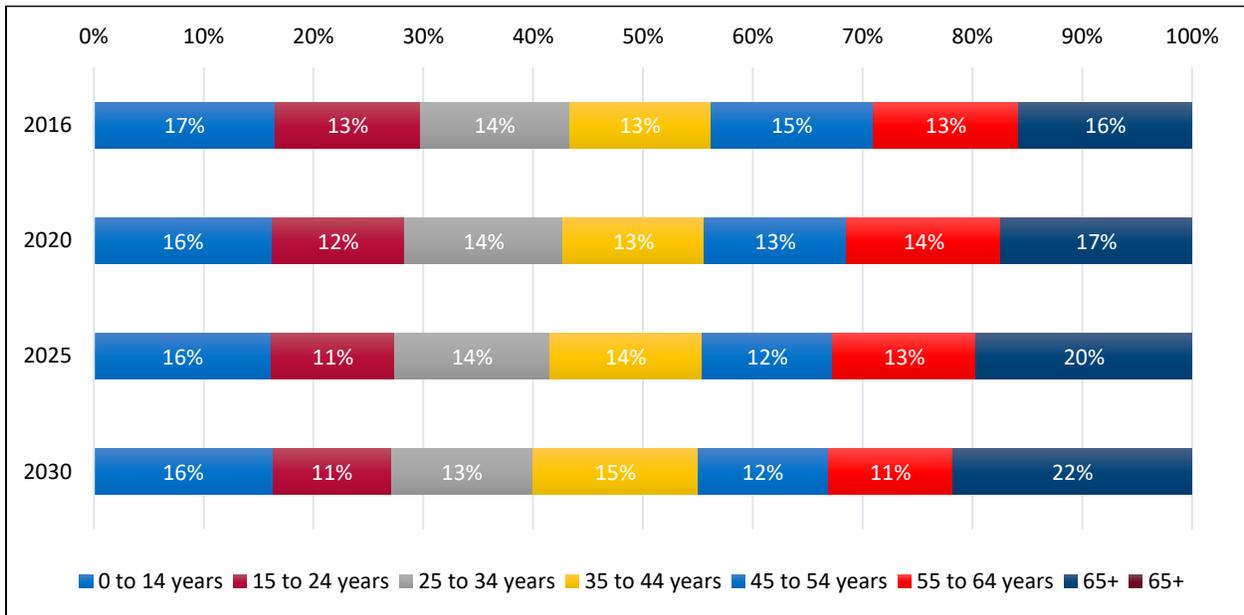
Total Regional Population Change Outlook, 2016-2030



Source: Canadian Skills Training & Employment Coalition, Metro Economics

The Kitchener – Waterloo - Barrie region’s age distribution is also expected to shift in the coming years. In 2018, an estimated 16% of the region’s population were 65 years of age or older, and that proportion is expected to rise to 22% 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.

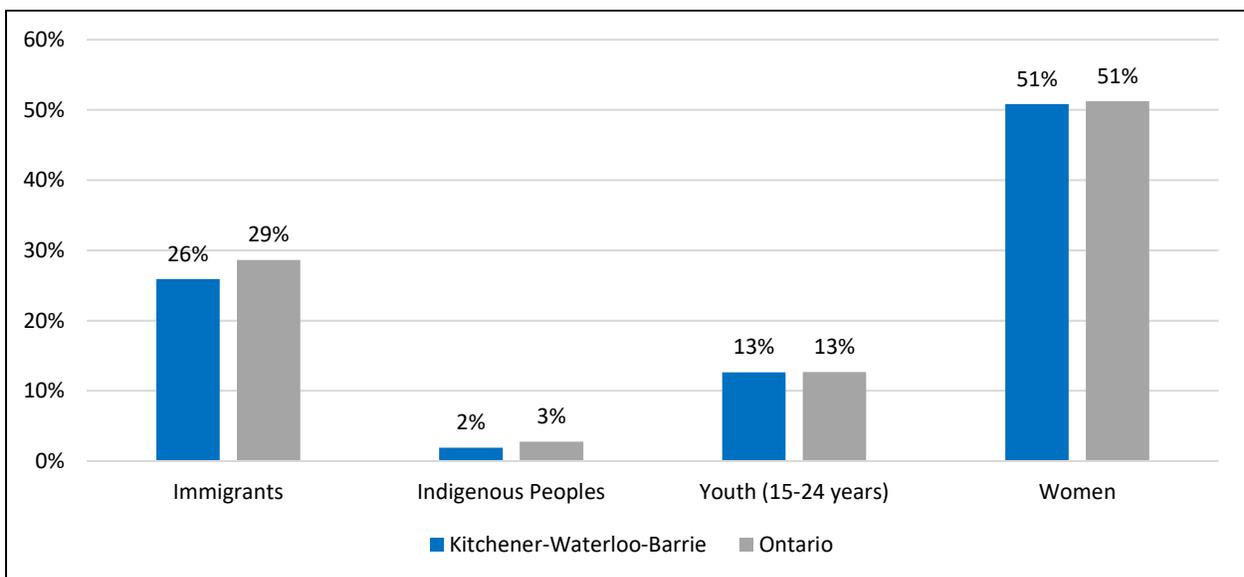
Regional Population Outlook by Age Distribution, 2016-2030



Source: Canadian Skills Training & Employment Coalition, Metro Economics

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 Kitchener – Waterloo – Barrie region’s population are generally on par with those of Ontario as a whole. The region had similar shares of immigrants, Indigenous peoples, youth and women as the provincial population as of 2016.

Regional and Provincial Population Diversity, 2016



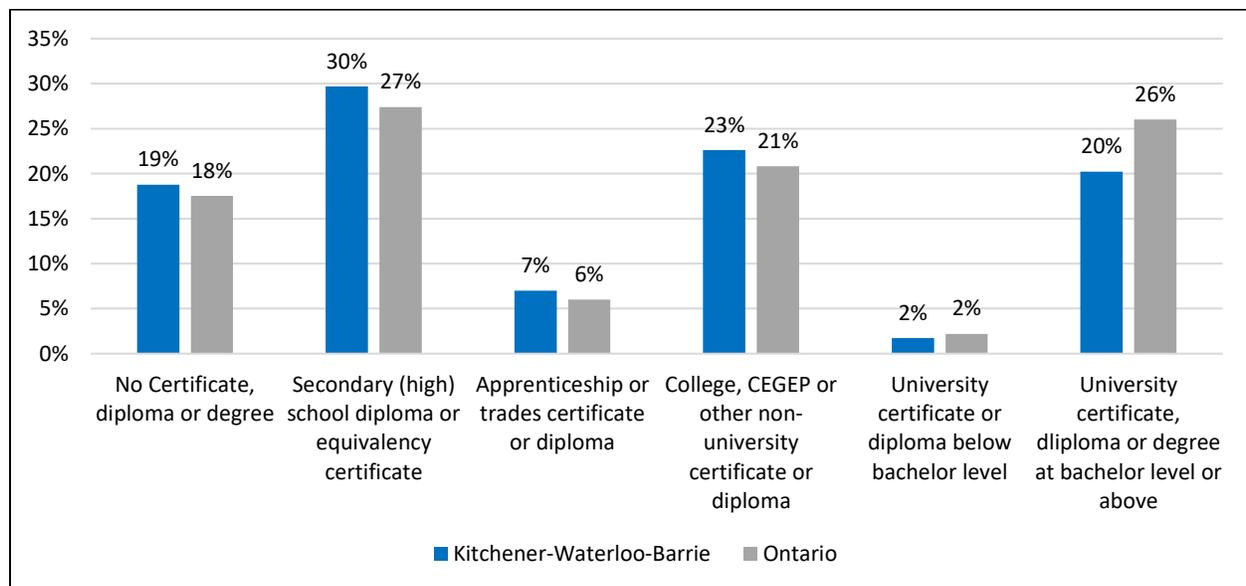
Source: Canadian Skills Training & Employment Coalition, Statistics Canada

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 one-half (48%) of people in the Kitchener – Waterloo - Barrie 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 (23%) than the provincial average (21%). Conversely, 20% of the region had a university degree at bachelor level or above, compared to 26% for Ontario.

Regional and Provincial Educational Attainment, 2016

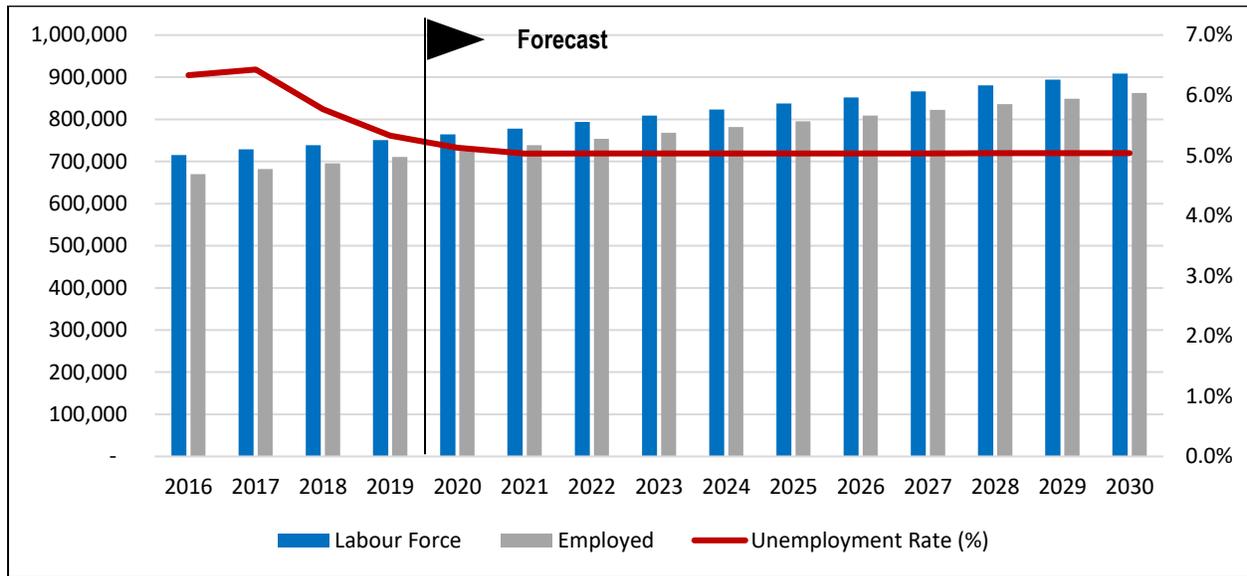


Source: Canadian Skills Training & Employment Coalition, Statistics Canada

Labour Market Activity

Total employment in the Kitchener – Waterloo – Barrie region was an estimated 695,900 in 2018, while the region’s labour force, including both the employed and those who are unemployed and actively seeking work, totaled 738,500. The unemployment rate, or the proportion of unemployed persons in the labour force, was 5.8%. 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 over the coming decade.

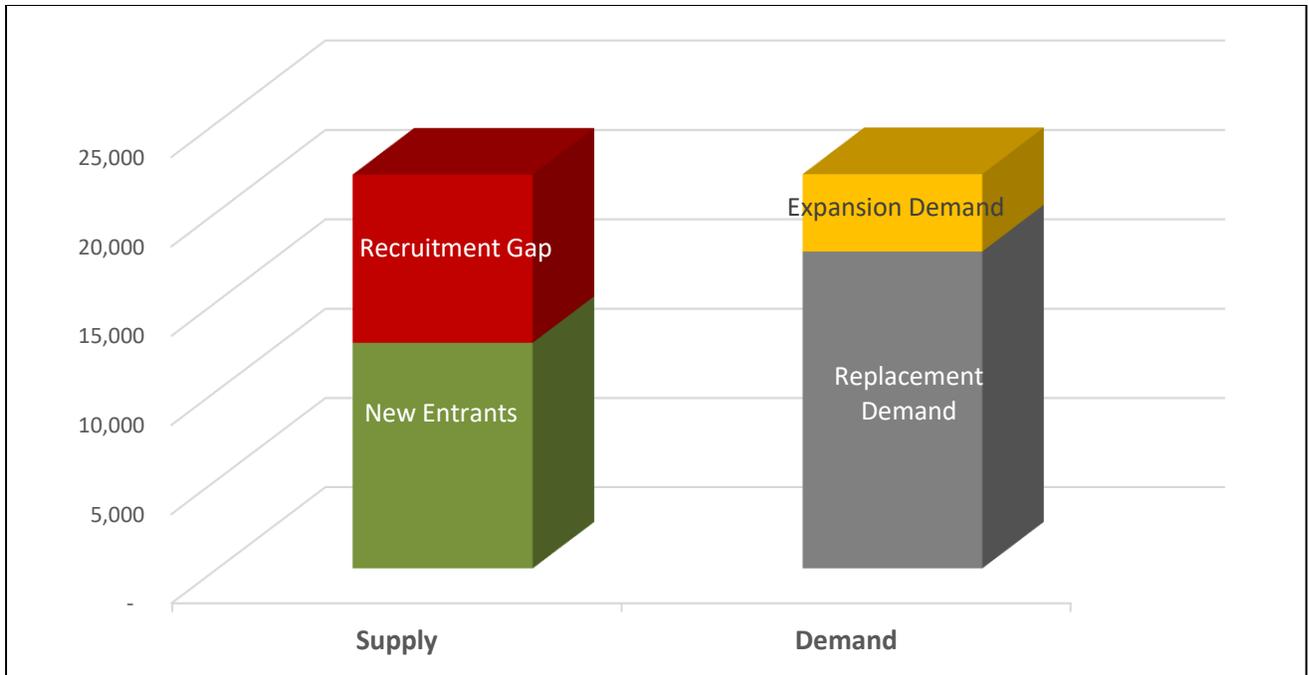
Total Regional Employment Outlook, 2016-2030



Source: Canadian Skills Training & Employment Coalition, Metro Economics

Kitchener – Waterloo – Barrie CMA Manufacturing Hiring Requirement, 2016-2025

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 Kitchener – Waterloo – Barrie (CMA) indicate that new entrants will cover only 57% of the region’s manufacturing hiring requirement between 2016 and 2025. The remaining 43% is the industry’s recruitment gap in the region.



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:

Kitchener – Waterloo – Barrie CMA Manufacturing Hiring Requirement by Occupation, 2016-2025

Occupations	Total Hiring Requirement 2016 - 2025	Share of 2016 Employment
All Occupations in Manufacturing	22,066	30.8%
Motor vehicle assemblers, inspectors and testers	2,003	23%
Manufacturing managers	924	36%
Labourers in food, beverage and associated products processing	913	32%
Material handlers	649	30%
Machinists and machining and tooling inspectors	578	27%

Shippers and receivers	533	34%
Welders and related machine operators	529	26%
Construction millwrights and industrial mechanics	519	34%
Plastics processing machine operators	415	39%
Process control and machine operators, food, beverage and associated products processing	354	35%
Mechanical engineers	340	31%
Other labourers in processing, manufacturing and utilities	334	30%
Senior managers - construction, transportation, production and utilities	285	40%
Industrial and manufacturing engineers	253	29%
Electrical and electronics engineers	244	29%
Transport truck drivers	237	44%
Electrical and electronics engineering technologists and technicians	203	29%
Industrial electricians	175	31%
Furniture and fixture assemblers and inspectors	172	37%
Industrial engineering and manufacturing technologists and technicians	162	21%
Mechanical engineering technologists and technicians	140	19%
Chemical technologists and technicians	122	36%
Contractors and supervisors, machining, metal forming, shaping and erecting trades	108	28%
Industrial sewing machine operators	98	51%
Structural metal and platework fabricators and fitters	62	24%
Labourers in wood, pulp and paper processing	51	35%
Sheet metal workers	50	51%

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.

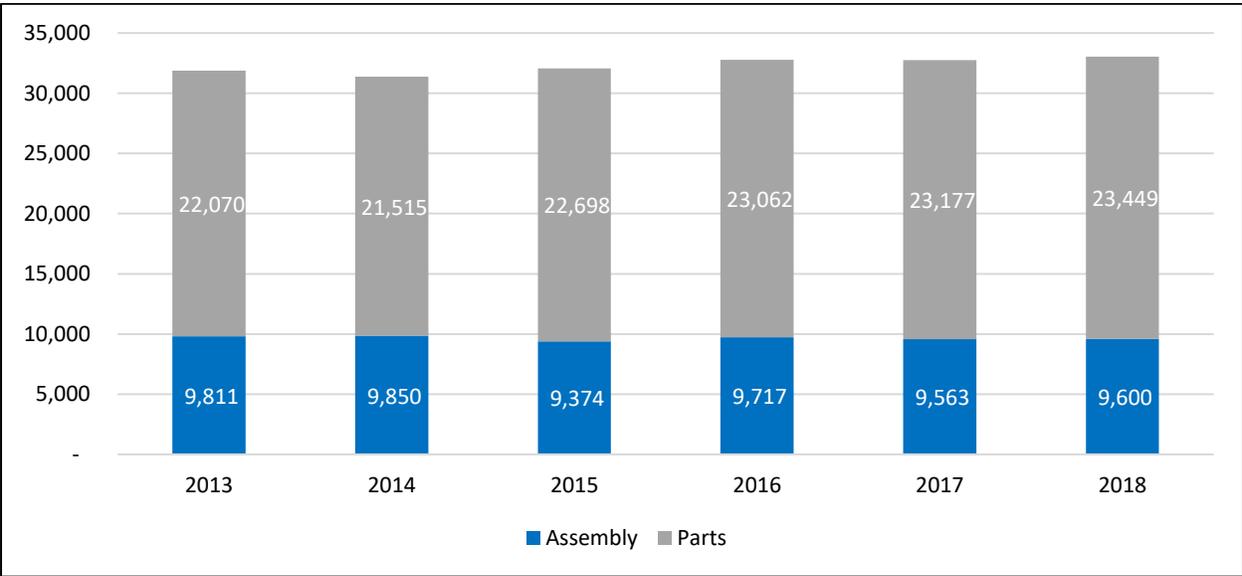
Profile of Automotive Manufacturing Employment

Total automotive manufacturing employment in the region, including Original Equipment Manufacturer (OEM) plants and parts suppliers, was an estimated 33,000 workers across 91 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 31,375 in 2014 to its peak in 2018. In comparison, data from Statistics Canada’s 2016 Census reports the region’s automotive manufacturing employment as totaling 27,545 workers.

The Kitchener – Waterloo – Barrie region is home to two large OEM assembly plants: Honda assembly in New Tecumseth that produces the Honda Civic and a Toyota plant in Cambridge that produces the Toyota RAV4 and RAV4 Hybrid. There is an additional Honda-owned sub-assembly plant in New Tecumseth and an FCA-owned (Fiat Chrysler) plant that produces interiors. These plants employed an estimated 10,850 combined workers in 2018. Employment at OEM plants has remained stable in recent years, having reached as high 10,900 in 2014.

There are an estimated 75 parts suppliers in the region. An estimated 56 parts suppliers are located in the Waterloo and Wellington CDs, some of which are dedicated to supplying Honda and Toyota assembly. There are also multiple establishments working in plastics, seating, sub-assembly and suspension manufacturing. The remaining parts suppliers in Kitchener – Waterloo – Barrie are located in Simcoe and Dufferin, where an additional 5,000 employees are employed.

Regional Automotive Manufacturing Employment by Activity, 2013-2018

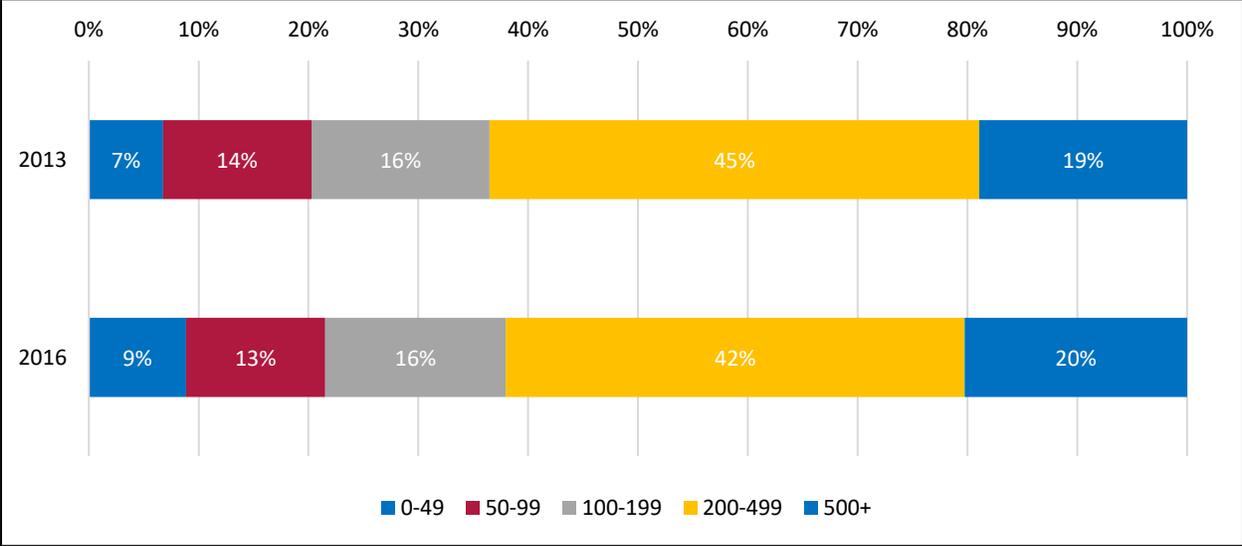


Source: Canadian Skills Training & Employment Coalition, Automotive Policy Research Centre

Profile of Automotive Manufacturing Employers

Statistics Canada’s business counts data provides insights into the mix of business types present in the Kitchener – Waterloo – Barrie region’s automotive manufacturing industry. A comparison of data from 2013 and 2016 reveals that the proportion of small-sized automotive manufacturing establishments (i.e. 1 to 99 employees) remained stable. The region also saw the share of medium-sized automotive manufacturing establishments (i.e. 100 to 199 employees) remain stable at 16% in both 2013 and 2016.

Regional Automotive Manufacturing Establishments by Employment Size, 2013-2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada

The largest OEM automotive manufacturing employers in the Kitchener – Waterloo – Barrie region include Honda with three plants and Toyota with two. Linamar and Magna International are the largest parts suppliers with a combined 24 plants. Taken together, the region’s top employers employed 23,625 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
Linamar	21	6,725
Toyota	2	5,300
Honda	3	4,300
Magna International	2	2,110
F&P Manufacturing	1	920
Simcoe Parts Service (HLI)	1	900
Toyoda Gosei	1	750
Denso	1	745
Bend-All	3	720

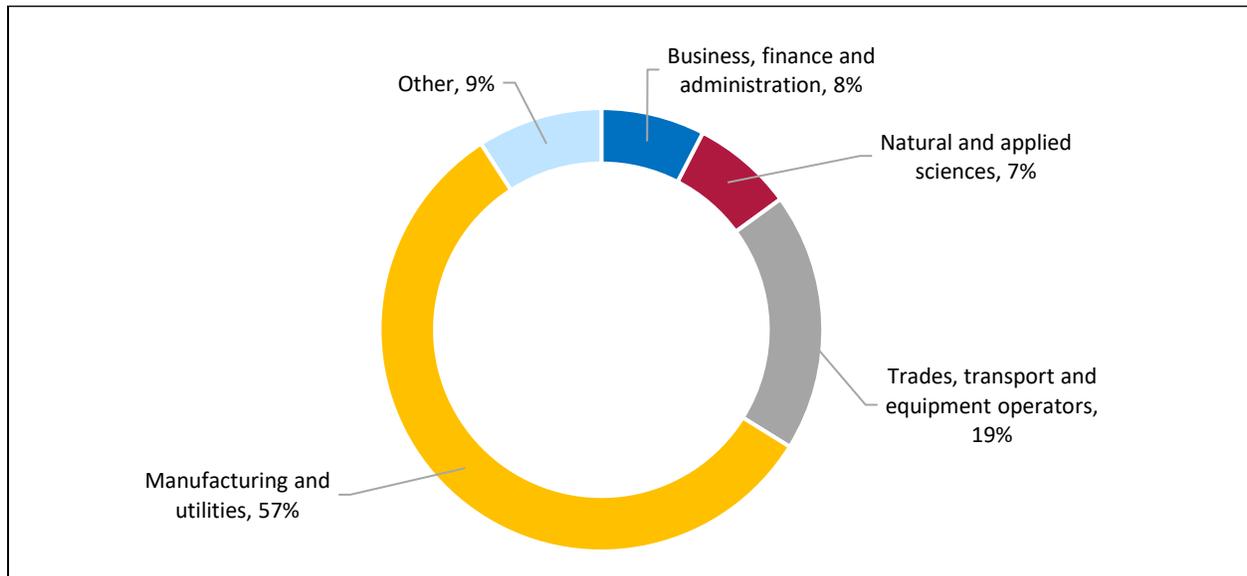
Source: Canadian Skills Training & Employment Coalition, Automotive Policy Research Centre

Automotive Manufacturing Labour Market

Workers in the Kitchener – Waterloo – Barrie 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 more than half (57%) of the region’s automotive manufacturing workforce. A further 19% is accounted for by trades, transport and equipment operators. The remaining workers are split between business, finance and administration occupations (8%); natural and applied sciences occupations (7%); and all other occupation types (9%).

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 one-third (37%) of the industry's workforce 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 in the region's automotive manufacturing workforce include motor vehicle assembling supervisors (NOC 9221), material handlers (NOC 7452), manufacturing managers (NOC 0911), and welders and related machine operators (NOC 7237). 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)	10,745	37.0%
Supervisors, motor vehicle assembling (NOC 9221)	1,815	6.3%
Material handlers (NOC 7452)	1,220	4.2%
Manufacturing managers (NOC 0911)	865	3.0%
Welders and related machine operators (NOC 7237)	725	2.5%
Construction millwrights and industrial mechanics (NOC 7311)	680	2.3%
Industrial painters, coaters and metal finishing process operators (NOC 9536)	675	2.3%
Other labourers in processing, manufacturing and utilities (NOC 9619)	615	2.1%
Machinists and machining and tooling inspectors (NOC 7231)	535	1.8%
Mechanical engineers (NOC 2132)	535	1.8%
Tool and die makers (NOC 7232)	490	1.7%
Machining tool operators (NOC 9417)	430	1.5%
Automotive service technicians, truck and bus mechanics and mechanical repairers (NOC 7321)	400	1.4%
Metalworking and forging machine operators (NOC 9416)	395	1.4%
Industrial electricians (NOC 7242)	385	1.3%
Shippers and receivers (NOC 1521)	380	1.3%

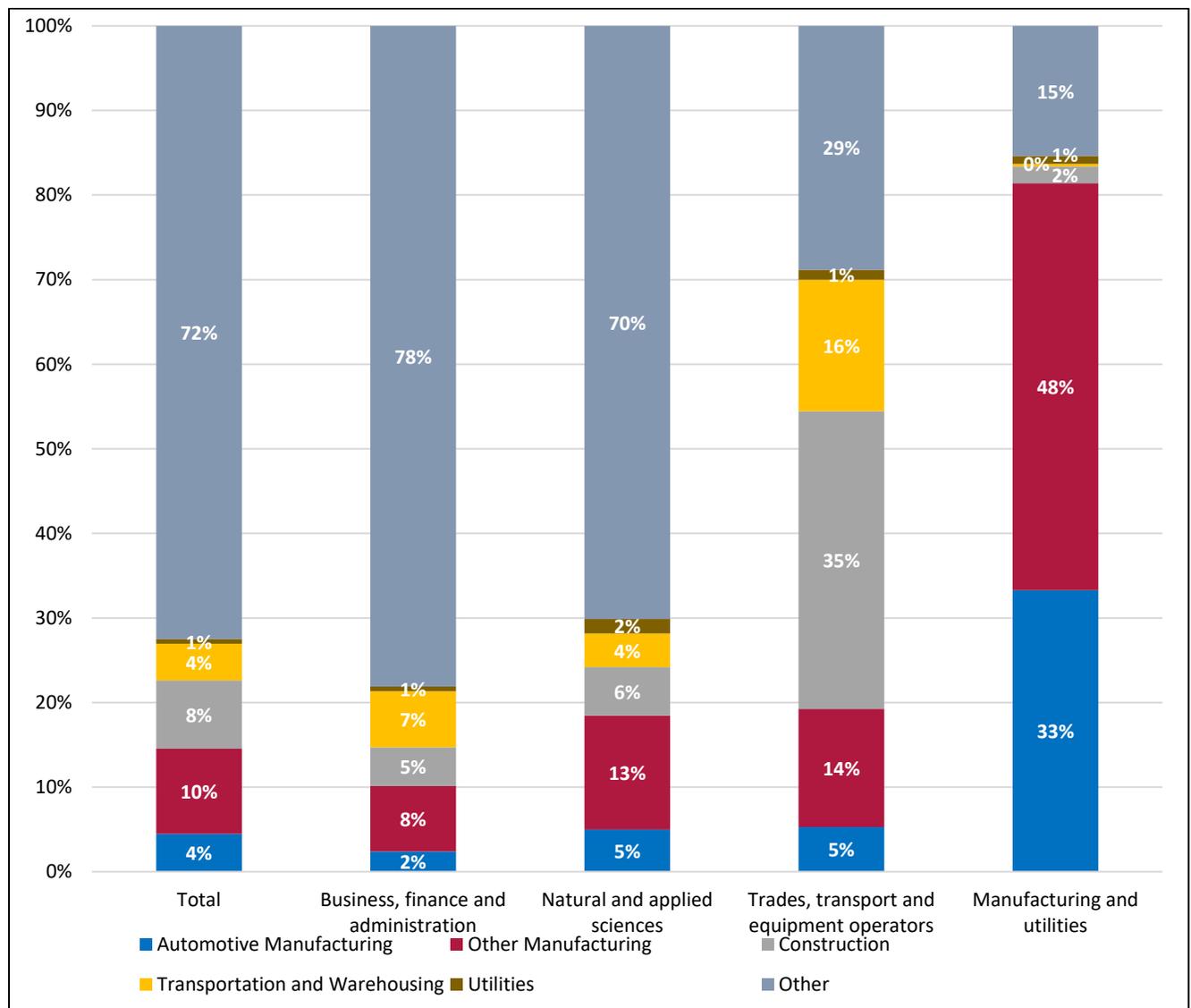
Source: Canadian Skills Training & Employment Coalition, Statistics Canada

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 Kitchener-Waterloo-Barrie region's total workforce in 2016. Among manufacturing and utilities occupations, however, the industry accounted for 33% of the workforce. The primary competition for these occupations comes from other manufacturing employers (48%). 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.

Regional Workforce Distribution by Job Family and Sector, 2016

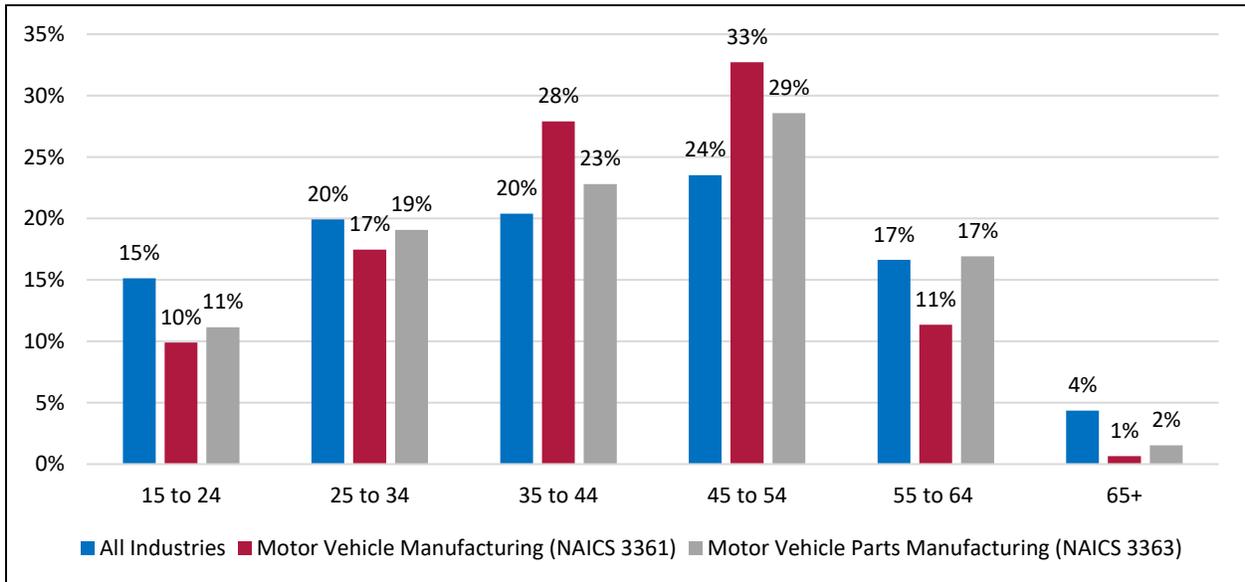


Source: Canadian Skills Training & Employment Coalition, Statistics Canada

Automotive Manufacturing Demographics

The age distribution of the Kitchener – Waterloo – Barrie region’s automotive manufacturing workforce is distinct from that of the region’s total workforce across all industries. Notably, just 10% of motor vehicle manufacturing workers and 11% 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.

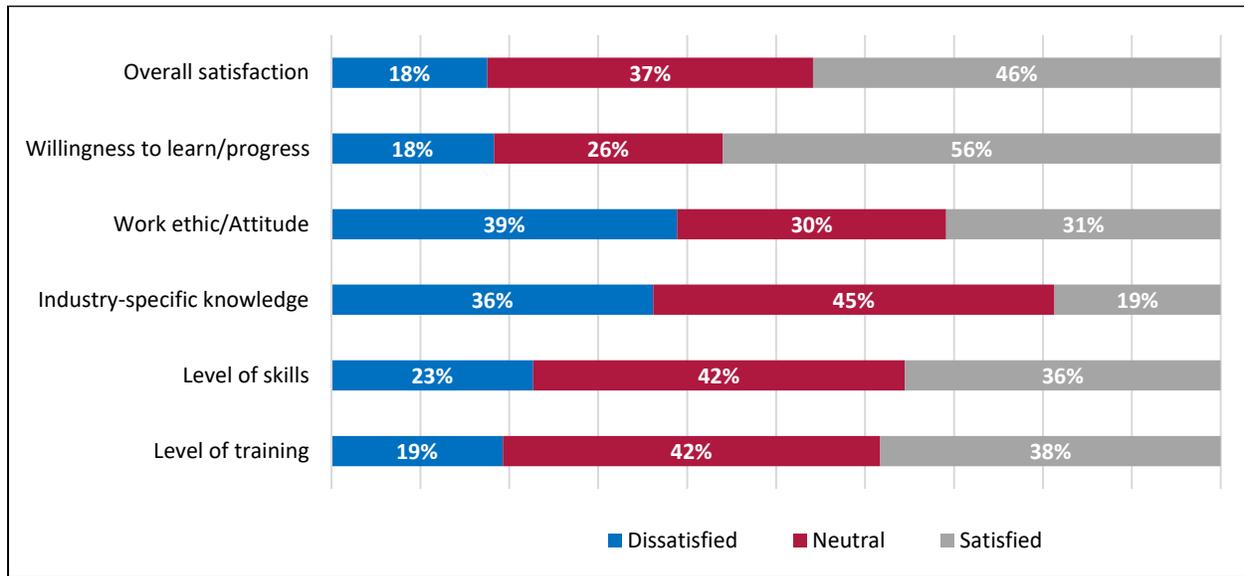
Regional Automotive Manufacturing Workforce Age Distribution, 2016



Source: Canadian Skills Training & Employment Coalition, Statistics Canada

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.

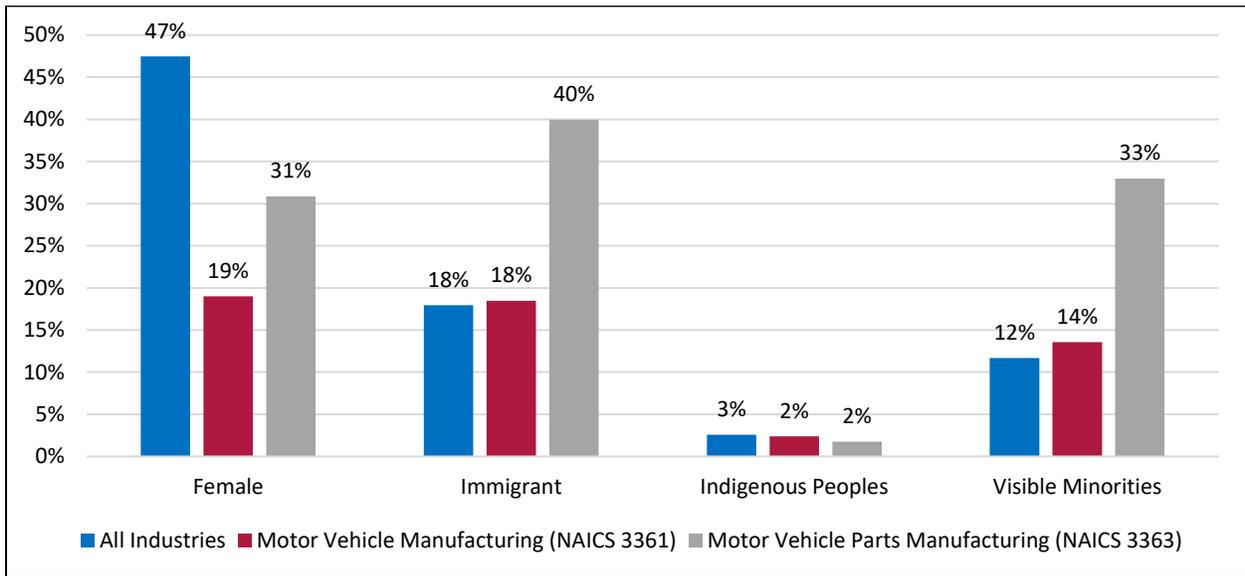
Canadian Manufacturing Employer Satisfaction with Young Workers, 2016



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 47% as of 2016, on par with their population share. However, the proportions of women working in motor vehicle manufacturing (19%) and motor vehicle parts manufacturing (31%) were well-below average. Elsewhere, foreign-born workers account for 18% of the region’s total workforce, which is similar to the share found in motor vehicle manufacturing (18%) but significantly lower than the share found in motor vehicle parts manufacturing (40%). 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.

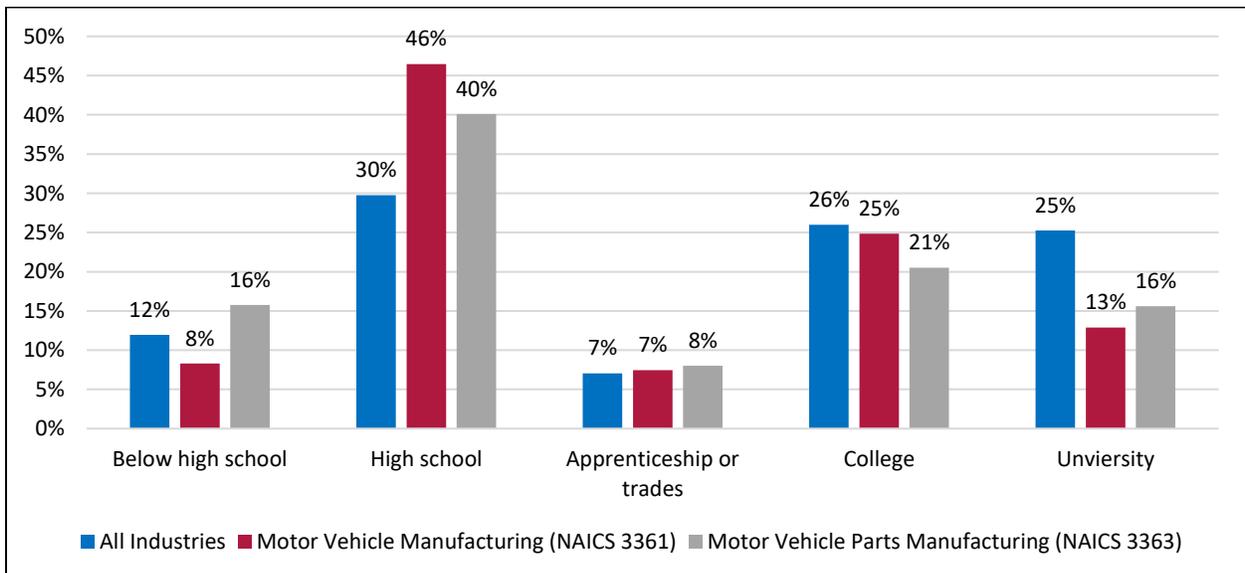
Regional Automotive Manufacturing Workforce Diversity, 2016



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. In this region, 55% of motor vehicle manufacturing workers and 56% 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