FOCAL Initiative

DIVERSITY & EMPLOYMENT IN CANADA'S AUTOMOTIVE MANUFACTURING SECTOR

FEBRUARY 2024

About the FOCAL Initiative

The Future of Canadian Automotive Labourforce (FOCAL) Initiative, funded by the Government of Canada, is a collaboration of the Canadian Skills Training and Employment Coalition (CSTEC), the Automotive Policy Research Centre (APRC) and Prism Economics and Analysis.

The FOCAL Initiative has produced labour market information and data related to Canada's automotive manufacturing sector, examined key trends affecting the automotive labour market, and produced forecasts of supply and demand for key occupations in the broader automotive sector.

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Executive Summary

This report is a follow up to our 2019 Diversity report, and the 2020 paper on women's participation in the automotive sector in the post-COVID era. This paper provides an update on diversity and the labour force in Canada's automotive industry based on the latest labour market data for four equity-serving groups (EDGs) - women, indigenous persons, persons with disabilities, and racialised persons. This paper focuses on industries with NAICs codes 3363 (motor vehicle manufacturing) and 3361 (motor vehicle parts manufacturing employees) within the context of the broader manufacturing and general Canadian labour force. The difference between this paper and others, is the inclusion of persons with disabilities. In addition, we look at sectoral employment data in the automotive supply chain. We make several observations based on this analysis.

- Women continue to be under-represented in Canada's automotive industry (20% in assembly and 27% in parts production) and tend to be concentrated in lower-paying occupations. However, over the period 2010 to 2022, the percentage of women in parts production did increase by 20.1%, and by 45.8% in assembly; while overall manufacturing had a 4% increase.
- Women also face gender pay gaps, but assembly has much better pay equity than parts production or the general manufacturing labour force. Recruiting women into higher paying occupations and paying them equitably within the same occupations based on education, skills and performance, will help in reducing these pay gaps.
- Racialised persons are well represented in the auto workforce, accounting for 26% in assembly, representative of the Canadian labour force and a much higher proportion in parts production at 42.3%.
- A large proportion of racialised persons had a *university certificate, diploma or bachelor degree,* 33% in assembly and 29% in parts production, but this is slightly lower than the manufacturing sector, overall (36.7%).
- 87.8% of persons with permanent ability (PPDs) in the labour force in assembly are employed and 79.3% in parts production, but this is lower than manufacturing overall at 91.4%.
- 8% of all employed in *assembly* and in *parts production* are persons with permanent disabilities (PPDs), the same as manufacturing overall (8%), but slightly lower than the overall economy (10%).
- Indigenous Peoples employed in assembly (2.7%) and parts production (2%) are below the national share of 3.9%. This is related to the location of employers versus the location of indigenous persons. However, the expansion of mining for production of EV batteries will provide more job opportunities in the supply chain.

Introduction

Canadian automotive manufacturing employers face tight labour markets and shortages of skilled and semi-skilled employees. One of the objectives of the FOCAL initiative since its inception, has been to examine opportunities to recruit from different labour pools to address skills shortages. To that end, we previously did papers on employment of youth, women, racialised persons[1], Indigenous persons[2] (First Nations, Metis, and Inuk), and immigrants. This paper provides a labour market information (LMI) update on the labour force participation of the four federal employment equity groups - women, racialised persons, persons with disabilities[3] and Indigenous persons in Canada's automotive industry, reflecting any changes or shifts in employment, post-pandemic. This information can now be used as a benchmark for future workforce planning and workforce diversity strategies for these groups. Newcomers/immigrant participation in the automotive labour force is addressed in a separate paper on immigrant participation and immigration policy.

The FOCAL project defines the broader automotive sector using a much broader set of industries including the supply chain. While this paper focuses on motor vehicle manufacturing (3363) and motor vehicle parts manufacturing employees (3361), similar to the previous papers on diversity, this paper also presents some LMI on sectors in the broader supply chain. The report utilises custom data requests from Statistics Canada from the 2021 Census and Labour Force Survey data from 2010 to 2022.

The paper is organised into four sections focusing on four demographic groups - women, racialised persons, persons with disabilities, and Indigenous persons, in the following areas:

- Employment in the automotive sector;
- Sectoral employment comparison – automotive vs other sectors, 2022;
- Education credentials;
- Employment in selected occupations; and,
- Wages by gender.

This information can be used for assessing and improving representation and equity in the workforce for these EDGs and exploring new sources of labour in the context of labour market shortages.

[1] Formerly visible minority.
[2] Aboriginal peoples in federal legislation, but now First Nations, Metis, and Inuk (Inuit) or FNMI is also used.
[3] Employment Equity groups based on the Federal Employment Equity Act (which is currently under review), also called equity-deserving groups (EDGs) or equity-seeking groups.

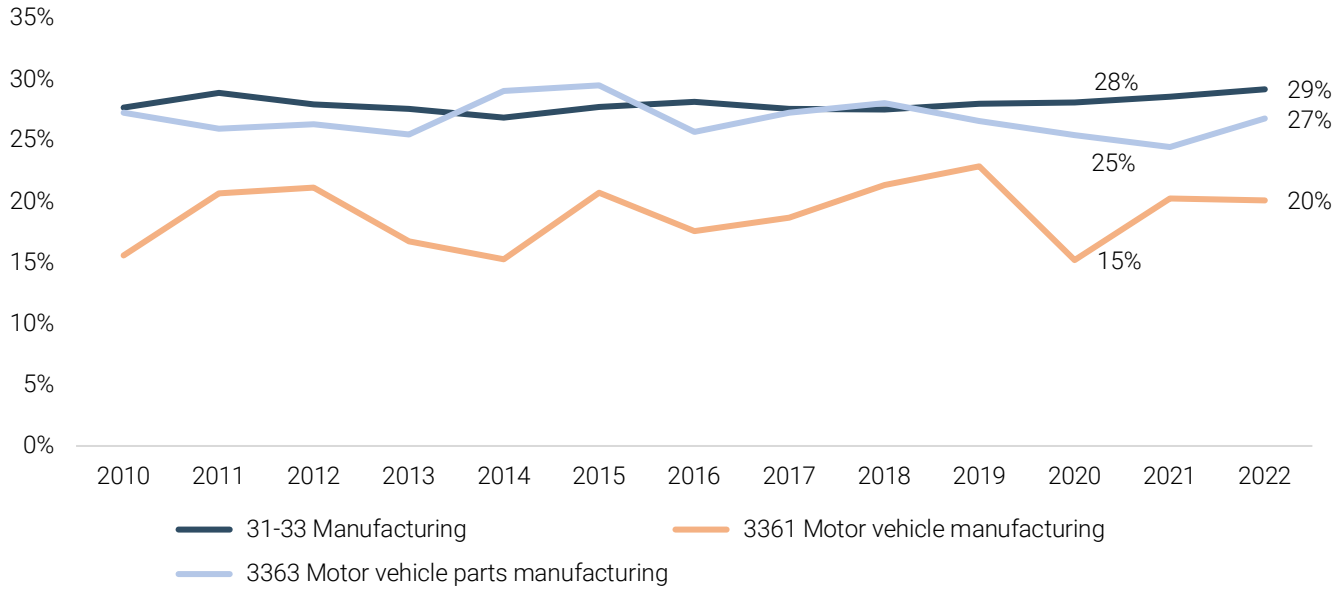
Women's Representation

Women make up half of the labour force (48%) but continue to be underrepresented in the automotive sector and its supply chain. There may be opportunities to encourage more young women to bring their talents to the automotive sector.

Trends in women's employment in the automotive sector

From a long-term trend perspective, the percentage of women in parts production increased by 20.1% from 2010 to 2022, and by 45.8% in assembly; a much higher increase than manufacturing which had a 4% increase from 2010 to 2022. More recently, in 2019, the proportion of women employed[4] in Assembly (3361 - motor vehicle manufacturing) was 23% and 27% in Parts production (3363 - motor vehicle parts manufacturing), and 28% in the overall manufacturing sector. Within the context of pandemic shut-downs and slowdowns in plants, that share dropped to 15% in assembly and 25% in parts production in 2020; significantly much less for the latter. Since then, 2022 numbers show that in assembly, the share of women is now up by 5% to 20%, but down 3% from the 2019 pre-pandemic level. However, the share of women employed in parts production is back to the 2019 level at 27%. The share of women employed in the overall manufacturing sector did not change in 2020 from 2019, and increased to 29% in 2021, and stayed at 29% in 2022.

Figure 1. Trends in the share of women employed in the automotive sector in Canada



Source: Labour Force Survey, CSTEC Custom Request

[4] Employed includes employees and other workers.

Sectoral comparison – Automotive and related sectors

The automotive sector has a broad supply chain which is evolving with the transition to electric vehicles (EVs). Using Census 2021 data, the table below shows a ranked comparison of assembly and parts production with related sectors in the supply chain, regarding the share of women employed. While women are almost half of the employed in the economy of Canada, some subsectors employ more women than others, ranging from 11% in *Iron and steel mills and ferro-alloy* manufacturing to 44% in *Management, scientific and technical consulting services*. *Parts production* ranked at 11 with 28% and *vehicle assembly* ranked at 22 with 19% of the workforce being women.

Table 1. Percentage of women employed in selected sectors

Rank	Sector	% of Women+
	Total - All industries	48%
	31-33 Manufacturing	29%
1	5416 Management, scientific and technical consulting services	44%
2	3325 Hardware manufacturing	42%
3	3344 Semiconductor and other electronic component manufacturing	38%
4	3345 Navigational, measuring, medical and control instruments manufacturing	32%
5	3351 Electric lighting equipment manufacturing	32%
6	4173 Computer and communications equipment and supplies merchant wholesalers	31%
7	3261 Plastic product manufacturing	30%
8	3342 Communications equipment manufacturing	30%
9	5413 Architectural, engineering and related services	29%
10	3341 Computer and peripheral equipment manufacturing	29%
11	3363 Motor vehicle parts manufacturing	28%
12	5415 Computer systems design and related services	27%
13	3359 Other electrical equipment and component manufacturing	26%
14	3259 Other chemical product manufacturing	26%
15	3255 Paint, coating and adhesive manufacturing	26%
16	3353 Electrical equipment manufacturing	23%
17	3272 Glass and glass product manufacturing	23%
18	415 Motor vehicle and motor vehicle parts and accessories merchant wholesalers	22%
19	3251 Basic chemical manufacturing	21%
20	3262 Rubber product manufacturing	21%
21	3328 Coating, engraving, cold and heat treating and allied activities	20%
22	3361 Motor vehicle manufacturing	19%
23	3323 Architectural and structural metals manufacturing	17%
24	3321 Forging and stamping	17%
25	2122 Metal ore mining	16%

Rank	Sector	% of Women+
26	3314 Non-ferrous metal (except aluminium) production and processing	15%
27	3327 Machine shops, turned product, and screw, nut and bolt manufacturing	15%
28	2123 Non-metallic mineral mining and quarrying	14%
29	3315 Foundries	13%
30	3335 Metalworking machinery manufacturing	13%
31	3312 Steel product manufacturing from purchased steel	11%
32	3311 Iron and steel mills and ferro-alloy manufacturing	11%

Source: Census 2021

Education credentials of women in the labour force

The table shows the breakdown of the educational credentials of women who are in the labour force in the economy, in manufacturing, in assembly, and in parts production. The data shows that there is a significant share of women with *secondary school* education, but that share is higher in assembly and parts production than manufacturing, in general, and in the broader economy. The low percentage of women with an *apprenticeship certificate* is consistent with past trends in education and employment. There is also a significant share of women with a *university certificate, diploma or bachelor degree*.

Table 2. Women in the labour force by education credential

Credential	All industries	31-33 Manufacturing	3361 Motor vehicle manufacturing	3363 Motor vehicle parts manufacturing
No certificate, diploma or degree	8.9%	13.1%	5.4%	12.3%
High (secondary) school diploma or equivalency certificate	24.7%	29.6%	39.2%	34.9%
Non-apprenticeship trades certificate or diploma	5.2%	7.8%	4.1%	3.9%
Apprenticeship certificate	4.3%	5.5%	4.9%	3.9%
Program of 3 months to less than 1 year (College, CEGEP and other non-university certificates or diplomas)	3.2%	2.5%	2.6%	2.6%
Program of 1, 2 or more years (College, CEGEP and other non-university certificates or diplomas)	18.1%	17.3%	20.3%	18.3%
University certificate or diploma (pre or post bachelor) or bachelor level	26.6%	19.4%	18.1%	19.0%
Graduate Degree	9.1%	4.8%	5.4%	4.9%
Total	100%	100%	100%	100%

Source: Census 2021

Employment in selected occupations- women

The 2021 Census data on occupational employment shows that in professional/technical/ managerial occupations in auto, women are underrepresented, but they continue to have high representation in production jobs, and very low employment in the skilled trades occupations, reflective of the educational labour force data. Women's participation in the trades is highest in welder and related machine operators. Interestingly, women seem to have an interest in cybersecurity work with 50% in vehicle assembly and 32% in Manufacturing.

Table 3. Percentage of women in the labour force who are employed in selected occupations

Occupation Type	Occupation	Manufacturing	Assembly	Parts Production
Professional/ technical/managerial occupations	Engineering Managers	15%	12%	3%
	Manufacturing Managers	21%	13%	10%
	mechanical engineers	9%	9%	9%
	Industrial and Manufacturing engineers	19%	12%	17%
Skilled Trades	Welders and related machine operators	6%	10%	21%
	Industrial Electricians	2%	3%	2%
	Machinists, machining and tooling inspectors	4%	4%	10%
Production	Supervisors, motor vehicles assembling	21%	20%	40%
	Motor vehicle assemblers, inspectors and testers	34%	22%	40%
	Plastic products assemblers, finishers and inspectors	42%	33%	33%
	Mechanical assemblers and inspectors	14%	18%	19%
	Material handlers	13%	13%	12%
Information Technology	Computer systems developers and programmers	13%	19%	8%
	Computer engineers (except software engineers and designers)	9%	17%	0%
	Software developers and programmers	13%	16%	15%
	Cyber security specialists	32%	50%	0%

Source: Census 2021

Notes:
n/a – no person in the labour force
0% - of persons in labour force, no one is employed

Wages and the gender pay gap in auto

According to 2022 labour force data, the gender pay gap in Canada based on *average hourly wage* for employees was 13.3% and across sectors, ranged from 3.1% in *Arts, entertainment and recreation* to 23.1% in *Professional, scientific and technical services*.

In vehicle assembly, the gender pay gap for *average hourly wage* and *median hourly wage* was 4%; *average weekly wage* gap was 2%, and *median weekly wage* gap was 3%. The smaller gap may relate to unionisation in the sector. A larger gender pay gap exists in both parts production and overall manufacturing. One of the reasons for these wage discrepancies may be that women in manufacturing and parts production tend to be concentrated in lower-paying positions such as assemblers, inspectors, and testers than in higher-paying occupations such as managerial and professional occupations. In addition, as previous LMI shows, manufacturing and auto manufacturing are absorbing newcomer women, especially semi-skilled and unskilled labour. These women may have an urgency to find work to help support their families on arriving in Canada. A separate paper on immigration and auto will examine the labour force of immigrants and newcomers and policy implications.

Table 4. Women employees and the gender pay gap

Wages	Sector	Total Wage ($)	Men ($)	Women ($)	Pay Difference ($)	Gender Pay Gap ($)
Average hourly wages $ (employees only)	31-33 Manufacturing	31.01	32.32	27.84	-4.48	14%
	3361 Motor vehicle manufacturing	35.69	35.97	34.53	-1.44	4%
	3363 Motor vehicle parts manufacturing	27.43	28.84	23.6	-5.24	18%
Median hourly wages $ (employees only)	31-33 Manufacturing	26.67	28.34	23.08	-5.26	19%
	3361 Motor vehicle manufacturing	34.5	35	33.65	-1.35	4%
	3363 Motor vehicle parts manufacturing	24	25	20	-5	20%
Average weekly wages $ (employees only)	31-33 Manufacturing	1224.3	1289.87	1065.48	-224.39	17%
	3361 Motor vehicle manufacturing	1429.44	1434.17	1410.37	-23.8	2%
	3363 Motor vehicle parts manufacturing	1087.61	1150.79	915.4	-235.39	20%
Median weekly wages $ (employees only)	31-33 Manufacturing	1057.7	1134	904	-230	20%
	3361 Motor vehicle manufacturing	1380	1383.96	1336	-47.96	3%
	3363 Motor vehicle parts manufacturing	944	1000	798	-202	20%

Source: Labour Force Survey, CSTEC Custom Request

Representation of Racialised Persons

As Canada's population becomes more diverse with people from diverse ethnicities, cultures, and racial backgrounds, so does its workforce. There are 19.3 million people in the labour force, of which 5.2 million are racialised and 89.7% of those in the labour force are employed.

Table 5. Racialised and non-racialised population in Canada

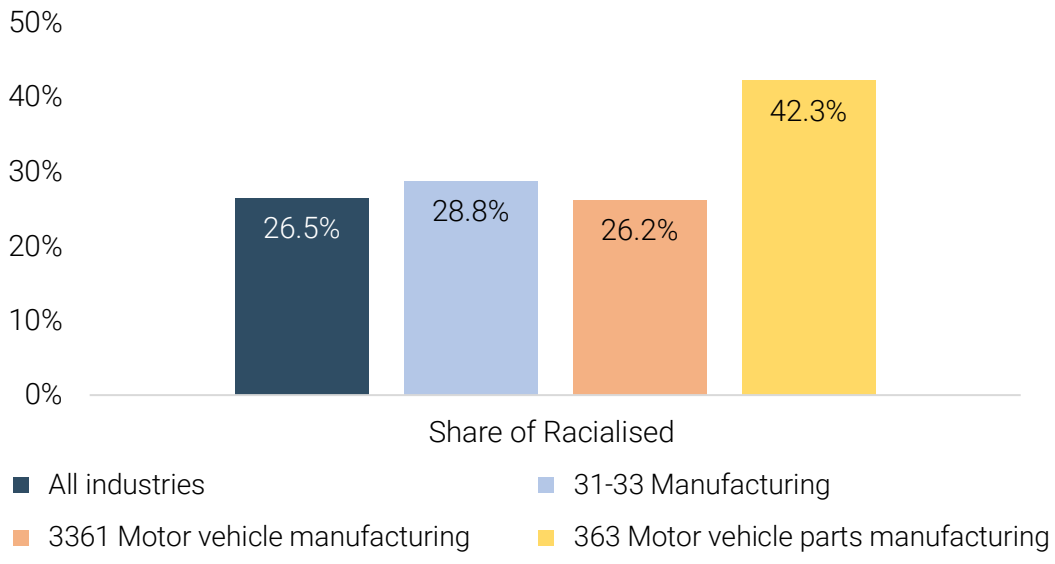
Racialised status	Total - Labour force status	In the labour force	In Labour Force, Employed
Total	30,335,920	19,310,340	17,321,700
Racialised	7,721,915	5,243,000	4,589,445
Not Racialised	22,614,005	14,067,345	12,732,255

Source: Census 2021

Employment in the automotive sector

The share of racialised people employed in *parts production* (42.3%) is much higher than that of overall manufacturing, *vehicle assembly* and the overall economy in Canada. Assembly is on par with the general workforce representation at 26.2%.

Figure 2. Share of employed who are racialised



Source: Census 2021

Sectoral comparison – Automotive and related sectors

The table below shows a ranked comparison of *assembly* and *parts production* with related sectors in the supply chain, regarding the share of racialised persons employed. While racialised people employed in the economy of Canada is 26%, some subsectors employ more racialised persons than others, ranging from 5% in *Non-metallic mineral mining and quarrying* to 50% in *Semiconductor and other electronic component manufacturing*. *Parts production* ranks at 7 with 42% racialised persons and *vehicle assembly* ranks at 18 with 26%, the same as Canada overall.

Table 6. Percentage of racialised persons employed in selected industries

Rank	Sector	% of Racialised Persons Employed
	Total - All industries	26%
	31-33 Manufacturing	29%
1	3344 Semiconductor and other electronic component manufacturing	50%
2	3325 Hardware manufacturing	49%
3	3351 Electric lighting equipment manufacturing	48%
4	3341 Computer and peripheral equipment manufacturing	44%
5	5415 Computer systems design and related services	42%
6	4173 Computer and communications equipment and supplies merchant wholesalers	42%
7	3363 Motor vehicle parts manufacturing	42%
8	3261 Plastic product manufacturing	37%
9	3272 Glass and glass product manufacturing	36%
10	3359 Other electrical equipment and component manufacturing	35%
11	3342 Communications equipment manufacturing	34%
12	3328 Coating, engraving, cold and heat treating and allied activities	34%
13	3345 Navigational, measuring, medical and control instruments manufacturing	31%
14	3353 Electrical equipment manufacturing	31%
15	3255 Paint, coating and adhesive manufacturing	29%
16	5413 Architectural, engineering and related services	28%
17	5416 Management, scientific and technical consulting services	27%
18	3361 Motor vehicle manufacturing	26%
19	3335 Metalworking machinery manufacturing	25%
20	3259 Other chemical product manufacturing	25%
21	3321 Forging and stamping	24%
22	3323 Architectural and structural metals manufacturing	24%
23	3312 Steel product manufacturing from purchased steel	22%
24	3327 Machine shops, turned product, and screw, nut and bolt manufacturing	21%
25	3315 Foundries	18%

Rank	Sector	% of Racialised Persons Employed
26	415 Motor vehicle and motor vehicle parts and accessories merchant wholesalers	18%
27	3251 Basic chemical manufacturing	17%
28	3311 Iron and steel mills and ferro-alloy manufacturing	13%
29	3262 Rubber product manufacturing	11%
30	3314 Non-ferrous metal (except aluminium) production and processing	8%
31	2122 Metal ore mining	6%
32	2123 Non-metallic mineral mining and quarrying	5%

Source: Census 2021

Education credentials of racialised persons

The table below shows the breakdown of racialised persons by educational credentials in the economy, manufacturing, *assembly*, and *parts production*. The data shows that racialised workers in auto tend to have a *university certificate, diploma or bachelor degree*, on par with the manufacturing sector and the overall economy. There is also a significant share of racialised workers with *secondary school* education, which is slightly higher in auto than the overall economy. The percentage of racialised persons with an *apprenticeship certificate* is the lowest for all credential types, with parts production having the lowest share at 1.6%.

Table 7. Racialised persons in the labour force by credential

Credential	All industries	31-33 Manufacturing	3361 Motor vehicle manufacturing	3363 Motor vehicle parts manufacturing
No certificate, diploma or degree	7.2%	14.0%	5.4%	13.7%
High (secondary) school diploma or equivalency certificate	21.2%	25.8%	26.8%	28.5%
Non-apprenticeship trades certificate or diploma	2.8%	3.8%	2.2%	3.1%
Apprenticeship certificate	1.7%	2.1%	1.8%	1.6%
Program of 3 months to less than 1 year (College, CEGEP and other non-university certificates or diplomas)	2.2%	1.8%	1.5%	1.7%
Program of 1, 2 or more years (College, CEGEP and other non-university certificates or diplomas)	14.0%	13.0%	15.2%	14.1%
University certificate or diploma (pre or post bachelor) or bachelor level	36.7%	30.4%	33.0%	29.0%
Graduate Degree	14.0%	9.1%	14.0%	8.2%
Total	100%	100%	100%	100%

Source: Census 2021

Employment in selected occupations - racialised

The 2021 Census data on occupational employment shows that racialised persons are well-represented in auto, which speaks to equity in recruitment and hiring. In particular, parts production has higher shares of racialised persons in various occupations than assembly and manufacturing in general such as 70% of industrial and manufacturing engineers, 50% of mechanical engineers, and over 50% in production jobs related to assembly. The lowest share of employment are in the *skilled trades* occupations, which suggest more work is needed in attracting people of all backgrounds to the skilled trades.

Table 8. Percentage of Racialised Persons in the labour force who are employed in selected occupations

Occupation Type	Occupation	Manufacturing	Assembly	Parts Production
Professional/ technical/managerial occupations	Engineering Managers	25%	24%	26%
	Manufacturing Managers	20%	19%	21%
	mechanical engineers	37%	45%	50%
	Industrial and Manufacturing engineers	48%	56%	70%
Skilled Trades	Welders and related machine operators	24%	25%	44%
	Industrial Electricians	16%	14%	26%
	Machinists, machining and tooling inspectors	25%	37%	44%
Production	Supervisors, motor vehicles assembling	25%	23%	52%
	Motor vehicle assemblers, inspectors and testers	42%	23%	52%
	Plastic products assemblers, finishers and inspectors	40%	33%	58%
	Mechanical assemblers and inspectors	33%	24%	36%
	Material handlers	26%	21%	36%
Information Technology	Computer systems developers and programmers	24%	31%	52%
	Computer engineers (except software engineers and designers)	41%	42%	42%
	Software developers and programmers	40%	68%	69%
	Cyber security specialists	34%	50%	0%

Source: Census 2021

Representation of Persons with Permanent Disabilities

Disability refers to 'difficulties a person may have doing certain activities of daily living as a result of physical, cognitive, mental, or other health-related conditions or problems' (Statistics Canada). Employers need to be aware that disabilities may be visible, invisible, permanent, or temporary including mental health disability. The federal *Accessible Canada Act (ACA)* which came into force in 2019 includes "any physical, mental, intellectual, cognitive, learning, communication or sensory impairment" which can be "permanent, temporary, or episodic in nature.' In addition, each province has their own disability legislation and human rights protections in employment for this group. Employers may go beyond official legislation to create an inclusive workplace for employees with disabilities. As Canada's population ages, there will be more persons with limitations in activity (persons with temporary or permanent disability).

There are 19.3 million people in the labour force, of which 1.9 million have a permanent disability, and 86.7% of the latter are employed.

Table 9. Population of Canada by ability and labour force status

Limitations in activities of daily living	Total - Labour force status	In the labour force	In Labour Force, Employed
Total	30,335,920	19,310,345	17,321,700
Yes, always	4,453,205	1,976,125	1,713,150
Yes, often	1,807,205	983,420	848,380
Yes, sometimes	5,710,680	3,526,965	3,139,655
No	18,214,320	12,758,580	11,565,860
Not stated	150,510	65,260	54,650

Source: Census 2021

Direct employment in the automotive sector

According to Census 2021 data, PPDs in the labour force (people seeking work) have lower employment in *assembly* (79.3%) than in *parts production* (87.8%), and manufacturing (91.4%).

Table 10. PPDs employed as a % of the labour force, 2021

Sector	In the labour force	Employed	% Employed[5]
All Industries	1,976,125	1,713,150	86.7%
31-33 Manufacturing industries	133,220	121,815	91.4%
3361 Motor vehicle manufacturing	4,605	3,650	79.3%
3363 Motor vehicle parts manufacturing	6,330	5,555	87.8%

Source: Census 2021

Sectoral comparison for PPDs – Automotive and related sectors

Based on the 2021 Census, 10% of the employed are persons with a permanent disability (PPD). For manufacturing, this share is 8%, as well as in *vehicle assembly* and *parts production*, along with many other subsectors that may supply the automotive sector. A few other sectors have 9% of their employed persons who are PPDs or the same representation as the general economy of 10%. Only one sector (*forging and stamping*) has greater representation at 11%.

Table 11. Percentage of employed who are PPDs in selected industries

Rank	Sector	% of Persons with Permanent Disability
	All industries	10%
	31-33 Manufacturing	8%
1	3321 Forging and stamping	11%
2	2123 Non-metallic mineral mining and quarrying	10%
3	415 Motor vehicle and motor vehicle parts and accessories merchant wholesalers	10%
4	3262 Rubber product manufacturing	10%
5	5416 Management, scientific and technical consulting services	10%
6	3359 Other electrical equipment and component manufacturing	10%
7	3255 Paint, coating and adhesive manufacturing	10%
8	3325 Hardware manufacturing	10%
9	2122 Metal ore mining	9%
10	3311 Iron and steel mills and ferro-alloy manufacturing	9%
11	3314 Non-ferrous metal (except aluminium) production and processing	9%
12	3315 Foundries	9%
13	3261 Plastic product manufacturing	9%
14	3345 Navigational, measuring, medical and control instruments manufacturing	9%

[5] The % employed = Employed / In the labour force

Rank	Sector	% of Persons with Permanent Disability
15	3312 Steel product manufacturing from purchased steel	8%
16	3323 Architectural and structural metals manufacturing	8%
17	3328 Coating, engraving, cold and heat treating and allied activities	8%
18	3327 Machine shops, turned product, and screw, nut and bolt manufacturing	8%
19	3251 Basic chemical manufacturing	8%
20	3361 Motor vehicle manufacturing	8%
21	5413 Architectural, engineering and related services	8%
22	3335 Metalworking machinery manufacturing	8%
23	3259 Other chemical product manufacturing	8%
24	3363 Motor vehicle parts manufacturing	8%
25	3272 Glass and glass product manufacturing	8%
26	3342 Communications equipment manufacturing	8%
27	3353 Electrical equipment manufacturing	8%
28	5415 Computer systems design and related services	8%
29	4173 Computer and communications equipment and supplies merchant wholesalers	8%
30	3344 Semiconductor and other electronic component manufacturing	8%
31	3341 Computer and peripheral equipment manufacturing	8%
32	3351 Electric lighting equipment manufacturing	7%

Source: Census 2021

Education credentials of PPDs

The table shows the breakdown of the educational credentials of *persons with permanent disabilities* (PPDs) who are in the labour force in the overall economy, in manufacturing, in assembly, and in parts production. Forty-one percent (41%) of the labour force in assembly and thirty-six percent (36%) in parts production have a *secondary school* education, which is higher than manufacturing and the broader economy. Less than 15% have a *university certificate, diploma or bachelor degree* in assembly, parts production and in manufacturing compared to 23.3% for the overall economy.

Table 12. PPDs in the labour force by credential

Credential	All industries	31-33 Manufacturing	3361 Motor Vehicle Manufacturing	3363 Motor Vehicle Parts Manufacturing
No certificate, diploma or degree	9.8%	14.3%	7.2%	14.1%
High (secondary) school diploma or equivalency certificate	25.6%	30.7%	41.0%	36.3%
Non-apprenticeship trades certificate or diploma	5.1%	7.7%	4.0%	4.2%
Apprenticeship certificate	4.1%	5.9%	4.1%	4.3%
Program of 3 months to less than 1 year (College, CEGEP and other non-university certificates or diplomas)	4.5%	3.5%	4.3%	3.7%
Program of 1, 2 or more years (College, CEGEP and other non-university certificates or diplomas)	19.9%	19.1%	21.4%	22.0%
University certificate or diploma (pre or post bachelor) or bachelor level	23.3%	15.6%	14.8%	12.4%
Graduate Degree	7.6%	3.2%	3.1%	2.7%
Total	100%	100%	100%	100%

Source: Census 2021

Employment in selected occupations - PPDs

The 2021 Census data on occupational employment shows that persons with permanent disabilities (PPDs) in the labour force have high employment levels in professional, managerial, and IT jobs. On the other hand, jobs in production and the skilled trades that require more movement and manual labour have lower employment levels. Workers with PPDs may be born with or develop a disability through repetitive stress injury, off-site or onsite accidents, or aging. This data speaks to the need to explore ways to hire and support PPDs with accommodations using assistive tools and new work technologies, because you can retain workers, but some also have a lot to offer in terms of their intellectual abilities.

Table 13. Percentage of PPDs in the labour force who are employed in selected occupations

Occupation Type	Occupation	Manufacturing	Assembly	Parts Production
Professional/ technical/managerial occupations	Engineering Managers	98%	80%	100%
	Manufacturing Managers	95%	86%	89%
	mechanical engineers	97%	100%	91%
	Industrial and Manufacturing engineers	95%	100%	67%
Skilled Trades	Welders and related machine operators	91%	100%	84%
	Industrial Electricians	91%	77%	93%
	Machinists, machining and tooling inspectors	94%	50%	84%
Production	Supervisors, motor vehicles assembling	92%	93%	100%
	Motor vehicle assemblers, inspectors and testers	79%	69%	83%
	Plastic products assemblers, finishers and inspectors	84%	83%	0%
	Mechanical assemblers and inspectors	89%	78%	75%
	Material handlers	91%	60%	91%
Information Technology	Computer systems developers and programmers	96%	n/a	100%
	Computer engineers (except software engineers and designers)	97%	n/a	n/a
	Software developers and programmers	93%	100%	n/a
	Cyber security specialists	100%	100%	n/a

Source: Census 2021

Notes:
n/a – no person in the labour force
0% - of persons in labour force, no one is employed

Representation of Indigenous Persons

There are 19.3 million people in the labour force, of which 801,500 are indigenous (4.2% of the Canadian labour force). Of those 801,500 who are in the labour force, 85% are employed. The total indigenous persons employed are 3.9% of the Canadian population employed.

Table 14. Indigenous population by labour force status

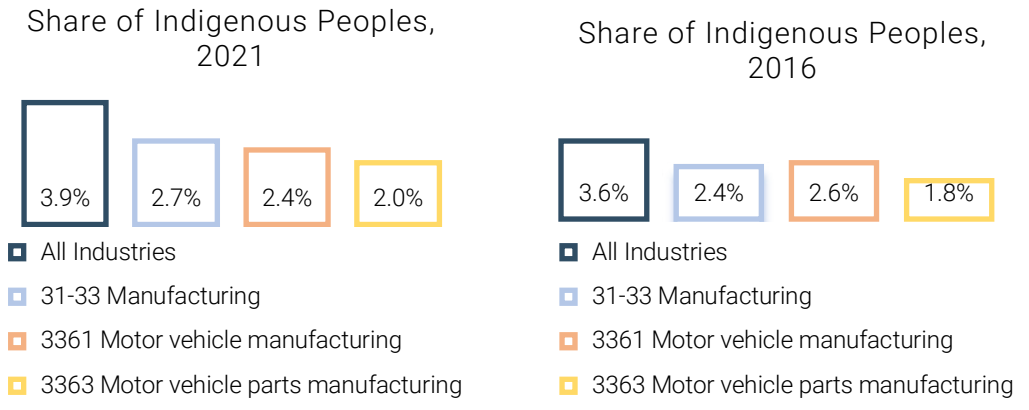
Indigenous Identity	Total - Labour force status	In the labour force	In Labour Force, Employed
Total	30,335,920	19,310,340	17,321,700
Indigenous identity (First Nations, Métis, and Inuk (Inuit))	1,348,040	801,495	680,425
Non-Indigenous identity	28,987,880	18,508,845	16,641,270

Source: Census 2021

Employment shifts in the automotive sector - FNMI

The share of indigenous people employed increased to 3.9% in 2021 from 3.6% in 2016 in Canada. There was a small upward change in manufacturing (0.3%). There was a small drop in the shared of indigenous person employed in *vehicle assembly* and a small increase in *parts production* from 2016. See Figure 4. Employment of indigenous persons in auto is below the national share. As discussed in a previous paper, 'the majority of Canada's automotive manufacturing industry is located in regions with relatively small Indigenous populations' (FOCAL, 2019). As the supply chain of the sector has grown to include mining for minerals for EV batteries in diverse regions where First Nations live, the indigenous community will have more opportunities to access jobs in auto-related companies.

Figure 3. Shifts in employment between 2016 and 2021 for Indigenous Persons



Source: Census 2016 and 2021

Sectoral comparison for FNMI – Automotive vs other sectors

The table below shows a ranked comparison of assembly and parts production with related sectors in the supply chain, regarding the share of indigenous persons employed. Indigenous representation in the auto supply chain ranges from 0.58% to 12%. *Parts production* ranks at 21 with 1.98% and vehicle assembly ranks at 13 with 2.39%. While indigenous persons are 3.9%of the employed in the economy of Canada, they have higher representation in some subsectors than others, such as *Metal ore mining* (12%) and *non-metallic mineral mining and quarrying* (8.8%), which is related to a history of mining on First Nations reserves and the legal obligations of employers to provide employment under community benefits agreements for members of the communities.

Table 15. Percentage of Indigenous Peoples employed in selected industries

Rank	Sector	% of Indigenous People
	Total - All industries	3.93%
	31-33 Manufacturing	2.69%
1	2122 Metal ore mining	12.00%
2	2123 Non-metallic mineral mining and quarrying	8.77%
3	3311 Iron and steel mills and ferro-alloy manufacturing	3.79%
4	415 Motor vehicle and motor vehicle parts and accessories merchant wholesalers	3.42%
5	3314 Non-ferrous metal (except aluminium) production and processing	3.24%
6	3312 Steel product manufacturing from purchased steel	3.03%
7	3323 Architectural and structural metals manufacturing	2.95%
8	3262 Rubber product manufacturing	2.94%
9	3328 Coating, engraving, cold and heat treating and allied activities	2.90%
10	3327 Machine shops, turned product, and screw, nut and bolt manufacturing	2.55%
11	3251 Basic chemical manufacturing	2.52%
12	3315 Foundries	2.41%
13	3361 Motor vehicle manufacturing	2.39%
14	5416 Management, scientific and technical consulting services	2.31%
15	3359 Other electrical equipment and component manufacturing	2.24%
16	5413 Architectural, engineering and related services	2.16%
17	3261 Plastic product manufacturing	2.15%
18	3335 Metalworking machinery manufacturing	2.14%
19	3259 Other chemical product manufacturing	2.13%
20	3321 Forging and stamping	2.10%
21	3363 Motor vehicle parts manufacturing	1.98%
22	3272 Glass and glass product manufacturing	1.94%
23	3342 Communications equipment manufacturing	1.77%
24	3255 Paint, coating and adhesive manufacturing	1.74%
25	3345 Navigational, measuring, medical and control instruments manufacturing	1.57%
26	3353 Electrical equipment manufacturing	1.45%
27	5415 Computer systems design and related services	1.17%
28	4173 Computer and communications equipment and supplies merchant wholesalers	1.15%
29	3325 Hardware manufacturing	1.12%
30	3344 Semiconductor and other electronic component manufacturing	0.86%
31	3341 Computer and peripheral equipment manufacturing	0.63%
32	3351 Electric lighting equipment manufacturing	0.58%

Education credentials of Indigenous Persons

The table shows the breakdown of the educational credentials of indigenous persons who are in the labour force in the economy, manufacturing, assembly, and parts production. The majority of indigenous persons had *secondary school* education – 49% in parts production and 48.4% in assembly, which is higher than manufacturing and the broader economy. There is also a significant indigenous labour force in parts production (17.3%) and assembly (20.8%) with community college education that had a study period of 1 or more years. Generally, the percentage of indigenous persons in the labour force with an *apprenticeship certificate* is higher than other EDGs, which may be related to a history of the promotion of the skilled trades to indigenous persons. The data also reflect the need to promote participation and retention in university education.

Table 16. Indigenous Persons in the labour force by credential

Credential	All industries	31-33 Manufacturing	3361 Motor Vehicle Manufacturing	3363 Motor Vehicle Parts Manufacturing
No certificate, diploma or degree	16.8%	17.8%	6.1%	14.4%
High (secondary) school diploma or equivalency certificate	31.7%	37.2%	48.4%	49.0%
Non-apprenticeship trades certificate or diploma	5.7%	8.1%	5.0%	6.2%
Apprenticeship certificate	5.5%	8.5%	6.5%	2.3%
Program of 3 months to less than 1 year (College, CEGEP and other non-university certificates or diplomas)	5.4%	4.1%	3.2%	5.9%
Program of 1, 2 or more years (College, CEGEP and other non-university certificates or diplomas)	17.7%	16.3%	20.8%	17.3%
University certificate or diploma (pre or post bachelor) or bachelor level	14.2%	7.4%	9.3%	5.2%
Graduate Degree	2.9%	0.7%	0.7%	0.0%
Total	100%	100%	100%	100%

Census 2021

Guided by the Truth and Reconciliation: Call to Actions (2015), employers, government and other stakeholders can collaborate to improve indigenous workforce participation and retention, especially related to *#92 on* policies related to indigenous peoples, and their land and resources;

education; training; employment for indigenous peoples; and education of management and staff towards reconciliation and inclusion.

Conclusion

This paper provided an update on the current state of EDG employment in the automotive sector, as well as in it supply chain, demonstrating that while the sector has come a long way in terms of workforce diversity, especially related to representation of racialised persons, there is room to widen labour market participation for all four EDGs in the automotive workforce. The findings of this paper can inform recruitment and policy solutions to address current and long-term labour shortages facing the automotive sector.

For women, there could be improvements in numbers and the quality of jobs, especially for vehicle assembly, whose numbers have not recovered to pre-pandemic levels. The low proportion of women in the sector suggests employers might want to use recruitment strategies designed to attract young women, including encouraging young women to study in educational areas in STEM where innovation in auto and Industry 4.0 is happening such as in software development, EV technologies, smart factories, and mobility. Companies could also launch recruitment and retention programmes targeted at Indigenous persons, especially given the expansion of the supply chain to mining. Outreach and engagement, and partnerships with educational institutions (secondary schools and higher education institutions) and community organisations could widen the labour pool of companies. Recruitment strategies could include coop. programmes, work-integrated learning, apprenticeships, and mentorship programmes that provide support for EDGs in the early stages of their education and/or career.

There are also opportunities to be more inclusive of persons with permanent disabilities (PPDs) who have traditionally faced marginalisation in the labour force. The aging of the workforce and skills shortages suggests a need to retain older workers, some of whom may have temporary or permanent disabilities, as well as hire from the pool of PPDs who may have skills for diverse occupations. Vehicle assembly has been an innovator in the use of robotics which has helped workers to stay in the workforce. For example, Ford in Germany deployed Robbie the cobot, 'to work with people with reduced mobility to undertake tasks that would otherwise be considered difficult or impossible by such workers due to their ailment' (Industry Insider, 2022). While large companies can afford these technologies, SMEs may need assistance from government to introduce new technologies such as co-bots/robots. Robotics can not only improve productivity and quality, but also assist workers with a physical limitation, including older workers, to continue to work.

Being an inclusive employer is a key competitive factor in attracting and retaining talent. Employers who widen their labour pool by recruiting people of all backgrounds, abilities, and genders, will be able to address labour shortage issues. Those who also provide an inclusive workplace environment will retain people by considering the specific barriers and challenges that

diverse groups face and develop appropriate policies and practices, provide employee training, assistive technologies, and reasonable workplace accommodation.

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