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Automotive Industry Labour Market Analysis: Labour Mobility, Commuting Patterns, and Canada's Automotive Industry

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

Funded by the Government of Canada | Canada

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.

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.

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October 2019

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Introduction

Manufacturing employers in Canada have recently faced tight labour markets. Automotive manufacturing employers, including those that assemble vehicles and those that manufacture parts and components, are no exception. These manufacturers face challenges recruiting and retaining employees with adequate skills. These challenges are the result of several factors, including competition with other manufacturing industries, competition with other industries that require a labour force with a similar skill set (e.g. utilities, construction), and a general shortage of employees with particular skills (e.g. electricians, millwrights, and tool and die makers). In this context, it is important to better understand how the location of automotive manufacturing facilities relative to the communities in which existing and potential employees reside help or hinder manufacturers' ability to recruit and retain employees.

This report draws upon Statistics Canada's commuting flows data to examine the mobility and commuting patterns of motor vehicle manufacturing (NAICS 3361) and Motor Vehicle Parts Manufacturing (NAICS 3363) employees in Canada. In so doing, it provides insight into the extent that such employees are required to commute in order to work in these industries, and how this compares to the average commuting patterns for all Canadians. Specifically, the report focuses on two key variables: 1) duration (in minutes) and 2) location relative to home (i.e. whether the employee commutes within the same Census Sub-Division, outside their Census Sub-Division but within the same Census Division, to a difference Census Division, or to a different province altogether). The report also makes commentary on the commuting patterns of automotive industry employees in the context of their earnings and the location of automotive manufacturing facilities.

Automotive Manufacturing Geography and Labour Mobility

The Geography of the Automotive Manufacturing in Canada

In Canada, passenger car and light truck assembly by automotive Original Equipment Manufacturers (OEMS) such as FCA, Ford, General Motors, Honda, and Toyota takes

place exclusively in southern Ontario. Table 1 illustrates the location of OEM passenger car and light truck assembly plants in Canada at the time of writing (note that General Motors' Oshawa assembly plant is scheduled to close late in 2019). However, there are several bus and heavy truck manufacturing facilities located in Québec, Manitoba, and Ontario (see Table 2). There are also several hundred automotive parts, components, and technology manufacturing facilities across Canada. While the majority of these are located in Ontario, there is a substantial number in Québec, a smaller number in Manitoba, and some in British Columbia and Nova Scotia.

Table 1. Passenger Car and Light Truck Assembly Plants in Canada, September 2019.

Company	Municipality	Census Division	Economic Region	Province
FCA	Brampton	Peel	Toronto	Ontario
FCA	Windsor	Essex	Windsor-Sarnia	Ontario
Ford	Oakville	Halton	Toronto	Ontario
General Motors	Ingersoll	Oxford	London	Ontario
General Motors	Oshawa	Durham	Toronto	Ontario
Honda	New Tecumseth	Simcoe	KW-Barrie	Ontario
Toyota	Cambridge	Waterloo	KW-Barrie	Ontario
Toyota	Woodstock	Oxford	London	Ontario

Table 2. Select Bus and Heavy Truck Assembly Plants in Canada, September 2019.

Company	Municipality	Census Division	Economic Region	Province
MCI (New Flyer)	Winnipeg	Number 11	Winnipeg	Manitoba
New Flyer	Winnipeg	Number 11	Winnipeg	Manitoba
Hino	Woodstock	Oxford	London	Ontario
Paccar	St-Francois-du-Lac	Nicolet-Yamaska	Centre-du- Québec	Québec
Nova Bus	St-Eustache	Deux-Montagnes	Laurentides	Québec
Nova Bus	Ste-Thérèse	Thérèse-De Blainville	Laurentides	Québec
Lion Electric	St-Jérôme	La Rivière-du-Nord	Laurentides	Québec
Prévost	Ste-Claire	Bellechasse	Chaudière-Appalaches	Québec

With the exception of FCA's Windsor assembly plant, most vehicle assembly facilities are located in suburban industrial parks or in smaller towns and cities. The same is true for the majority of automotive parts and components manufacturing establishments. Most of these facilities are not easily accessible by public transit, but have ample parking space. As such, the vast majority of automotive manufacturing employees commute to work in privately-owned vehicles. This is consistent with most manufacturing employees in Canada, but differs considerably from other industries, where employees are more likely to commute via public transit, walking, or other means (e.g. bicycling). This has changed very little in the past two decades.

Commuting to Work – Duration

Table 3 illustrates the duration of employees' commute in minutes in Canada, Ontario, Quebec, Manitoba, and select Economic Regions. On average, 64 percent of Canadians commute for less than 30 minutes every day, while 28 percent commute between 30 and 59 minutes, and 8 percent commute for more than one hour. These patterns vary geographically. For example, the duration of the commute for those who live in large urban areas such as Toronto and Montréal is more likely to be over 30 minutes (and in many cases more than an hour), while the duration of the commute for those who live in Windsor-Sarnia, Estrie, or Centre-du-Québec is more likely to be less than 30 minutes.

Table 3. Commuting Duration of All Employees, Select Geographies.

Geography	**Commuting Duration**		
	Less than 30 minutes	30 – 59 minutes	More than 1 hour
Canada	64%	28%	8%
Ontario	58%	31%	11%
Windsor-Sarnia	81%	17%	2%
London	75%	22%	3%
KW-Barrie	74%	21%	5%
Toronto	43%	38%	18%
Hamilton-Niagara	73%	22%	4%
Stratford-Bruce	77%	19%	4%
Québec	63%	29%	8%
Montréal	40%	45%	16%
Laurentides	74%	23%	4%
Chaudière-Appalaches	79%	19%	2%
Estrie	82%	17%	2%
Centre-du-Québec	83%	14%	3%
Montérégie	73%	23%	4%
Manitoba	71%	25%	4%
Winnipeg	64%	31%	4%

Table 4 illustrates the average duration of the commute of those employed in Motor Vehicle Manufacturing (NAICS 3361). These data show that, on average, Motor Vehicle Manufacturing employees are less likely than the average Canadian to have a short (< 30 minute) commute, more likely to have an intermediate (30-59 minute) commute, and about as likely to have a commute of over one hour. This is likely because of the size and location of vehicle assembly plants – some of which employ over 5,000 people – and the fact that they are required to draw from a large 'labourshed' in order to staff their facilities. The relatively high wages of vehicle assembly plants may also induce employees to commute further distances. These data also show that those living in London, Kitchener-Waterloo-Barrie, and Québec

are much more likely to have a commute of between 30 and 59 minutes or, in some cases (e.g. Kitchener-Waterloo-Barrie, Chaudière-Appalaches), of 60 minutes or more. This is most likely because of the semi-rural location of assembly plants in those regions.

Table 4. Commuting Duration, NAICS 3361, Select Geographies.

Geography	**Commuting Duration**		
	Less than 30 minutes	30 – 59 minutes	More than 1 hour
Canada	55%	36%	9%
Ontario	55%	36%	9%
Windsor-Sarnia	75%	23%	2%
London	51%	44%	5%
KW-Barrie	51%	39%	10%
Toronto	45%	39%	16%
Hamilton-Niagara	78%	20%	2%
Stratford-Bruce	73%	25%	3%
Québec	57%	37%	6%
Montréal	42%	48%	10%
Laurentides	58%	39%	3%
Chaudière-Appalaches	56%	34%	10%
Estrie	58%	42%	0%
Centre-du-Québec	61%	35%	4%
Montérégie	54%	39%	8%
Manitoba	54%	42%	4%
Winnipeg	52%	43%	4%

Table 5 illustrates the average duration of the commute of those employed in Motor Vehicle Parts Manufacturing (NAICS 3363). These data show that, similar to Motor Vehicle Manufacturing employees, Motor Vehicle Parts Manufacturing employees are less likely than the average Canadian to have a short commute and more likely to have an intermediate commute. In contrast to Motor Vehicle Manufacturing employees and all Canadians, however, they are less likely to commute for more than one hour. These data suggest that while Motor Vehicle Parts Manufacturing employees may be required to commute between 30 and 59 minutes as the result of the location of these manufacturing facilities relative to their places of residence, they are less likely to commute for more than an hour due to lower wages relative to those who are employed in vehicle assembly plants.

Table 5. Commuting Duration, NAICS 3363, Select Geographies.

Geography	Commuting Duration		
	Less than 30 minutes	30 – 59 minutes	More than 1 hour
Canada	61%	33%	7%
Ontario	60%	33%	7%
Windsor-Sarnia	75%	22%	2%
London	71%	26%	3%
KW-Barrie	65%	30%	5%
Toronto	44%	44%	12%
Hamilton-Niagara	67%	28%	5%
Stratford-Bruce	72%	24%	4%
Québec	64%	31%	6%
Montréal	39%	47%	14%
Laurentides	71%	29%	0%
Chaudière-Appalaches	75%	21%	4%
Estrie	81%	19%	0%
Centre-du-Québec	83%	14%	3%
Montérégie	63%	32%	5%
Manitoba	67%	30%	3%
Winnipeg	62%	33%	4%

Commuting to Work – Destination

Table 6 illustrates the destination of Canadian employees' commute. These data are based on place of residence and place of work. They show that 58 percent of Canadians commute to work within their Census Sub-Division (CSD), while 21 percent commute to work in a different CSD within the Census Division (CD) in which they reside. Those residing in Windsor-Sarnia (95 percent) and Winnipeg (89 percent) are most likely to reside in the same CD in which they work. Those residing in Laurentides, Montérégie, Toronto, and Montréal are least likely to reside in the same CD in which they work. An additional 20% commute to a CD outside of that in which they reside. Only a very small number – just over 1 percent – commute to a different province (a large number of whom commute within the Ottawa-Gatineau region).

Table 6. Destination of Commute (Geography) of All Canadians, Select Geographies.

Geography	Same CSD	Different CSD, Same CD	Different CD	Different Province
Canada	58%	21%	20%	1%
Ontario	58%	16%	25%	1%
Windsor-Sarnia	60%	35%	5%	0%
London	67%	16%	17%	0%
KW-Barrie	49%	34%	17%	0%
Toronto	53%	11%	36%	0%
Hamilton-Niagara	61%	17%	22%	0%
Stratford-Bruce	48%	29%	23%	0%
Québec	53%	15%	32%	1%
Montréal	52%	12%	35%	0%
Laurentides	33%	23%	45%	0%
Chaudière-Appalaches	53%	18%	29%	0%
Estrie	61%	11%	28%	0%
Centre-du-Québec	54%	23%	23%	0%
Montérégie	38%	23%	39%	0%
Manitoba	76%	10%	13%	1%
Winnipeg	88%	1%	11%	0%

Table 7 illustrates the destination of Motor Vehicle Manufacturing (NAICS 3361) employees' commute. These data show that Motor Vehicle Manufacturing Employees are less likely to commute within the same CSD as all Canadians and more likely to commute to a different CD. Those Motor Vehicle Manufacturing employees who reside the populous Middlesex CD (including London), which is not home to a vehicle assembly plant, are most likely to commute to a different CD. This likely reflects the large number of employees at General Motors' Ingersoll assembly plant and at Toyota's Woodstock assembly plant who reside in Middlesex. Motor Vehicle Manufacturing employees in Québec are also far more likely than all Canadians to commute outside of their CD. One significant exception are Motor Vehicle Manufacturing employees in Windsor-Sarnia, 97 percent of whom work in the same CD in which they reside. This is likely due to the large number of employees at FCA's Windsor assembly plant who reside in the Essex CD, which is bordered by the United States to the South, West, and North.

Table 7. Destination of Commute (Geography) of Motor Vehicle Manufacturing (NAICS 3361) Employees, Select Geographies.

Geography	Same CSD	Different CSD, Same CD	Different CD	Different Province
Canada	31%	32%	36%	0%
Ontario	30%	34%	35%	0%
Windsor-Sarnia	49%	49%	3%	0%
London	25%	19%	56%	0%
KW-Barrie	23%	47%	30%	0%
Toronto	26%	22%	51%	0%
Hamilton-Niagara	43%	45%	13%	0%
Stratford-Bruce	44%	25%	31%	0%
Québec	23%	17%	60%	0%
Montréal	25%	26%	46%	0%
Laurentides	8%	16%	76%	0%
Chaudière-Appalaches	30%	15%	56%	0%
Estrie	30%	17%	53%	0%
Centre-du-Québec	32%	18%	49%	0%
Montérégie	21%	22%	56%	0%
Manitoba	77%	2%	20%	0%
Winnipeg	84%	2%	14%	0%

Table 8 illustrates the destination of Motor Vehicle Parts Manufacturing (NAICS 3363) employees' commute. These data show that Motor Vehicle Parts Manufacturing employees are less likely than all Canadians to commute within the CSD in which they reside, and more likely to commute to a different CD. However, they are more likely than Motor Vehicle Manufacturing employees to commute within the same CSD in which they reside and less likely than Motor Vehicle Manufacturing employees to commute to a different CSD or different CD. Motor Vehicle Parts Manufacturing employees who reside in London and the Centre-du-Québec are among the least likely to commute to a CD other than that in which they reside. Those in Winnipeg are most likely to reside in the same CSD as that in which they reside. One of the reasons that Motor Vehicle Parts Manufacturing employees may not commute as far as Motor Vehicle Manufacturing employees is because their wages of the former are lower than those of the latter, leading to less incentive to travel further for work (especially if other similar-paying employment is available locally, which is often the case when labour markets are tight).

Table 8. Destination of Commute (Geography) of Motor Vehicle Parts Manufacturing (NAICS 3363) Employees, Select Geographies.

Geography	Same CSD	Different CSD, Same CD	Different CD	Different Province
Canada	31%	32%	36%	0%
Ontario	30%	34%	35%	0%
Windsor-Sarnia	49%	49%	3%	0%
London	25%	19%	56%	0%
KW-Barrie	23%	47%	30%	0%
Toronto	26%	22%	51%	0%
Hamilton-Niagara	43%	45%	13%	0%
Stratford-Bruce	44%	25%	31%	0%
Québec	23%	17%	60%	0%
Montréal	25%	26%	46%	0%
Laurentides	8%	16%	76%	0%
Chaudière-Appalaches	30%	15%	56%	0%
Estrie	30%	17%	53%	0%
Centre-du-Québec	32%	18%	49%	0%
Montérégie	21%	22%	56%	0%
Manitoba	77%	2%	20%	0%
Winnipeg	84%	2%	14%	0%

Discussion and Conclusion

Automotive manufacturing employers may want to consider the commuting patterns of current Motor Vehicle Manufacturing and Motor Vehicle Parts Manufacturing employees when developing their recruitment and retention strategies. As the data herein show, the commutes of both Motor Vehicle Manufacturing and Motor Vehicle Parts Manufacturing employees are longer in duration and in distance than those of all Canadians. They also show that the commutes of Motor Vehicle Manufacturing employees are longer in duration and in distance than those of Motor Vehicle Parts Manufacturing employees. This is likely a function of the relative high wages of Motor Vehicle Manufacturing employees, the location of vehicle assembly facilities, and the size of those facilities, which require employers to recruit from a large geographic area or 'labourshed.'

Based on these data and other research conducted as part of this project, it is reasonable to assume that vehicle assemblers can continue to rely on employees who commute between 30 and 59 minutes by personal vehicle. However, automotive parts manufacturing employees may face more challenges as a result of their location relative to the communities in which existing and prospective employees reside. In some municipalities, notably Windsor, these employers can expect that the majority of their employees reside in nearby communities. However, in most, automotive parts

manufacturing employers must recruit from beyond their immediate locale. This can present challenges, especially in instances when wages are insufficient to induce employees to drive longer distances or to afford a personal vehicle altogether. In such cases, employers may need to consider solutions that are tailored to their particular situation.

These tailored solutions are necessary because the situations of individual automotive parts manufacturing employers can differ considerably. These differences include the location of the facility (is it in a large population centre or in a small town?) and the size of the facility (does it employ 50 people? Or 1000?). An employer with a large manufacturing facility in an industrial park on the outskirts of a large population centre that is reliant on manufacturing may be able to work with municipal transit commissions to improve bus schedules as to better service their employees' needs and schedules. Recent examples of the latter can be found in Windsor, where municipal transit commissions have improved bus service to industrial parks in LaSalle and even to Leamington's greenhouses (CBC News, 2019; Cross, 2019) and in London, where more buses to industrial parks focused on shift times commenced earlier this year (DeBono, 2018). However, smaller employers or those located in small communities that lack municipal public transit, may need to consider other solutions. These include employer-organized carpools or employer-provided transportation (e.g. private buses) from larger population centres to manufacturing facilities (several large automotive parts manufacturers in communities north of London and Kitchener-Waterloo currently employ such a strategy).

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