

**Labour Market Demographics and Job Quality in Canada's Automotive Assembly and
Automotive Parts Manufacturing Industries, 2000-2017**

Name: Shannon M. Miller

Supervisor: Dr. Suzanne Mills

MA in Work & Society

September 2018

Contents

List of Figures.....	3
List of Tables	4
Introduction.....	7
I - “Men, Metal and Machines:” Job Quality and Gender-based Occupational Segregation in Automotive Manufacturing	9
Fordism, Gender, and the Automotive Industry, 1950s-1970s	10
Automotive Industry Restructuring & Persistent Occupational Segregation, 1970s-2010s	13
II - Canadian Labour Market Changes, 1970s-2010s.....	20
III - Methodology	26
IV - Results	27
V - Discussion & Conclusion.....	49
References.....	56

List of Figures

<i>Figure 1: Women's Canadian Labour Force Participation, 1977 to 2017</i>	20
<i>Figure 2: Older Workers' Canadian Labour Force Participation, 1977 to 2017</i>	22
<i>Figure 3: Proportion of Jobs Occupied by Women in Select Canadian Industries, 1987 to 2017</i>	29

List of Tables

<i>Table 1: Proportion of Jobs Occupied by Older Workers in Select Canadian Industries, 2000 and 2017.....</i>	30
<i>Table 2: Proportion of Jobs Occupied by Core-aged Workers in Select Canadian Industries, 2000 and 2017.....</i>	30
<i>Table 3: Proportion of Jobs Occupied by Young Workers in Select Canadian Industries, 2000 and 2017.....</i>	30
<i>Table 4: Age Distribution of Men's Employment in Select Canadian Industries, 2000 to 2017... </i>	31
<i>Table 5: Age Distribution of Women's Employment in Select Canadian Industries, 2000 to 2017</i>	31
<i>Table 6: Union Density in Select Canadian Industries, 2000 to 2017</i>	32
<i>Table 7: Proportion of Permanent Jobs in Select Canadian Industries, 2000 to 2017.....</i>	33
<i>Table 8: Proportion of Full-Time Jobs in Select Canadian Industries, 2000 to 2017</i>	33
<i>Table 9: Average Hourly Wages in Select Canadian Industries Compared to All Industries, 2000 to 2017 (Nominal Dollars.....</i>	34
<i>Table 10: Average Hourly Wages in Select Canadian Industries, 2000 to 2017 (Real Dollars).. </i>	34
<i>Table 11: Men's Union Density in Select Canadian Industries, 2000 to 2017</i>	35
<i>Table 12: Women's Union Density in Select Canadian Industries, 2000 to 2017</i>	35
<i>Table 13: Younger Workers' Union Density by Age, 2000 to 2017</i>	36
<i>Table 14: Core-Aged Workers' Union Density by Age, 2000 to 2017</i>	36
<i>Table 15: Older Workers' Union Density by Age, 2000 to 2017.....</i>	37
<i>Table 16: Men's Union Density by Age in Select Canadian Industries, 2000 to 2017</i>	37
<i>Table 17: Women's Union Density by Age in Select Canadian Industries, 2000 to 2017</i>	37

<i>Table 18: Proportion of Men in Permanent Employment (versus Temporary) in Select Canadian Industries, 2000 to 2017</i>	40
<i>Table 19: Proportion of Total Permanent and Temporary Jobs Occupied by Men in Select Canadian Industries, 2000 to 2017.....</i>	40
<i>Table 20: Proportion of Women in Permanent Jobs (versus Temporary) in Select Canadian Industries, 2000 to 2017</i>	40
<i>Table 21: Proportion of Total Permanent and Temporary Jobs Occupied by Women in Select Canadian Industries, 2000 to 2017.....</i>	40
<i>Table 22: Proportion of Workers by Age in Permanent Jobs (versus Temporary) in Select Canadian Industries, 2000 to 2017.....</i>	40
<i>Table 23: Proportion of Men by Age Group in Permanent Jobs (versus Temporary) in Select Canadian Industries, 2000 to 2017.....</i>	41
<i>Table 24: Proportion of Women by Age Group in Permanent Jobs (versus Temporary) in Select Canadian Industries, 2000 to 2017.....</i>	41
<i>Table 25: Proportion of Men in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017</i>	42
<i>Table 26: Proportion of Women in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017</i>	43
<i>Table 27 and 28: Workers' Share of All Jobs by Job Status in Select Canadian Industries, 2000 to 2017</i>	43
<i>Tables 29: Proportion of Women by Age in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017.....</i>	43
<i>Table 30: Proportion of Men by Age in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017</i>	44
<i>Table 31: Average Hourly Wages versus Overall Average Wages in Select Industries, 2000 (Nominal Dollars).....</i>	45

<i>Table 32: Average Hourly Wages versus Overall Average Wages in Select Industries, 2017 (Nominal Dollars).....</i>	45
<i>Table 33: Men's Average Hourly Wages in Select Industries (Compared to All Industries), 2000 & 2017 (Nominal Dollars).....</i>	45
<i>Table 34: Women's Average Hourly Wages in Select Industries (Compared to All Industries), 2000 & 2017 (Nominal Dollars).....</i>	45
<i>Table 35: Men's Average Hourly Wages in Select Industries, 2000 & 2017 (Real Dollars).....</i>	46
<i>Table 36: Women's Average Hourly Wages in Select Industries, 2000 & 2017 (Real Dollars)...</i>	46
<i>Table 37: Average Hourly Wages in Select Industries by Age (Compared to All Industries), 2000 & 2017 (Nominal Dollars).....</i>	46
<i>Table 38: Average Hourly Wages in Select Industries by Age (Compared to All Industries), 2000 & 2017 (Real Dollars)</i>	47
<i>Table 39: Men's Average Hourly Wages in Select Industries by Age (Compared to Automotive Assembly and Automotive Parts Manufacturing Average Wages), 2000 & 2017 (Nominal Dollars).....</i>	47
<i>Table 40: Women's Average Hourly Wages in Select Industries by Age (Compared to Automotive Assembly and Automotive Parts Manufacturing Average Wages), 2000 & 2017 (Nominal Dollars</i>	48
<i>Table 41: Men's Average Hourly Wages in Select Industries by Age, 2000 & 2017 (Real Dollars).....</i>	48
<i>Table 42: Women's Average Hourly Wages in Select Industries by Age, 2000 & 2017 (Real Dollars).....</i>	48

Introduction

Canada's automotive industry has traditionally provided secure, well-paying jobs to core-aged men, and remains an important source of middle-class employment. However, in recent decades, the industry has undergone significant restructuring due to economic downturns, new systems of production organization, and the emergence of Japanese-based automakers with non-union workforces (Klier & Rubenstein, 2013; Holweg, 2008; Holmes, 2004; Rutherford & Holmes, 2007). Much of this industry restructuring occurred alongside or following broader shifts in workforce demographics and the quality of work. These demographic changes include an increase in the proportion of women and older workers in Canada's labour market. Women now comprise almost half of Canada's workforce and the proportion of workers over the age of 65 almost doubled between 1995 and 2015 (Statistics Canada, 2017). Moreover, job quality in Canada has declined as measured by union density – an indicator that workers have representation and most likely better working conditions - and permanent full-time jobs (Statistics Canada, 2018e; Statistics Canada, 2017b; Galarneau, 2005; Lewchuk, 2017). It is unclear whether these demographic and job quality trends have influenced work in Canada's automotive industry.

Canada's automotive manufacturing industry is an area of interest for researchers, consumers, workers, and governments due to the historical importance of automotive production and employment. In Canada, manufacturing is concentrated in Ontario and Québec, where most production facilities and jobs are located. In 2000, of the 2,242,300 jobs in manufacturing, roughly 214,000 were in automotive assembly and automotive parts manufacturing (Statistics Canada, 2018f). From 2000 to 2009, Canada lost more than 490,000 manufacturing jobs, the

majority of which were in food processing, light manufacturing (e.g. garments), automotive assembly, and automotive parts manufacturing (Statistics Canada, 2018f; Leach, 2016, 130).

During this time, the number of automotive industry jobs decreased from 214,000 to 120,700, with most of these jobs being lost around the 2008/2009 recession (Statistics Canada, 2018f). Between 2009 and 2017, Canada's automotive industry recovered slightly. It now employs approximately 130,000 people, over 95% of whom are employed in Ontario (Sweeney & Mordue, 2017, s6).

While some studies address job quality and demographics in the automotive industry, there is little analysis of how these factors are connected or at how they have changed since the industry peak in 1999. Many authors have addressed the sexual division of labour in automotive manufacturing (Lewchuk, 1993; Milkman, 1983; Pietrykowski, 1995) and job segregation based on race, age, and immigration status (Wood, 2006; Leach, 2008; Sugiman, 2001). However, these sources either explore the history of exclusion in manufacturing generally or, if they do focus on automotive manufacturing, are limited to plant-specific changes in gender and race distribution. Literature regarding automotive job quality references the material gains achieved during the peak of the Fordist regime, (Peters, 2009, 267; Quadagno et al., 2003) in addition to the declining union density and increase in bargaining concessions made by automotive unions (Klier & Rubenstein, 2013; Rose, 2015; Goolsbee & Krueger, 2015). A gap remains regarding the contemporary demographics of the automotive industry since its peak, more recent changes in automotive industry job quality, and how these are related.

This study addresses this gap by examining changes in the demographic composition and quality of work in Canada's automotive industry between 2000 and 2017. More specifically, the study examines the gender and age composition of Canada's automotive assembly and

automotive parts manufacturing industries, and the quality of automotive industry work by analyzing wages, unionization rates, job permanency, and the proportion of full- and part-time workers. The paper is organized as follows. Section I reviews literature that examines links between identity and job quality in the Canadian automotive industry. This includes the historical link between higher quality automotive work and masculinity through the peak Fordist era (from the 1950s), persistent gender-based segregation during the 1980s and 1990s, and, more recently, declining job quality. Section II provides an overview of Canadian labour market demographics and job quality changes since the 1970s. This section provides context for the labour market variables examined in the study. Section III outlines methodology, while Section IV describes key findings. Section V discusses the significance of the findings and how they align with assumptions made prior to data analysis. While the broader labour market has experienced major demographic shifts in the last few decades, the same cannot be said for automotive manufacturing. Employment in the automotive industry is still male-dominated, and while job quality in automotive manufacturing is still better than job quality in all industries, this disparity has narrowed.

I - “Men, Metal and Machines:” Job Quality and Gender-based Occupational Segregation in Automotive Manufacturing

The following section reviews literature about job quality and occupational segregation in automotive manufacturing. This review is organized around two themes. The first theme examines the emergence of high-quality work and blue-collar masculinity during the Fordist era.

This facilitated a gendered division of labour by providing middle-class wages within male-dominated automotive workplaces. The second theme explores the post-1970s restructuring of the automotive industry, its impacts on job quality, and the persistent gender-based occupational segregation within the industry.

Fordism, Gender, and the Automotive Industry, 1950s-1970s

Automotive manufacturing was historically organized around Fordist production processes that relied on a gendered division of labour, Taylorist management principles, and higher-paying, more secure jobs. Fordism describes a social and economic system that was marked by a shift from craft production to mass production and consumption (Peters, 2009, 267). In the early 1900s, this system was pioneered by and named for Henry Ford of Ford Motor Company, who invented the moving assembly line to manufacture the Model T automobile (Williams et al., 1992, 518). The system was further developed - in the automotive industry - to include lower unit prices and relatively high rates of compensation to allow workers to consume the products they produced.

Automotive manufacturing was at the centre of postwar development in North America, which is evident through the impact of automotive industry labour-management relations on unionized manufacturing negotiations. Employers were beholden to “legislative minimum standards, formal union rules... seniority clauses... and grievance procedures” that improved working conditions for workers (Lewchuk et al., 2001, 80). Fordism led to increased material gains and job security, particularly from the 1940s to the 1960s (Peters, 2009, 267; Quadagno et al., 2003). Moreover, many of the jobs that promised secure employment and retirement

provisions were male-dominated and unionized, which have been dwindling since the early 1970s (Quadagno et al., 2003, 640-1).

While Fordism secured full-time work for men, women's participation in the labour market was largely considered temporary, and their wages were considered secondary to those supplied by men. The Fordist regime may have improved the household incomes of some women who lived with men, but women did not have economic independence since they could not access the same high-quality jobs as some men. As women began to enter the labour market in greater numbers, they were characterized as a disposable reserve army of labour whose wages were supplementary to the household wage (McDowell, 1991, 402). Conversely, men's paid work was perceived as more instrumental in maintaining a nuclear family household. The modern family structure, which involves both a leading male breadwinner and female caretaker who performs unpaid labour within the home sustained the Fordist production regime. Moreover, the paid labour performed by women was primarily in undervalued domestic and service jobs, which indicates the construction of active masculinity in contrast to passive femininity through work, which was applied across male-dominated manufacturing industries (McDowell, 1991, 402).

Blue-collar masculinity is a common theme in research about exclusion in the manufacturing sector. Blue-collar employment created working-class communities and established men's roles as providers within their families and society (Linkon, 2014, 149). Working-class masculinities were shaped in all-male workplaces, with the entry of women into these spaces being perceived as an invasion (Meyer, 1999, 117). Unions were complicit in the production of working-class masculinities. For example, language often referred to labour collectives as brotherhoods (Baron, 2006, 150). The use of masculine terms to describe their core

membership affected union organizing efforts and how they represented workers. As a result, women autoworkers in the 1940s were underrepresented in union leadership and silenced in union forums even though they expressed commitment to the union and were active members (Sugiman, 2001, 97).

By exploring issues that arose when women entered blue-collar work, Swerdlow (1989, 374) concludes that the primary challenge to women remaining in these jobs was resentment from male workers. Although the employment of women did not threaten male workers' job security, they held onto the belief that men's skill and superiority was challenged by women performing as well as they did (Swerdlow, 1989, 374). Challenges to masculine culture are characterized as crises or "travails of the masculine psyche," which frames social, or economic shifts as a defeat for masculinity or a problem that must be remedied (Baron, 2006, 144). The entry of women into blue-collar jobs prompted male workers to preserve their quality of work by limiting the employment of women (Creighton, 1996, 322). To do so, male workers would marginalize women to restrict their access to men's work, or single out female workers to question their competence, motivated by this perceived threat to their masculinity (Creighton, 1996, 323; Swerdlow, 1989, 376). Maynard (1989) and Lewchuk (1993, 825) share the sentiment that by clinging to the common thread of masculinity - despite class differences, increased de-skilling, alienation, and opposition in economic interests - male workers have likened themselves to the employer.

Key automotive manufacturers, government officials, and male workers played a role in reshaping and conceptualizing masculinity and men's work (Lewchuk, 1993; Meyer, 2002; Creighton, 1996; Pietrykowski, 1995). Automobile production plants were described as a "social and cultural world of men, metals and machines" (Meyer, 2002, 126). Furthermore, within

automotive manufacturing plants, there was a combination of both rough and respectable masculinity. On shop floors, male workers perpetuated rough masculinity through playfulness, language, and “confrontational opposition to management,” while experiencing aspects of respectable masculinity through high-paying, stable, and union-represented employment (Woodhall and Leach, 2010, 46; Meyer, 1999, 119). These hubs of masculinity were maintained by excluding women from these spaces altogether, or confining them to female-dominated departments like upholstery or automotive parts manufacturing (Pietrykowski, 1995, 40).

During World War II, women entered the high-wage automotive industry - albeit temporarily – to remedy a wartime labour shortage (Milkman, 1982, 365). A close examination of women industrial workers shows that employers resisted hiring women to do men’s jobs, and would isolate women from their male coworkers (Milkman, 1982, 335; Lewchuk, 1993, 830). Compared to 11% of the men, more than half of the women employed in automotive plants were confined to five of the seventy-two job classifications (Milkman, 1982, 49). This was done in spite of women’s productivity levels matching those of male workers (Lewchuk, 1993, 831). While women’s wartime contributions have been celebrated by feminist movements as proof of shifting ideology, their inclusion in the workforce was limited and only out of necessity given the shortage of male labourers. Once men returned to their jobs, women were segregated back into the private sphere or lower-paying retail, service, or clerical work.

Automotive Industry Restructuring & Persistent Occupational Segregation, 1970s-2010s

Since the 1970s, the Canadian automotive industry has undergone significant restructuring. These changes include new entrants into the North American market, the

emergence of new, more flexible production systems like lean manufacturing, and increasing diversity in the broader labour market. In addition, just-in-time production, “quality control at source,” outsourcing and other output-focused mandates are now common within automotive manufacturing (Cooney, 2002; Holmes, 2004). The shift towards lean production intensified the work process, with parts being delivered to factories only as needed in order to maximize profits (Aronowitz & Moody, 1998, 120). The result was a practice referred to as management by stress where the pressure of this system pushed workers to resolve problems as quickly as possible to meet production targets, at the expense of control over the work process (Herod, 2000, 523).

From the 1970s to the early 1980s, increasing globalization and the 1981-1982 recession intensified competition between the North American Big Three automakers (General Motors, Chrysler, and Ford) and Japanese automakers (Anderson & Holmes, 1995, 659). This led to rising imports of automobiles built in Japan to North America, followed by “Asian direct investment into North American... production facilities,” which are referred to as transplants (Anderson & Holmes, 1995, 659). To compete with these Japanese producers, North American automakers invested in newer production systems, including automation, and work and production reorganization. Following the 1981-1982 recession, the Canadian automotive industry had a better recovery than the American industry and went on to experience strong growth throughout the 1980s and 1990s (Anderson & Holmes, 1995, 659). Chung et al. (2002, 8) explain that much of the increase in North American automobile output was due, in part, to production by Japanese transplants.

Since the automotive industry peak of 1999, the industry has changed in ways that negatively affected workers within the industry. In 1999, Canada was the fifth largest automobile producer in the world behind the United States, Japan, Germany, and France. Canadian

automotive manufacturers produced more than three million light vehicles, building one-fifth of the vehicles in North America (Anastakis & Van Biesebroeck, 2010, iii). In the last decade, Canada has been overtaken as a lead automobile producer by countries like China, South Korea, and Mexico (Anastakis & Van Biesebroeck, 2010, iii). The 2009 collapse of the North American automotive industry was marked by an extended decrease in market share, the bankruptcy of General Motors and Chrysler, a sharp decline in production output and an over-75 billion-dollar bailout of these automotive firms by American and Canadian governments (Anastakis & Van Biesebroeck, 2010, iii-siv). This economic crisis resulted in the loss of more than 40,000 jobs in Canada's automotive industry, and economic displacement throughout North America (Bernard, 2015). Moreover, the industry-wide restructuring that resulted from the 2008/2009 recession helped to restore the Big Three carmakers within the competitive global market. One strategy employed by North American automakers was to reduce labour costs by hiring fewer workers, particularly hourly employees whose workforce decreased by 34% between 2007 and 2009 (Klier & Rubenstein, 2013, 150). Labour cost reduction also included reducing the wage premium between Big Three workers, indicating a decline in automotive job quality (Klier & Rubenstein, 2013, 151).

The increasing competition in the automotive industry negatively affected union density, and compromised the leverage unions had in bargaining on behalf of workers. Since 2009, there has been an increase in the share of Canadian employment held by transplant, or foreign-owned companies like Honda and Toyota (Sweeney & Mordue, 2017, s10). While production and trades employees in Big Three plants are unionized, plants in America operated by Honda and Toyota are not (Goolsbee & Krueger, 2015, 6). Between 2000 and 2013, employment in Big Three plants fell by half, while employment in transplant factories almost doubled (Goolsbee &

Krueger, 2015, 6). Factors like increasing contention between unions and employers, as well as the inability of unions to make significant gains for their members, have also contributed to declining density rates (Rose, 2015, 103).

In the last few decades, the loss of manufacturing jobs within Canada has caused a corresponding decline in union density as the non-union service sector expanded (Johnson, 2002, 339). The resulting loss of bargaining power has led to concessions in wages and benefits in exchange for investment and job security (Quadagno et al., 2003, 643). An example of a bargaining concession that has become a divisive topic for unions is the two-tier wage system. In 2007, the Big Three and the United Autoworkers in the United States agreed to a limited two-tier wage system, cutting the wages for some new hires to half the earnings of incumbent union members (MacNeil, 2013, 182). This system was extended to all new hires following the recession of 2008/2009. The concession sparked criticism from American union membership because of the disadvantaged position it created for new hires, and its incongruence with the principle of equal pay for equal work (Chaison, 2012, 15). While the Canadian Autoworkers Union (CAW) rejected two-tier compensation systems, the union accepted concessions like extending the grow-in period for new hires to acquire full wages and benefits (Rutherford & Holmes, 2013, 124). These decisions eroded working conditions, faith in the union, and solidarity among workers, as those in the lower tier or with longer grow-in periods were likely to be younger, newer entrants who were frustrated by doing similar work as those in the upper tier, for significantly less compensation.

While the automotive manufacturing industry has changed substantially in the last few decades, a culture of masculinity remains, limiting women's access to well-paying employment. Woodhall and Leach (2010, 48) explain that while automotive assembly offered some of the

highest-paid "unskilled or semi-skilled jobs" in Ontario, at an average hourly wage of \$27 in 2002, women did not typically hold these positions. The 2006 census demonstrated that 22% of the total workers in Ontario's automotive assembly sector were women (Woodhall & Leach, 2010, 48). Women in automotive manufacturing ordinarily worked in the more volatile and largely non-union automotive parts industry, where the hourly rate of pay ranged from \$12 to \$30. In an analysis of employment opportunities for women in rural Ontario, Leach (2016) notes the tendency of automotive parts manufacturers to seek out low-skilled workers like women for non-union, low-paying work in automotive parts manufacturing. Women in these rural communities – some of whom were unionized – achieved financial independence that is uncommon for women in these regions (Leach, 2016, 137). This granted them the ability to contribute to their household earnings, take care of their children, or leave partners that they no longer wanted to live with. The financial independence also allowed them to purchase consumer goods like clothes dryers which alleviated some of their household responsibilities (Leach, 2016, 137). The introduction of these rurally situated women into traditionally male-dominated jobs disrupted gender role expectations that are based in the male breadwinner model.

Despite the increase in the number of women employed in automotive manufacturing, barriers to increased female participation in the automotive industry persist. These include the volatility of the industry, work design/organization, and the lack of representation regarding women's issues. The volatility of the automotive industry and exclusiveness of automotive assembly jobs have deterred some women from seeking employment in that industry (Leach, 2016). In terms of work design, manufacturing work was historically designed for men's bodies and physical needs and repetitive strain injuries and musculoskeletal disorders were found to be more common in female autoworkers (Woodhall and Leach, 2010, 50). Furthermore, harassment

on the job from co-workers and management has also made it difficult for women to retain employment, and they would sometimes be punished for complaints by being overlooked for advancement opportunities (Leach, 2016, 139).

Additional factors that affected women's opportunities within the automotive workplace include the demands women faced within the private sphere that were not evenly redistributed with their increased participation in paid work (Woodhall and Leach, 2010, 45). For example, some women voluntarily left "good [unionized] jobs" in automotive assembly due to the difficulties they faced in balancing rotating shifts and frequent overtime with childcare and other household responsibilities. Some female autoworkers dealt with these issues in the face of unsupportive management and male co-workers, due to women's issues being perceived as trivial, and the gender imbalance in unions.

Union attempts to increase and engage a more diverse membership have faced the challenge of addressing the needs of female workers (Chaykowski & Powell, 1999, s17). Moreover, some unions have the additional challenge of changing their internal organizational structures which have traditionally had deeply entrenched patriarchal practices and male-dominated leadership (Chaykowski & Powell, 1999, s17). Woodhall and Leach (2010) argue in support of programs that advocate for women's interests in male-dominated workplaces, stating these collectives may lead to better opportunities for women in the industry. For example, in the 1990s the Canadian Autoworkers Union (CAW - now Unifor) negotiated for Women's Advocates in the automotive workplace to deal with concerns regarding violence, harassment, or discrimination within the workplace (Briskin, 2006, 25). The CAW has also promoted initiatives around child care, successfully negotiating for supportive infant care funding since the 1980s (Briskin, 2006, 25). While these advocacy programs need thorough evaluation systems to ensure

effectiveness, little was offered within the literature regarding the metrics for the success of these programs or more contemporary efforts for equity in automotive manufacturing. Women's participation in the automotive industry has increased, but there are still flaws in how the firms and labour unions accommodate women's unique needs within this male-dominated industry. Furthermore, there is a lack of contemporary literature about the proportion of female workers in the North American automotive manufacturing industry and the type of work they perform, particularly after the recession of 2008/2009.

While the automotive industry has changed with regard to globalization and the demands of competition, little is offered in the literature regarding contemporary demographic changes within the automotive industry. The Canadian automotive industry has historically been male-dominated (Lewchuk, 1993; Milkman, 1982; Meyer, 2002), with higher than average rates of unionization, higher wages, and higher proportions of permanent employees (Yates & Leach, 2007; Quadagno, et al., 2003; Woodhall & Leach, 2010). However, the Canadian automotive industry also faced restructuring in the years leading up to, during, and following the Great Recession. This led to extensive job loss and a decrease in union density in the industry (Sweeney and Mordue, 2017). There is a gap in the literature about demographic changes in the automotive industry before and after the recession of 2008/2009, specifically about the proportion of women and older workers within the industry. Given the history of discrimination based on gender and age in automotive manufacturing employment, this is an area of interest for labour scholars and women's studies researchers. To address these gaps, this study examines gender and age demographic trends in automotive assembly and automotive parts manufacturing employment. Furthermore, the study evaluates changes in job quality in automotive manufacturing, using unionization rates, wages and job status as quality indicators.

II - Canadian Labour Market Changes, 1970s-2010s

This section reviews changes in the Canadian labour market since the 1970s. This includes the evolution of Canadian labour market demographics with regard to age and gender, and job quality shifts such as decreased union density and the proportion of full-time permanent jobs.

Canadian labour market demographics have changed substantially since the 1970s. Some changes include increases in the participation of women, immigrants, and older workers (Burke & Ng, 2006). Core-aged women's labour force participation rose from 42% in 1970 to 76% in 1990, then to 85% in 2014 (Statistics Canada, 2018a). In addition, women increased from 37.4% of Canada's labour force in 1976 to 47.4% in 2017 (Figure 1; Statistics Canada, 2018f).

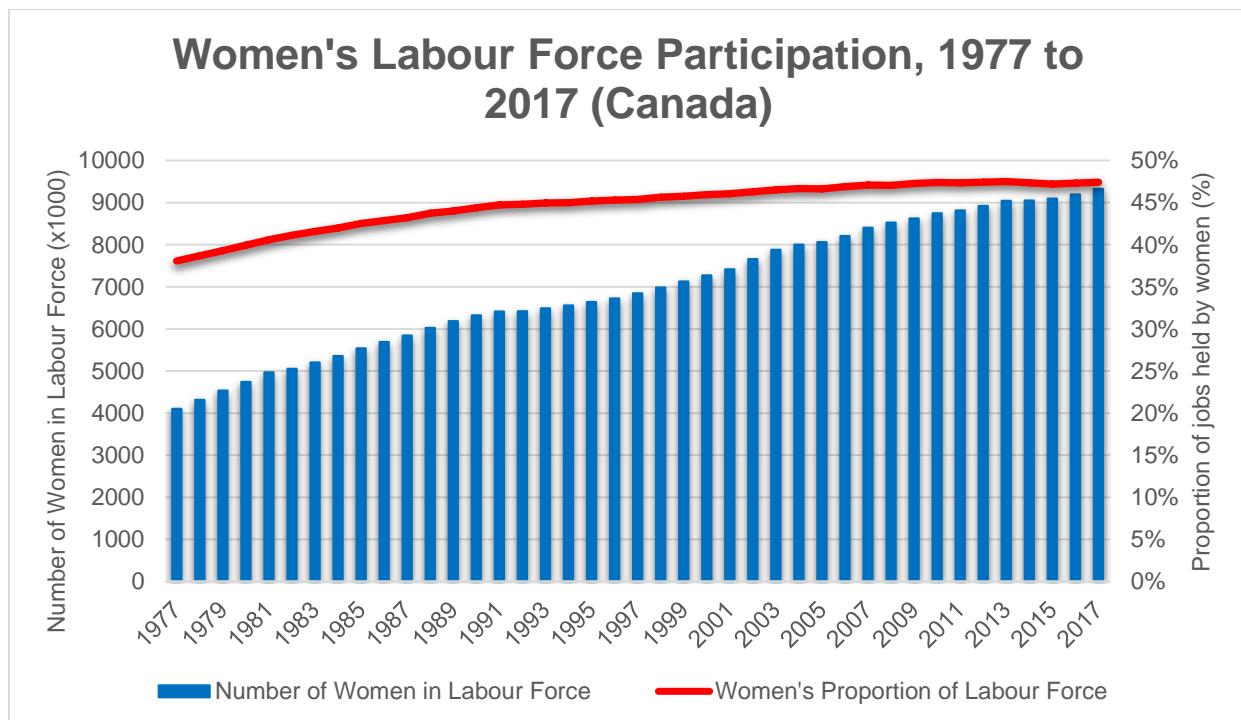


Figure 1: Women's Canadian Labour Force Participation, 1977 to 2017 (Source: Statistics Canada, 2018a - Table 14-10-0023-01)

Various factors affected women's increased labour force participation in North America. For instance, the feminist movements of the late 1960s and 1970s challenged the imposition of nuclear family structures and gendered division of labour, prompting American and Canadian legislation that prohibited discrimination on grounds like gender and race (Evans, 1980, 17). Chaykowski and Powell (1999, s7) attribute Canadian women's increased work participation during the 1970s to the resulting change in culture and the normalization of dual-earner families. During the 1980s, North American labour market fluctuations and welfare restructuring widened the gap between the richest and poorest households. As a result, more working-class women were required to participate in paid work outside the home – in addition to unpaid work within the home - to maintain their standards of living (McDowell, 1991, 415).

Throughout the 1980s and 1990s, women's entry into the labour market was affected by political and economic restructuring. For example, within Ontario, government cuts to social services eroded supports for care work that women typically performed (Benzanson, 2006, 5). While full-time permanent employment declined for men and women, women were more likely to enter low-paid, precarious employment given the lack of support needed to remain in full-time permanent work (Cranford et al., 2003, 454). Therefore, despite an overall increase in women's participation in paid work, it was not proportional to the quality of work that was accessible to men in previous decades.

Women's labour force participation increased from 37% to 47% between 1976 and 2003, and has stabilized at between 47% and 48% since (Statistics Canada, 2018f). A more prevalent demographic shift since then has been the increasing proportion of the workforce comprised of those over the age of 55. Since the 1990s, the proportion of workers above the age of 55

increased significantly (Statistics Canada, 2017a). Between 1996 and 2016, the labour force participation of people 55 years rose from 22% to 38% (Fields et al., 2017). Workers 55 years and over increased from an 11% share of the labour force in 1976 to 21% in 2017 (Figure 2).

Within this cohort of older workers, 53.5% of men over 65 years (retirement age) reported working in 2015, compared to 38.8% of women over 65 (Statistics Canada, 2017a).

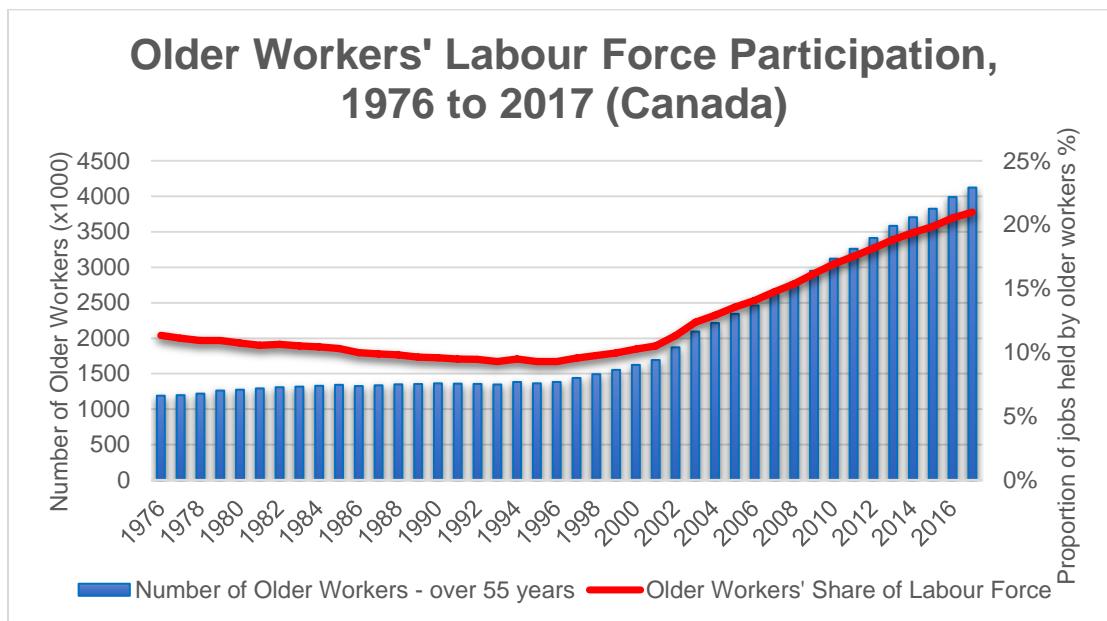


Figure 2: Older Workers' Canadian Labour Force Participation, 1977 to 2017 (Source: Statistics Canada, 2018a - Table 14-10-0023-01)

Most of the aging workforce growth occurred between 1996 (24%) and 2007 (33%), and was partially attributed to declining fertility rates, longer lifespans due to improved health, lower levels of wealth, and low rates of return on their assets due to economic downturns (Beach, 2008; Fields et al., 2017; Carriere & Galarneau, 2011). Furthermore, in the early 2000s, there was an emerging concern about shortages of skilled workers in Canada, resulting in the prolonged employment of older workers (McMullin & Cooke, 2004, 33). Prior to December of 2006, there were no provisions in Canadian legislation that prohibited hiring, promotion and termination

decisions for employees over the age of 65 (OHRC, 2006; CHRC, 2011). This meant that employees were unprotected against policies regarding mandatory retirement at the age of 65. Starting with Ontario in 2006, most Canadian provinces – except New Brunswick – have repealed mandatory retirement laws (CHRC, 2011; AWCBC, 2014). In 2012, the Canadian Human Rights Act and Canada Labour Code were amended to prohibit federally regulated employers from enforcing mandatory retirement for workers over the age of 65 (Legal Line, 2018; AWCBC, 2014).

The recession of 2008/2009 affected the employment and retirement behaviours of older workers differently than previous recessions. Economic downturns of the 1980s and 1990s caused older workers to be made redundant to make room for younger workers (Beck, 2013, 258). However, during and immediately following the 2008/2009 recession, younger workers were more likely to lose their jobs than older workers, as a result of restructuring. The protection of older workers was, in part, because of workplace seniority rights that grant the preference for employment opportunities based on a worker's length of service.

The 2008/2009 economic downturn caused a decline in financial assets and home equity, prompting older workers to save more, extend their working lives, or survive on less during retirement (Munnell & Rutledge, 2013, 125). Many opted for a combination of working longer and resigning themselves to a lower retirement payout. Furthermore, laid-off late-career workers in America remained jobless longer than they in previous recessions, leading many to retrieve low incomes from Social Security and disability benefits (Munnell & Rutledge, 2013, 139). According to Neumark and Button (2014), lengthier unemployment durations suggest eroding social safety net protections, which threatens the retirement security of older workers. Without legislative restrictions on how long an employee can work, many older workers have remained in

the labour force. However, the rising proportion of older workers presents a number of challenges for new entrants to the workforce and for firms that are concerned about older workers' abilities to adapt to newer work systems.

Over the same period, there has also been an overall decline in the quality of work. Since the 1980s, the quality of some jobs in North America has deteriorated. Indicators of this include union density decline, and the decreased proportion of full-time permanent jobs (Statistics Canada, 2018e; Statistics Canada, 2017b; Galarneau, 2005; Lewchuk, 2017). Despite Canadian unions faring better than American unions, union density has declined (Rose, 2015, 101; Statistics Canada, 2018e). Between 1981 and 2014, Canada's unionization rate decreased from approximately 38% to 29%, with most of the decline occurring during the 1980s and 1990s (Galarneau & Sohn, 2013). This loss of union density was primarily observed among male workers, who decreased from a 42% unionization rate in 1981 to 27% in 2014 (Statistics Canada, 2018e).

The changes to union density affected workers differently based on age and gender. For instance, the decrease in union density in all industries was most prevalent among workers under the age of 25. The declining unionization rate among young men was due – in part – to the de-unionization of male-dominated industries like construction and manufacturing (Statistics Canada, 2018e). However, while men's unionization rate declined significantly from 1981 to 2012, women's unionization rate was more stable, fluctuating from 31% to 32% during this time (Galarneau & Sohn, 2013). Older women were the only group to increase in union density, with those over the age of 55 years experiencing a 7% union density increase (Statistics Canada, 2018e). The stable or rising unionization of core-aged and older women is likely due to them being concentrated in highly unionized public sector industries like healthcare and education

(Statistics Canada, 2018e). This gender discrepancy is likely a result of the over-representation of older women in the public sector, particularly education and health care, sectors that have had stable and - in some cases - rising union density over this period (Statistics Canada, 2018e).

While public sector unionization rates increased from 70.4% in 1999 to 71.3% in 2014, private sector unionization rates decreased from 18% to 15% (Statistics Canada, 2018e).

The decreasing proportion of core-working-aged men and women in permanent, full-time work is further evidence of declining job quality. Especially from the late 1990s to the early 2000s, non-standard or precarious employment grew at a faster rate than permanent employment (Galarneau, 2005). This is the result of prior economic and technological shifts within the global labour market, in addition to increasing competition among firms causing a demand for flexible labour (Kalleberg, 2009, 2). From 2005 to 2015, there was a shift from full-time, permanent work to part-time and temporary work (Statistics Canada, 2017b). While both men and women were affected by the decline of full-time permanent work, women of core-working-age were more likely to be in part-time work. Between 2005 and 2015, the proportion of core-aged men in full-time work decreased from 63.3% to 56.2% (Statistics Canada, 2017c). Similarly, the proportion of core-aged women decreased from 46.4% to 43.7% between 2005 and 2015 (Statistics Canada, 2017c). The rise in precarious work means that workers are earning less, given that temporary jobs have lower earning potential than permanent ones (Galarneau, 2005). Temporary jobs also have fewer – if any – benefits or development opportunities for workers (Galarneau, 2005). The decline in Canada’s union density, in addition to an increase in non-standard work means that in many cases, job quality has decreased as the labour market has become more diverse. The following section described the methods used to explore these changes to demographics and job quality within Canada’s automotive industry.

III - Methodology

This study examines data from Statistics Canada's Labour Force Survey. The Labour Force Survey is a monthly household survey that provides national, provincial, territorial, and regional employment data about the current state of the Canadian labour market (Statistics Canada, 2018h). These surveys are administered to members of the labour force and are conducted through computer-assisted interviews and electronic questionnaires (Statistics Canada, 2018h).

Data for "All Industries" and "Manufacturing" (NAICS codes 31-33) were publicly accessible. Customized industry-specific data was purchased through Statistics Canada for vehicle assembly (NAICS code 3361) and motor vehicle parts manufacturing (NAICS code 3363). To answer the research question guiding this study, I examined industry-specific data related to gender, age, job permanence (e.g. permanent vs. temporary), union density, job status (e.g. full-time vs part-time), and hourly wages.

This study explores two demographic categories: gender and age. Gender is defined by a binary (male/female) within the Labour Force Survey. Workers are also classified into three age categories: young (under 25 years), core-aged¹ (25 to 54 years), and older (55 years and older). I used four indicators of job quality: union density, job permanence, job status (full-time or part-time), and hourly wages. These quality indicators were selected given the relationship between unionization rates, job permanence, higher wages, and overall working conditions (Helland et al., 2017; Barth et al., 2017). Permanent jobs are defined by Statistics Canada as jobs for which there is "no predetermined termination date," and temporary jobs either have a predetermined

¹ "Core-aged" is a term used by Statistics Canada to describe workers from age 25 to 54 years (Statistics Canada, 2017)

termination date or are designed to end when a project is finished (Statistics Canada, 2018g). Temporary jobs include term, contract, and seasonal work. Full-time jobs consist of employees who typically work thirty hours or more per week “at their main or only job,” while part-time work consists of those that typically work less than thirty hours (Statistics Canada, 2018g).

I presented both nominal and real wages in my analysis of earnings in automotive manufacturing employment. Real wages were calculated by converting nominal wages for 2017 into the equivalent dollar value for the year 2000 using the following formula:

$$\text{Real Wage} = \frac{2017 \text{ Nominal Wage} \times 2000 \text{ Consumer Price Index}}{2017 \text{ Consumer Price Index}}$$

The annual average Consumer Price Indices used were 130.4 and 95.4 for 2017 and 2000, respectively (Statistics Canada, 2018j).

IV – Results

This section examines Labour Force Survey data about the demographics and job quality for automotive assembly and automotive parts manufacturing jobs between 2000 and 2017. Results are organized into three subsections. First, I present data about gender and age in automotive assembly and automotive parts manufacturing. Second, I present changes to job quality indicators: union density, job status, job permanence and wages. Third, I examine how the changes in job quality differ among demographic categories.

Overall, the results indicate that there has been an increase in the proportion of automotive manufacturing jobs occupied by older men. The proportion of automotive assembly

jobs held by women increased slightly between 2000 and 2017, while the proportion of automotive parts manufacturing jobs held by women did not change substantially. There was also an increase in the proportion of jobs that were held by older workers – particularly older men. Over the same period, the quality of work in automotive assembly and automotive parts manufacturing declined. This is especially the case when examining union density and wages, which have decreased more in the automotive industry than in all industries. The proportion of permanent jobs (versus temporary jobs) in automotive assembly and automotive parts manufacturing also decreased between 2000 to 2017. There was little to no change observed in the proportion of full-time jobs in the automotive industry. Analyzing demographic changes in tandem with this decline in job quality highlighted how despite the decline in automotive job quality, older workers have held an increasing proportion of higher-paying automotive jobs compared to other demographic groups.

DEMOGRAPHICS

Women's labour force participation increased slightly in all industries, and automotive assembly from 1987 to 2017. In all industries, where women increased from occupying 43% of jobs in 1987 to 48% of jobs in 2017 (Figure 3). However, the low proportion of automotive assembly jobs held by women increased more steeply than the share of jobs held by women in all industries. Following the automotive industry peak of 1999, the proportion of automotive assembly jobs held by women increased from 15.8% in 2000 to 17.9% in 2017. Despite these increases, manufacturing, automotive assembly, and automotive parts manufacturing are still male-dominated.

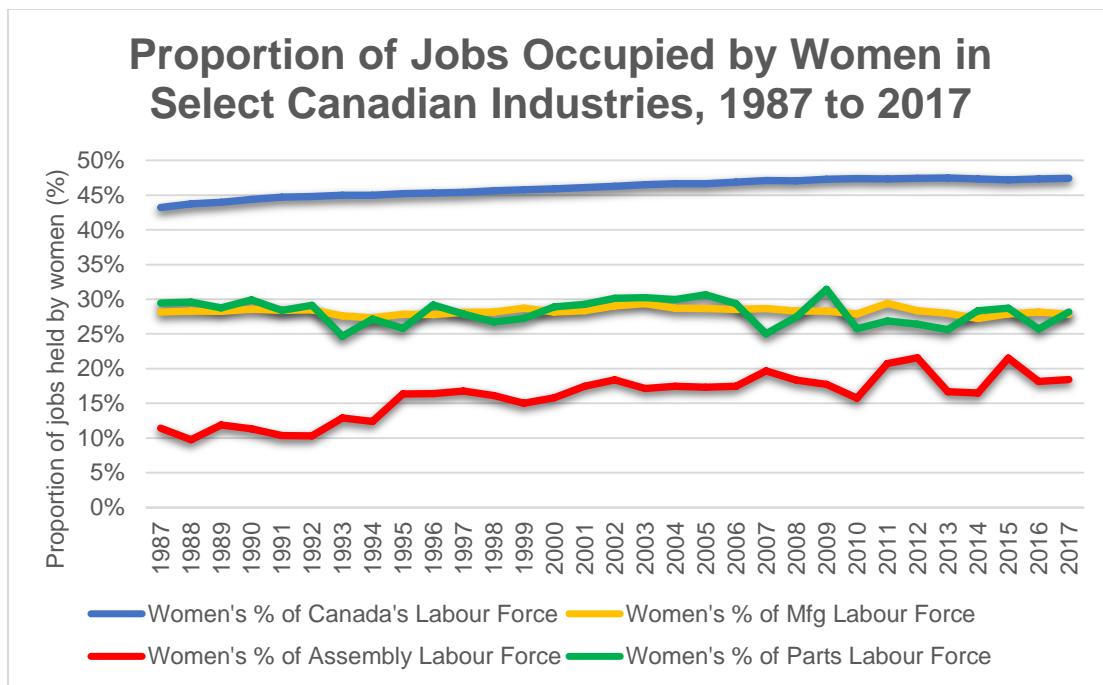


Figure 3: Proportion of Jobs Occupied by Women in Select Canadian Industries, 1987 to 2017
 (Source: Statistics Canada, 2018a - Table 14-10-0023-01)

The proportion of jobs occupied by older workers in Canada increased from 10% of the labour market to 21% between 2000 and 2017 (Table 1). These increases were even more substantial in manufacturing, where the proportion of jobs occupied by older workers increased from 9% to 23%. The proportion of jobs held by older workers increased from 9% to 21% in automotive assembly and from 8% to 23% in automotive parts manufacturing between 2000 and 2017. Conversely, the proportion of jobs occupied by core-aged workers decreased from 74% to 66% in all industries (Table 2). This decrease was more prevalent in manufacturing (79% to 69%), in automotive assembly (83% to 72%), and in automotive parts manufacturing (81% to 66%) than in all industries (74% to 66%). The majority of these increases occurred following the recession of 2008/2009. Conversely, while the proportion of jobs held by younger workers in all industries and in manufacturing slightly decreased, the proportion of automotive assembly and

automotive parts manufacturing jobs occupied by younger workers did not change notably (Table 3).

> 55 years			
	2000	2017	Change (2017-2000)
All	10%	21%	+11%
	9%	23%	+14%
	9%	21%	+12%
	8%	23%	+15%

Table 1: Proportion of Jobs Occupied by Older Workers in Select Canadian Industries, 2000 and 2017

25 to 54 years			
	2000	2017	Change (2017-2000)
All	74%	66%	-8%
	79%	69%	-11%
	83%	71%	-13%
	81%	66%	-15%

Table 2: Proportion of Jobs Occupied by Core-aged Workers in Select Canadian Industries, 2000 and 2017

< 25 years			
	2000	2017	Change (2017-2000)
All	15%	13%	-2%
	11.8%	8.6%	-3.2%
	7.4%	8.0%	+0.6%
	10.4%	10.7%	+0.3%

Table 3: Proportion of Jobs Occupied by Young Workers in Select Canadian Industries, 2000 and 2017

While core-aged men occupy the largest proportion of automotive assembly and automotive parts manufacturing jobs, older male and older female workers experienced the most substantial increases in their share of automotive jobs. In all industries, the proportion of jobs

occupied by older men increased from 12% to 22% between 2000 and 2017 (Table 4). These increases in share of jobs for older men were more substantial in manufacturing (10% to 23%), automotive assembly (10% to 22%) and automotive parts manufacturing (9% to 24%). Similarly, between 2000 and 2017, the share of jobs occupied by older women increased in all industries (9% to 20%), manufacturing (7% to 22%), automotive assembly (6% to 17%) and automotive parts manufacturing (6% to 21%) (Table 5). Core-aged men and women had the largest decreases were the share of jobs occupied by core-aged workers, in all industries, manufacturing, automotive assembly and automotive parts manufacturing.

	Men <25 years			Men 25 to 54 years			Men >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	15%	13%	-2%	74%	65%	-8%	12%	22%	+10%
Mfg	12%	9%	-3%	78%	68%	-11%	10%	23%	+14%
Asmby	7%	8%	+1%	83%	70%	-13%	10%	22%	+12%
Parts	11%	11%	+1%	80%	65%	-15%	9%	24%	+14%

Table 4: Age Distribution of Men's Employment in Select Canadian Industries, 2000 to 2017

	Women <25 years			Women 25 to 54 years			Women >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	16%	14%	-2%	75%	66%	-9%	9%	20%	+11%
Mfg	11%	8%	-3%	82%	70%	-11%	7%	22%	+15%
Asmby	10%	8%	-3%	84%	74%	-10%	6%	17%	+11%
Parts	10%	9%	-1%	84%	70%	-14%	6%	21%	+15%

Table 5: Age Distribution of Women's Employment in Select Canadian Industries, 2000 to 2017

The demographic composition of Canada's labour market changed with regard to the share of jobs occupied by women and older workers. The share of jobs occupied by women in total labour force increased slightly in all industries and automotive assembly from 2000 to 2017, with little notable change in manufacturing and automotive parts manufacturing. Furthermore, older workers – older men in particular – experienced significant growth in their share of automotive assembly and automotive parts employment. Conversely, the share of jobs held by

core-aged men decreased the most, particularly in automotive assembly and automotive parts manufacturing.

QUALITY

Overall, job quality in automotive assembly and automotive parts manufacturing declined between 2000 and 2017. Union density, the proportion of permanent jobs, and average real wages in automotive assembly and automotive parts manufacturing decreased more than in all industries and manufacturing. Union density in all industries decreased from 32% to 30% between 2000 and 2017 (Table 6). Changes to union density in automotive assembly and automotive parts manufacturing were more substantial during this time, decreasing from 65% to 47% and 41% to 26% respectively. Despite having the largest decrease in union density, automotive assembly still had the highest union density as of 2017. Most of the decline in union density in the automotive industry occurred during the recession of 2008/2009, as employment at unionized automakers decreased.

	2000	2008	2017	Change (2017-2000)
All	32%	31%	30%	-2%
Mfg	34%	29%	25%	-9%
Asmbly	65%	49%	47%	-18%
Parts	41%	27%	26%	-15%

Table 6: Union Density in Select Canadian Industries, 2000 to 2017

Jobs in manufacturing, automotive assembly, and automotive parts manufacturing were more likely to be permanent than those in all industries, with 93% of the jobs in each sector recorded as permanent in 2017 (Table 7). Between 2000 and 2017, the proportion of permanent jobs decreased slightly in all industries, but has decreased more sharply in automotive assembly

and automotive parts manufacturing, from 96% to 93% and 97% to 93% respectively. In terms of job status, automotive assembly, and automotive parts manufacturing have the highest proportion of full-time jobs with 97% and 98% of jobs being permanent in 2017 (Table 8). In comparison, 81% of jobs in all industries were full-time in 2017. The proportion of full-time jobs in all industries, manufacturing, and automotive assembly decreased slightly with no notable change in automotive parts manufacturing.

	2000	2017	Change (2017-2000)
All	88%	86%	-1%
Mfg	94%	93%	-1%
Asmby	96%	93%	-3%
Parts	97%	93%	-4%

Table 7: Proportion of Permanent Jobs in Select Canadian Industries, 2000 to 2017

	2000	2017	Change (2017-2000)
All	82%	81%	-1%
Mfg	97%	95%	-1%
Asmby	98%	97%	-1%
Parts	98%	98%	0%

Table 8: Proportion of Full-Time Jobs in Select Canadian Industries, 2000 to 2017

While nominal hourly wages in automotive assembly were once much higher than those in all industries, the wage gap between jobs in automotive manufacturing and all industries has narrowed. All industries and manufacturing experienced more substantial per cent changes increases) in nominal average hourly wages. In 2000, average hourly earnings in automotive assembly were 41% higher than hourly wages in all industries, while manufacturing and automotive parts manufacturing hourly wages were 5% and 7% higher (Table 9). As of 2017, nominal average hourly wages in manufacturing, automotive assembly, and automotive parts manufacturing declined relative to the average hourly wages in all industries. Manufacturing and

automotive parts manufacturing nominal average hourly earnings decreased to fractions of the nominal average hourly earnings in all industries. Despite an increase in automotive assembly nominal average hourly earnings, they remained higher than average earnings in all industries. In addition, although real hourly wages have increased in all industries, they have decreased in automotive assembly and automotive parts manufacturing. From 2000 to 2017, the average real hourly wages increased \$2.48 in all industries and \$1.11 in manufacturing (Table 10). Conversely, real hourly wages decreased \$1.76 in automotive assembly and \$0.48 in automotive parts manufacturing.

	2000	2017	% Change	% of All Industry Average Hourly Wages in 2000	% of All Industry Average Hourly Wages in 2017
All	\$ 16.66	\$ 26.16	+57%	100%	100%
Mfg	\$ 17.55	\$ 25.50	+45%	105%	97%
Asmbly	\$ 23.45	\$ 29.65	+26%	141%	113%
Parts	\$ 17.85	\$ 23.74	+33%	107%	91%

Table 9: Average Hourly Wages in Select Canadian Industries Compared to All Industries, 2000 to 2017 (Nominal Dollars)

	2000	2017 Wages in 2000 \$	Real Change
All	\$ 16.66	\$ 19.14	+\$2.48
Mfg	\$ 17.55	\$ 18.66	+\$1.11
Asmbly	\$ 23.45	\$ 21.69	-\$1.76
Parts	\$ 17.85	\$ 17.37	-\$0.48

Table 10: Average Hourly Wages in Select Canadian Industries, 2000 to 2017 (Real Dollars)

DEMOGRAPHICS & QUALITY

Overall, core-aged and older men had the highest union density across all industries, particularly in automotive assembly and automotive parts manufacturing. Conversely, younger

workers had substantially lower union density in these industries. Job quality changes in the automotive industry differed based on workers' gender and age. For example, between 2000 and 2017, union density decreased for men in all industries (33% to 29%) and manufacturing (38% to 28%) (Table 11). Male workers in the automotive industry experienced more substantial decreases in union density, with the percentage of unionized men working in automotive assembly decreasing from 68% to 47% and automotive parts manufacturing decreasing from 43% to 23%. Despite these declines, in 2000, 2008, and 2017, men in automotive assembly had the highest union density. Most of the decrease in men's union density occurred between 2008 and 2009. Women's union density in all industries increased marginally from 31% in 2000 to 32% in 2017 (Table 12). In manufacturing and automotive parts manufacturing women's union density decreased from 24% to 17% and 35% to 19%, respectively. In addition, following a sharp decrease from 49% to 35% in 2008, union density for women in automotive assembly increased to 50% in 2017.

Union density decreased for all age groups except for young workers in all industries and automotive assembly (Tables 13, 14, and 15). There was a marginal (1%) increase in the union density of younger workers in all industries and automotive assembly. The most significant decrease in union density was experienced by core-aged automotive assembly workers, who decreased from 66% union density in 2000 to 43% in 2017 (Table 14). Older workers had the highest union density in all industries, particularly in automotive assembly, despite a decrease in union density from 76% in 2000 to 62% in 2017 (Table 15).

In all industries, union density for women of all ages and young men either remained the same or slightly increased between 2000 and 2017. The union density for core-aged and younger men in all industries decreased 7% and 5% respectively (Table 16). Core-aged men in

automotive assembly had the greatest decline in union density from 69% to 42% between 2000 and 2017. Union density in automotive parts manufacturing decreased across all gender and age groups, with core-aged women, core-aged men, and older men experiencing the greatest decreases. Core-aged and older women in automotive assembly experienced marginal to no change in union density, while young men in automotive assembly had a marginal 2% increase in union density (Table 16 and 17). This is likely due to increases in employment at Ford and FCA's Canadian assembly plants in the past five years.

	2000	2008	2017	Change (2017-2000)
All Mfg Asmbly Parts	33%	31%	29%	-5%
	38%	32%	28%	-10%
	68%	51%	47%	-22%
	43%	27%	28%	-15%

Table 11: Men's Union Density in Select Canadian Industries, 2000 to 2017

	2000	2008	2017	Change (2017-2000)
All Mfg Asmbly Parts	31%	32%	32%	+1%
	24%	19%	17%	-7%
	49%	35%	50%	+1%
	35%	18%	19%	-16%

Table 12: Women's Union Density in Select Canadian Industries, 2000 to 2017

	2000	2017	Change (2017-2000)
All Mfg Asmbly Parts	14%	16%	+1%
	19%	17%	-2%
	42%	43%	+1%
	29%	21%	-8%

Table 13: Younger Workers' Union Density by Age, 2000 to 2017

	2000	2017	Change (2017-2000)
All Mfg	36%	33%	-3%
	28%	20%	-9%

Asmbly	66%	43%	-23%
Parts	42%	25%	-17%

Table 14: Core-Aged Workers' Union Density by Age, 2000 to 2017

	2000	2017	Change (2017-2000)
All	37%	34%	-2%
	33%	24%	-9%
Mfg	76%	62%	-15%
	47%	31%	-16%
Asmbly			
Parts			

Table 15: Older Workers' Union Density by Age, 2000 to 2017

	Men <24 years			Men 25 to 54 years			Men>55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
	All	16%	17%	+1%	37%	30%	-7%	38%	33%
Mfg	25%	23%	-2%	40%	27%	-13%	42%	33%	-10%
	43%	44%	+2%	69%	42%	-27%	78%	62%	-16%
Asmbly									
Parts									
31%	21%	-10%	44%	28%	-17%	49%	32%	-17%	

Table 16: Men's Union Density by Age in Select Canadian Industries, 2000 to 2017

	Women <24 years			Women 25 to 54 years			Women >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
	All	13%	14%	+1%	35%	35%	0%	35%	36%
Mfg	20%	15%	-5%	24%	16%	-8%	25%	22%	-3%
	38%	38%	-1%	49%	47%	-1%	63%	63%	0%
Asmbly									
Parts									
23%	18%	-5%	36%	17%	-19%	38%	27%	-11%	

Table 17: Women's Union Density by Age in Select Canadian Industries, 2000 to 2017

For both genders - from 2000 to 2017 - workers were mostly permanent, with men in the automotive manufacturing occupying the highest proportion of permanent jobs. Core-aged and older workers occupied the highest proportions of permanent jobs, while the highest proportion

of temporary jobs were occupied by younger workers. While most jobs in all industries are still permanent, the share of temporary jobs has increased. This shift was most dramatic for younger men in automotive parts manufacturing. Between 2000 and 2017, most of the jobs within the Canadian labour market were permanent. However, the proportion of permanent jobs has slightly decreased across industries, particularly for men in the automotive industry. Tables 18 and 19 present the gender and job permanence breakdown of the Canadian labour market. Tables 20 and 21 show the proportion of each gender that is in permanent employment (relative to temporary employment). For both genders, a higher proportion of jobs were permanent between 2000 and 2017. However, jobs in manufacturing, automotive assembly, and automotive parts manufacturing are more likely to be permanent. The proportion of men in permanent automotive assembly and automotive parts manufacturing work decreased from 97% in 2000 to 93% in 2017, meaning that less of the men employed in automotive assembly and automotive parts manufacturing were in permanent roles (Table 18). In 2000, 82% of men in automotive assembly jobs and 69% of men in automotive parts jobs were permanent while in 2017, 77% of men in automotive assembly and 67% of men in automotive parts manufacturing were permanent (Table 19). The proportion of temporary automotive assembly and temporary automotive parts manufacturing jobs occupied by men increased by approximately 3% from 2000 to 2017. During this period, the proportion of women in permanent jobs decreased from 95% to 91% in automotive assembly and 92% to 91% in automotive parts manufacturing (Table 20). The proportion permanent automotive assembly jobs occupied by women increased from 14% to 16%, while their share of automotive parts manufacturing jobs decreased 28% to 25% (Table 21). Furthermore, in 2000, women were almost twice as likely to occupy permanent jobs

automotive parts manufacturing jobs than permanent automotive assembly jobs, with this gap slightly narrowing in 2017.

Almost all age groups in the industries examined experienced declines in the proportion of each group that was in permanent (versus temporary) employment (Table 22). The decrease in the permanent to temporary job ratio was greater in automotive manufacturing than in overall manufacturing or in the all industries. The proportion of young workers in permanent automotive assembly jobs decreased from 69% to 67% between 2000 and 2017. In 2000, 86% of younger workers in automotive parts manufacturing were permanent, but this decreased to 69% in 2017. The proportion of older workers in permanent automotive parts manufacturing jobs also decreased, but older workers in permanent automotive assembly increased from 95% to 98%. This meant that between 2000 and 2017, while less older workers in automotive parts manufacturing were permanent, more of the older workers employed in automotive assembly jobs were permanent, instead of temporary. Overall, most workers in all demographic categories were permanent, with the exception of younger women in automotive assembly, the majority of whom are temporary (Tables 23 and 24). Older men and women in automotive assembly and automotive parts manufacturing were the most likely to be in permanent positions and almost all workers in automotive assembly were permanent in 2000 and 2017. Overall, younger workers had the lowest percentages of permanent automotive manufacturing jobs. The proportion of younger men in permanent automotive assembly jobs and the proportions of younger men and women in permanent automotive parts manufacturing jobs decreased the most.

Proportion of Men in Permanent Employment		
2000	2017	Change (2017-2000)

All	88%	87%	-1%
Mfg	94%	94%	-1%
Asmbly	97%	93%	-4%
Parts	97%	93%	-4%

Table 18: Proportion of Men in Permanent Employment (versus Temporary) in Select Canadian Industries, 2000 to 2017

	% of Permanent Jobs Occupied by Men			% of Temporary Jobs Occupied by Men		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	46%	44%	-2%	6%	7%	+0.5%
Mfg	68%	68%	-0.2%	4%	5%	+0.5%
Asmbly	82%	77%	-5.5%	2.5%	5.5%	+3.1%
Parts	69%	67%	-1.4%	2%	5%	+2.9%

Table 19: Proportion of Total Permanent and Temporary Jobs Occupied by Men in Select Canadian Industries, 2000 to 2017

	Proportion of Women in Permanent Employment		
	2000	2017	Change (2017-2000)
All	87%	86%	-1%
Mfg	92%	92%	-0.2%
Asmbly	92%	91%	-1%
Parts	95%	91%	-4%

Table 20: Proportion of Women in Permanent Employment (versus Temporary) in Select Canadian Industries, 2000 to 2017

	% of Permanent Jobs Occupied by Women			% of Temporary Jobs Occupied by Women		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	42%	43%	+0.8%	6%	7%	+0.7%
Mfg	26%	25%	-0.3%	2%	2%	0%
Asmbly	14%	16%	+2.2%	1%	2%	+0.3%
Parts	28%	25%	-2.5%	1%	2%	+1.0%

Table 21: Proportion of Total Permanent and Temporary Jobs Occupied by Women in Select Canadian Industries, 2000 to 2017

	Permanent - <25 years			Permanent - 25 to 54 years			Permanent >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	71%	68%	-3%	91%	90%	-2%	89%	89%	0%

Mfg	79%	73%	-6%	96%	95%	-1%	96%	95%	-1%
Asmby	67%	60%	-7%	99%	96%	-3%	95%	98%	+3%
Parts	86%	69%	-17%	98%	95%	-2%	98%	96%	-3%

Table 22: Proportion of Workers by Age in Permanent Employment (versus Temporary) in Select Canadian Industries, 2000 to 2017

	Men <25 years			Men 25 to 54 years			Men >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
	All	71%	69%	-2%	92%	91%	-1.7%	89%	89%
Mfg	80%	75%	-5%	97%	96%	-0.7%	96%	95%	-0.4%
Asmby	74%	65%	-10%	99%	95%	-4%	99%	99%	0%
Parts	87%	68%	-19%	98%	97%	-1%	98%	94%	-4%

Table 23: Proportion of Men by Age Group in Permanent Jobs (versus Temporary) in Select Canadian Industries, 2000 to 2017

	Women <25 years			Women 25 to 54 years			Women >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
	All	71%	68%	-3%	90%	89%	-1%	90%	90%
Mfg	76%	67%	-9%	94%	94%	0%	96%	94%	-1.7%
Asmby	38%	37%	-1%	98%	96%	-2%	100%	100%	0%
Parts	85%	77%	-7%	96%	91%	-5%	100%	100%	0%

Table 24: Proportion of Women by Age Group in Permanent Jobs (versus Temporary) in Select Canadian Industries, 2000 to 2017

While most of the jobs in all industries are full-time (instead of part-time), jobs in manufacturing, automotive assembly and automotive parts manufacturing were even more likely to be full-time. In all the industry categories examined, men were more likely employed in full-time jobs than women were. Men in all industries decreased from 90% full-time in 2000 to 87% full-time in 2017, meaning that a slightly larger proportion of men were in part-time work (Table 25). Conversely, the proportion of women in all industries that were full-time increased marginally, from 73% in full-time jobs in 2000 to 74% full-time in 2017 (Table 26). The

proportion of men in automotive assembly and automotive parts manufacturing did not change notably. However, the proportion of women employed in automotive assembly full-time increased marginally, while the proportion of women employed in automotive parts manufacturing full-time slightly decreased.

In an examination of the proportion of full-time workers by age, Tables 27 and 28 show that most workers in each industry are full-time. This is especially the case when examining core-aged and older workers in automotive assembly and automotive parts manufacturing. Core-aged and older workers in full-time automotive assembly and automotive parts manufacturing are more likely to be full-time than workers of these age groups in all industries.

A higher proportion of younger and older women working in automotive assembly are now full-time, meanwhile a smaller proportion of young men in automotive assembly and younger and older women in automotive parts manufacturing are full-time. The proportion of older and younger women in full-time (versus part-time) automotive assembly jobs had the greatest increases, with older women increasing from 71% in full-time jobs to 100% and younger women increasing from 62% in full-time jobs to 87% (Table 29). There were small increases in the proportions of older men in full-time automotive assembly and younger men in full-time automotive parts manufacturing (Table 30). The proportion of younger men employed in automotive assembly full-time decreased from 87% in full-time jobs to 76% between 2000 and 2017, meaning that more of them are in part-time roles.

Proportion of Men that are in Full-Time Jobs			
	2000	2017	Change (2017-2000)
All	90%	87%	-2%
Mfg	98%	96%	-1.3%
Asmbly	99%	98%	-1%

Parts	98%	98%	0%
--------------	-----	-----	----

Table 25: Proportion of Men in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017

Proportion of Women that are in Full-Time Jobs			
	2000	2017	Change (2017-2000)
All	73%	74%	+1%
Mfg	94%	92%	-2%
Asmbly	93%	95%	+2%
Parts	98%	96%	-2%

Table 26: Proportion of Women in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017

	Full-time - <25 years			Full-time - 25 to 54 years			Full-time >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	56%	51%	-5%	88%	88%	0%	78%	77%	-1%
Mfg	89%	84%	-5%	98%	97%	-1%	94%	94%	0%
Asmbly	82%	79%	-3%	100%	99%	-1%	96%	99%	+3%
Parts	91%	92%	+1%	99%	99%	0%	98%	97%	-2%

	Part-time - <25 years			Part-time - 25 to 54 years			Part-time >55 years		
	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)	2000	2017	Change (2017-2000)
All	7%	7%	0%	9%	8%	-1%	2%	5%	+2%
Mfg	1%	1%	0%	2%	2%	0%	1%	1%	+1%
Asmbly	1%	2%	0%	0%	1%	1%	0%	0%	0%
Parts	1%	1%	0%	1%	1%	0%	0%	1%	+1%

Tables 27 and 28: Workers' Share of All Jobs by Job Status in Select Canadian Industries, 2000 to 2017

	2000	2017	Change (2017-2000)
Women >55 years - Assembly	71%	100%	+29%
Women <25 years - Assembly	62%	87%	+26%
Women >55 years - Parts	100%	94%	-6%
Women <25 years - Parts	92%	91%	-1%

Table 29: Proportion of Women by Age in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017

2000	2017	Change (2017-2000)
------	------	--------------------

Men >55 years - Assembly	99%	100%	+1%
Men <25 years - Assembly	87%	76%	-11%
Men >55 years - Parts	98%	98%	0%
Men <25 years - Parts	90%	93%	+3%

Table 30: Proportion of Men by Age in Full-Time Jobs (versus Part-Time) in Select Canadian Industries, 2000 to 2017

In the automotive industry, male workers on average out-earn their female co-workers.

Furthermore, the gap between nominal hourly wages in the automotive industry and all industries has narrowed significantly and real wages have decreased from 2000 to 2017. Wages in automotive assembly remained higher than the average hourly wages for all industries in 2017 but decreased substantially compared to 2000 levels (Tables 31 and 32). Men's and women's nominal wages in parts declined from being above the average hourly wages for all industries to below. In 2000 and 2017, men in automotive assembly and automotive parts manufacturing earned 3% to 6% more than the automotive industry average. Women, on the other hand, earned 14% to 16% less than the average wage in automotive assembly and automotive parts manufacturing for 2000 and 2017. Average hourly wages in automotive assembly are consistently higher than all industry wages or automotive parts manufacturing wages. In 2000, men's automotive assembly wages were 31% higher than men's average hourly wages for all industries while women's automotive assembly wages were 36% higher than women's wages in all industries (Tables 33 and 34). Women's nominal wages in automotive assembly were 36% higher than all industry wages in 2000 but decreased in value to 4% higher than the average hourly wages for all industries in 2017.

2000				
Avg Hourly	Men's Avg Wages	Men's % of Avg	Women's Avg Wages	Women's % of Avg

All	\$ 16.66	\$ 18.38	110%	\$ 14.81	89%
Mfg	\$ 17.55	\$ 18.93	108%	\$ 14.00	80%
Asmbly	\$ 23.45	\$ 24.04	103%	\$ 20.20	86%
Parts	\$ 17.85	\$ 19.01	106%	\$ 15.04	84%

Table 31: Average Hourly Wages versus Overall Average Wages in Select Industries, 2000
(Nominal Dollars)

2017					
	Avg Hourly	Men's Avg Wages	Men's % of Avg	Women's Avg Wages	Women's % of Avg
All	\$ 26.16	\$ 28.00	107%	\$ 24.28	93%
Mfg	\$ 25.50	\$ 26.94	106%	\$ 21.73	85%
Asmbly	\$ 29.65	\$ 30.58	103%	\$ 25.37	86%
Parts	\$ 23.74	\$ 25.14	106%	\$ 20.06	84%

Table 32: Average Hourly Wages versus Overall Average Wages in Select Industries, 2017
(Nominal Dollars)

	2000	2017	% Change	% of Total 2000	% of Total 2017
All	\$ 18.38	\$ 28.00	+52%	100%	100%
Mfg	\$ 18.93	\$ 26.94	+42%	103%	96%
Asmbly	\$ 24.04	\$ 30.58	+27%	131%	109%
Parts	\$ 19.01	\$ 25.14	+32%	103%	90%

Table 33: Men's Average Hourly Wages in Select Industries (Compared to All Industries), 2000 & 2017 (Nominal Dollars)

	2000	2017	% Change	% of Total 2000	% of Total 2017
All	\$ 14.81	\$ 24.28	+64%	100%	100%
Mfg	\$ 14.00	\$ 21.73	+55%	95%	89%
Asmbly	\$ 20.20	\$ 25.37	+26%	136%	104%
Parts	\$ 15.04	\$ 20.06	+33%	102%	83%

Table 34: Women's Average Hourly Wages in Select Industries (Compared to All Industries), 2000 & 2017 (Nominal Dollars)

While men's real hourly wages in all industries and manufacturing increased, their average hourly wages in automotive assembly decreased \$1.67 and their average hourly wages in automotive parts manufacturing decreased \$0.62 (Table 35). Similarly, women's real wages increased in all industries and manufacturing - increasing more in manufacturing than men's hourly wages did - but declined in automotive assembly and automotive parts manufacturing (Table 36). Older workers earned higher average wages than younger or core-aged workers in the automotive industry. Table 37 demonstrates that older workers (55 years and over) in automotive assembly made 13% more than average automotive assembly workers in 2000 and 16% more in 2017. Between 2000 and 2017, older automotive parts manufacturing workers earned from 13% to 15% more than the average worker in automotive parts manufacturing. Conversely, younger workers in automotive assembly and automotive parts manufacturing consistently made approximately 73% of the average wages in the industry. Table 38 shows that younger and older workers in automotive assembly and automotive parts manufacturing saw decreased real wages from 2000 to 2017, especially workers in automotive assembly.

	2000	2017	2017 Wages in 2000 \$	Real Change
All	\$ 18.38	\$ 28.00	\$ 20.48	+\$2.10
Mfg	\$ 18.93	\$ 26.94	\$ 19.71	+\$0.78
Asmbly	\$ 24.04	\$ 30.58	\$ 22.37	-\$1.67
Parts	\$ 19.01	\$ 25.14	\$ 18.39	-\$0.62

Table 35: Men's Average Hourly Wages in Select Industries, 2000 & 2017 (Real Dollars)

	2000	2017	2017 Wages in 2000 \$	Real Change
All	\$ 14.81	\$ 24.28	\$ 17.76	+\$2.95
Mfg	\$ 14.00	\$ 21.73	\$ 15.90	+\$1.90
Asmbly	\$ 20.20	\$ 25.37	\$ 18.56	-\$1.64
Parts	\$ 15.04	\$ 20.06	\$ 14.68	-\$0.36

Table 36: Women's Average Hourly Wages in Select Industries, 2000 & 2017 (Real Dollars)

	2000	2017	% Change	% of Total 2000	% of Total 2017
>55 years Assembly	\$ 26.40	\$ 34.28	+30%	113%	116%
>55 years Parts	\$ 20.11	\$ 27.19	+35%	113%	115%
<25 years Assembly	\$ 17.17	\$ 21.76	+27%	73%	73%
<25 years Parts	\$ 13.06	\$ 17.44	+34%	73%	73%

Table 37: Average Hourly Wages in Select Industries by Age (Compared to All Industries), 2000 & 2017 (Nominal Dollars)

	2000	2017 Wages in 2000 \$	Real Change
>55 years Assembly	\$ 26.40	\$ 25.08	-\$1.32
>55 years Parts	\$ 20.11	\$ 19.89	-\$0.22
<25 years Assembly	\$ 17.17	\$ 15.92	-\$1.25
<25 years Parts	\$ 13.06	\$ 12.76	-\$0.30

Table 38: Average Hourly Wages in Select Industries by Age (Compared to All Industries), 2000 & 2017 (Real Dollars)

An examination of nominal hourly wages of automotive workers by gender and age showed that older men earned the highest wages, with their wages in automotive assembly increasing from 14% to 19% above the average wage (Tables 39 and 40). Women's wages in automotive assembly are inaccessible, but the wages of older women in automotive parts manufacturing increased to meet the industry average, while younger women's automotive parts manufacturing wages declined further below the average. Instances of data suppression in Table 44 are indicated above by "x." Younger and older men in automotive assembly and automotive parts manufacturing experienced real wage decreases, with younger men in automotive assembly having the largest decrease (Table 41 and 42). Furthermore, the only real wage increase was among older women in automotive parts manufacturing, who experienced a \$2.08 increase from 2000 to 2017 (Table 42). All categories with wages available for analysis showed declines in real wages.

	2000	2017	% Change	% of Total 2000	% of Total 2017
Men >55 years - Assembly	\$ 26.66	\$ 35.15	+32%	114%	119%
Men <25 years - Assembly	\$ 18.21	\$ 22.09	+21%	78%	75%
Men >55 years - Parts	\$ 21.51	\$ 28.41	+32%	121%	120%
Men <25 years - Parts	\$ 13.41	\$ 18.27	+36%	75%	77%

Table 39: Men's Average Hourly Wages in Select Industries by Age (Compared to Automotive Assembly and Automotive Parts Manufacturing Average Wages), 2000 & 2017 (Nominal Dollars)

	2000	2017	% Change	% of Total 2000	% of Total 2017
Women >55 years - Assembly	x	\$ 29.19	x	X	98%
Women <25 years - Assembly	x	x	x	X	x
Women >55 years - Parts	\$ 15.24	\$ 23.67	+55%	85%	100%
Women <25 years - Parts	\$ 12.16	\$ 14.71	+21%	68%	62%

Table 40: Women's Average Hourly Wages in Select Industries by Age (Compared to Automotive Assembly and Automotive Parts Manufacturing Average Wages), 2000 & 2017 (Nominal Dollars)

	2000	2017	2017 Wages in 2000 \$	Real Change
Men >55 years - Assembly	\$ 26.66	\$ 35.15	\$ 25.72	-\$0.94
Men <25 years - Assembly	\$ 18.21	\$ 22.09	\$ 16.16	-\$2.05
Men >55 years - Parts	\$ 21.51	\$ 28.41	\$ 20.78	-\$0.73
Men <25 years - Parts	\$ 13.41	\$ 18.27	\$ 13.37	-\$0.04

Table 41: Men's Average Hourly Wages in Select Industries by Age, 2000 & 2017 (Real Dollars)

	2000	2017	2017 Wages in 2000 \$	Real Change
Women >55 years - Assembly	x	\$ 29.19	\$ 21.36	x
Women <25 years - Assembly	x	x	x	x
Women >55 years - Parts	\$ 15.24	\$ 23.67	\$ 17.32	+\$2.08
Women <25 years - Parts	\$ 12.16	\$ 14.71	\$ 10.76	-\$1.40

Table 42: Women's Average Hourly Wages in Select Industries by Age, 2000 & 2017 (Real Dollars)

Changes to the quality of work – measured by union density, job permanence, job status and average hourly wages - within Canadian industries has affected each demographic group differently. Older workers in automotive assembly were the most likely to be unionized, despite seeing significant decreases in union density. Union density decreased for all demographic groups, with the exception of women in all industries. Furthermore, permanent full-time jobs were more likely to be occupied by older and core-aged men, but there have been increases in the proportion of older women in permanent and full-time automotive assembly jobs. The real value of hourly wages has diminished from 2000 to 2017 - especially in automotive assembly – and the gap between wages in automotive manufacturing and all industries has narrowed. Despite this, older workers in automotive assembly have fared better than most in terms of maintaining a premium on average real wages in all industries. Based on these quality indicators, automotive assembly jobs are overall better compared to automotive parts manufacturing and all industries, but the quality of automotive assembly work is declining. The following section explores the implications of these results.

V - Discussion & Conclusion

Overall, the results of this research indicate a persistently male-dominated workforce and declining job quality in the automotive industry. Based on the quality indicators examined, there were primarily negative changes to the quality of work in automotive assembly and automotive parts manufacturing from 2000 to 2017. For instance, while automotive assembly maintains higher unionization rates than other industries, union density in the automotive industry declined more than it did in all industries or manufacturing. In addition, while the proportion of unionized

automotive employment was in decline prior to the 2008/2009 recession, the economic downturn caused a sharper decrease and very little recovery to industry peak levels.

Though the ratio of permanent jobs to temporary jobs in the labour market declined over the time period examined, this decline was greater in the automotive industry. Consistent with previous studies (Galarneau, 2005; Kalleberg, 2009; Lewchuk, 2017), and Labour Force Survey data regarding the rise of non-permanent work (Statistics Canada, 2017b; 2017c), there is some evidence of a slight decline of permanent jobs (and an increase in temporary jobs) in automotive assembly and automotive parts manufacturing. The automotive industry still has a higher proportion of full-time jobs than all industries, and only experienced a 1% decrease in full-time automotive assembly jobs between 2000 and 2017. Real hourly wages have, however, decreased in automotive assembly and automotive parts manufacturing despite increases in all industries and manufacturing. Conversely, there were some cases of quality indicators in 2017 remaining close to (or returning to) levels from the automotive industry peak in 2000. For example, in 2017 the proportion of full-time versus part-time workers in automotive assembly and automotive parts manufacturing, older and younger women's union density in automotive assembly were on par with 2000 levels.

The gap in job quality between the automotive industry and all industries is narrowing, particularly in terms of union density and real wages. In the automotive industry, each of these measures declined in this time period as they increased for all industries. Restructuring within the automotive industry has not yielded considerable gains for most autoworkers. While the automotive jobs in general experienced job quality decline, the loss of quality in automotive assembly was greater. These developments raise the question: if work in the automotive industry

has historically been a benchmark for good blue-collar jobs, what does the deterioration of these jobs mean for the future of good jobs? Should the automotive industry still receive attention and investment as it continues to decline, or will other expanding industries like healthcare set new standards for what constitutes “good jobs?” Furthermore, how have these automotive job quality changes affected - and been affected by changes to - workplace demographics within the automotive industry?

Results also showed that there are now more women and older workers in the automotive industry than there have been previously. The sharpest increase in automotive assembly jobs occupied by women, however, took place prior to the industry peak in 1999. Women’s labour force participation in the overall automotive industry increased prior to this. Throughout the 1980s and 1990s, the CAW supported and negotiated women’s advocacy programs in workplaces like automotive manufacturing facilities. Furthermore, unions have pursued employment equity and healthy work environments in their bargaining efforts to improve the working lives of female autoworkers.

Despite the increases in women’s labour force participation and employment in the Canadian labour market, women remain a minority in automotive manufacturing. Women occupy a smaller proportion of jobs in the automotive industry than their share of all industry jobs. This persistent gender-based segregation can be attributed to a history of explicit gender-based discrimination that fostered a culture of masculinity within the industry. Automotive manufacturing work has long been considered a masculine occupation, which likely plays a part in discouraging some women from retaining automotive manufacturing jobs. The proportion of women in automotive parts manufacturing has not deviated much since the 1980s, compared to automotive assembly where women’s employment shows a slow upward trend. However,

women occupy a higher proportion of jobs in lower-paying automotive parts manufacturing than they do in automotive assembly. Furthermore, the increase of women in automotive assembly work has occurred alongside a decline in working conditions. While women's nominal average hourly wages in automotive assembly remained above women's average hourly wages in all industries, they are still lower than men's average hourly wages in assembly.

The automotive industry historically provided core-aged men with a family wage, and has provided secure, seniority-based retirement provisions for older workers. Aging workers in manufacturing industries are also perceived to have a "safety net" due to workplace seniority regulations that protect them from economic restructuring in ways that younger workers are not (Meyer & Quadango, 1990, 52). Results indicate that the proportion of automotive manufacturing jobs occupied by older workers increased, while the proportion of jobs occupied by core-aged workers decreased and the proportion of jobs occupied by younger workers exhibited no notable change. Furthermore, the nominal hourly wages of older autoworkers were above the automotive industry average, but the nominal hourly wages of younger workers were a fraction of the industry average. In examining the history of age discrimination in the automotive industry, Wood (2006) argues that seniority clauses did not resolve tensions around race, glass, gender, and aging in the industry, but instead reshaped these tensions. Little exists in contemporary literature about older workers in automotive manufacturing jobs. However, the link between seniority and better working conditions indicates that older workers likely have access to better jobs in the automotive industry, especially if they decide to remain at work longer. This is linked to the contemporary issue of tension between younger workers entering the workforce and older workers that are not retiring (Groom, 2013; North, 2017). Extended working lives within the broader labour market, in addition to seniority rights that mainly benefit older

workers, causes younger workers to worry about their long-term employment prospects and likely impacts intergenerational relationships in the workplace.

The entire workforce has aged, in part due to legislative changes that have led workers to remain in their jobs longer. When examining the age distribution within each gender category, the proportion of jobs held by older men and women within the labour market increased more than men and women in other age categories. This increase in the proportion of jobs occupied by older men was greater in manufacturing, automotive assembly and automotive parts manufacturing. For older women, the greatest increases in the proportion of jobs they occupied were in manufacturing and automotive parts manufacturing. While the proportion of automotive assembly jobs occupied by older women increased, this increase in automotive industry work was more substantial for older men. It is likely that formerly “core-aged” workers have aged into the over-55 cohort and have chosen to remain at work due to factors like better health (longer lifespans), the end of mandatory retirement which prevents employers from driving them out of the workforce, and economic downturns causing them to extend their working lives. Furthermore, North American manufacturing industries – especially automotive – were negatively impacted by the recession of 2008/2009. This likely caused many workers to retain their “good” jobs (or return to them because of the “last out, first in” rule of seniority) to stay at work longer. Younger workers are more likely newcomers within the industry, making them lower-tier or less “grown-in” to their jobs. This lower-tier status means that workers earn less and have less benefits than their coworkers who were employed prior. Furthermore, the rise of delayed retirement impacts the quality of jobs that older workers in the unionized automotive industry – who are more likely to have greater seniority rights - have compared to industry newcomers. Given that the industry has historically explicitly excluded or segregated female

workers, older men in the industry are more likely to have seniority and the benefits that come with it, such as relative security and higher wages. This is an example of a structure in place that led to older men gaining more from – and being able to retain – employment in the automotive industry.

As women and older workers have occupied a greater share of automotive industry jobs, job quality has declined. These changes to demographics in the broader industry occurred alongside other changes like new (non-union) entrants, and increasing concessions in unionized plants. In addition, despite increases in women's share of permanent automotive assembly jobs compared to the decrease in men's, men still occupy the majority of higher-paid automotive jobs. While men's hourly wages are above the automotive industry average, women's wages are below the industry average, likely due to factors like occupational segregation, their lower chances of entering higher-paying and male-dominated engineering and trades jobs, and seniority-based or tiered compensation systems that disadvantage newer hires. Overall, in automotive manufacturing, men - older men in particular - have better quality jobs, despite their losses to real average hourly wages.

This study has inspired additional questions that can guide future research in this area. For example, in regards to the increase in employment of women in a declining automotive industry, one question is: what contemporary efforts have been made to ensure equity in automotive employment, particularly automotive assembly jobs where the proportion of women is smaller? Additionally, what proportion of women in the automotive industry are in high-paying trades or production jobs in automotive manufacturing versus administrative jobs? Finally, what efforts have been made to better create and integrate mixed-gender or intergenerational automotive workplaces? What are the effects of these efforts on worker

solidarity and collective bargaining outcomes in the automotive industry? The unions' desire to engage a more diverse membership begs the question of whether this is reflected in their leadership ranks. Furthermore, inclusion of a "diverse membership" in executive decisions would require more than potentially tokenistic roles that do not challenge a persistent culture of masculinity in the automotive industry. It would demand more robust systems of accountability to ensure a comfortable and accommodating work environment for all current and potential employees, and mechanisms in place to evaluate whether programs implemented on behalf of the membership are performing well. For this historically male-dominated industry, there will likely be resistance to attempts to change the firmly established culture of masculinity.

References

- Anastakis, D., & Van Bieseboeck, J. (2010). Introduction: The Automobile and Its Industry in Canada/Introduction: L'automobile et son industrie au Canada. *Canadian Public Policy / Analyse De Politiques*, 36, Siii-Sx. Retrieved from <http://www.jstor.org/stable/27806331>
- Anderson, M. & Holmes, J. (1995). High-skill, Low-wage manufacturing in North America: A Case Study from the Automotive Parts Industry. *Regional Studies*, 29(7), 655-671. DOI: 10.1080/00343409512331349253
- Aronowitz, S., & Moody, K. (1998, April). Workers in a Lean World: Unions in the International Economy. In *New Labor Forum* (No. 2, pp. 119-123). Sage Publications, Inc..
- Association of Workers' Compensation Boards (AWCBC). (2014). Mandatory Retirement Eliminated for Federally Regulated Employees. *Emerging Trends: Demographic*. Retrieved from <http://awcbc.org/?p=2540>
- Balakrishnan, J., Eliasson, J.B., Sweet, T.R.C. (2007). Factors affecting the evolution of manufacturing in Canada: A historical perspective. *Journal of Operations Management*, 25(2), 260-283. DOI: 10.1016/j.jom.2006.05.014
- Baron, A. (2006). Masculinity, the Embodied Male Worker, and the Historian's Gaze. *International Labor and Working-Class History*, 69(1), 143-160. DOI: 10.1017/S0147547906000081
- Beach, C. (2008). Canada's Aging Workforce: Participation, Productivity and Living Standards. *Bank of Canada*. Retrieved from <https://www.bankofcanada.ca/wp-content/uploads/2010/09/beach.pdf>
- Beaudry, P. & Lemieux, T. (1999). Evolution of the Female Labour Force Participation Rate in Canada, 1976-1994: a Cohort Analysis. *Canadian Business Economics*, Summer(1999), 1-14. Retrieved from <https://core.ac.uk/download/pdf/7033480.pdf>
- Beck, V. (2013). Employers' use of older workers in the recession. *Employee Relations*, 35(3), 257-271. doi:10.1108/01425451311320468
- Benzanson, K. (2006). Gender, the State, and Social Reproduction: Household Insecurity in Neoliberal Times. Toronto: University of Toronto Press. pp. 241.
- Bernard, A. (2015). Recent trends in Canadian Automotive Industries. *Statistics Canada*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/11-626-x/11-626-x2013026-eng.htm>
- Briskin, L. (2006). Equity Bargaining/ Bargaining Equity. *Restructuring Work and Labour in the New Economy*. Retrieved from <http://www.genderwork.ca/gwd/wp-content/uploads/equity-bargaining.pdf>
- Burke, R. J., & Ng, E. (2006). The changing nature of work and organizations: Implications for human resource management. *Human Resource Management Review*, 16(2), 86-94. doi:10.1016/j.hrmr.2006.03.006

- Canadian Human Rights Commission. (2011). Government of Canada Strikes Down Mandatory Retirement. *Resources*. Retrieved from <https://chrc-ccdp.gc.ca/eng/content/government-canada-strikes-down-mandatory-retirement>
- Carriere, Y. & Galarneau, D. (2011). Delayed retirement: A new trend? *Statistics Canada*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/75-001-x/2011004/article/11578-eng.htm>
- Chaison, G. (2012). *The New Collective Bargaining*. New York: Springer.
- Chaykowski, R.P. & Powell, L.M. (1999). Women and the Labour Market: Recent Trends and Policy Issues. *Canadian Public Policy*, (Nov. 1999), p. s1-s25. Retrieved from <https://www.jstor.org/stable/3552314>
- Chung, W., Mitchell, W., & Yeung, B. (2002) Foreign Direct Investment and Host Country Productivity: The American Automotive Component Industry in the 1980s. *Stern School of Business*. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.556.6677&rep=rep1&type=pdf>
- Cooney, R. (2002). Is “lean” a universal production system? Batch production in the automotive industry. *International journal of operations & production management*, 22(10), p. 1130-1147. DOI: 10.1108/01443570210446342
- Cranford, C. J., Vosko, L. F., & Zukewich, N. (2003). The gender of precarious employment in canada. *Relations Industrielles*, 58(3), 454-482. doi:10.7202/007495ar
- Creighton, C. (1996). The Rise of the Male Breadwinner Family: A Reappraisal. *Comparative Studies in Society and History*, 38(2), 310-337. Retrieved from <http://www.jstor.org/stable/179131>
- Crompton, R. (2006). Chapter 2: Caring and Working. *Employment and the Family*. Cambridge: 33-38.
- Evans, S. (1980). Personal Politics: The Roots of Women’s Liberation in the Civil Rights Movement and the New Left. New York: Knopf Doubleday Publishing Group. pp. 288
- Fields, A., Uppal, S. & LaRochele-Cote, S. (2017). The impact of aging on labour market participation rates. *Statistics Canada*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/75-006-x/2017001/article/14826-eng.htm>
- Galarneau, D. & Sohn, T. (2013). Long term trends in unionization. *Insights on Canadian Society*. Statistics Canada Catalogue no. 75-006-X.
- Galarneau, D. (2005). Earnings of temporary versus permanent employees. *Archived Content*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/75-001-x/10105/7761-eng.htm>
- Goolsbee, A.D. & Krueger, A.B. (2015). A Retrospective Look at Rescuing and Restructuring General Motors and Chrysler. *The Journal of Economic Perspectives*, 29(2), p.3-23. Retrieved from <http://www.jstor.org/stable/24292121>
- Groom, B. (2013). Young workers fear later retirement blocks career prospects. *Financial Times*. Retrieved from <https://www.ft.com/content/89a66206-e002-11e2-bf9d-00144feab7de>

- Hardy, M.A., Hazelrigg, L. & Quadagno, J. (1996). Internal Labor Markets, Plant Closings, and Retirement. *Ending a Career in the Auto Industry: "30 and Out."* New York: Plenum Press. pp. 274.
- Herod, A. (2000). Implications of Just-in-Time Production for Union Strategy: Lessons from the 1998 General Motors-United Auto Workers Dispute. *Annals of the Association of American Geographers*, 90(3), 521-547. Retrieved from <http://www.jstor.org/stable/1515527>
- Holmes, J. (2004). Rescaling collective bargaining: Union responses to restructuring in the North American auto industry. *Geoforum*, 35(1), 9-21. DOI: 10.1016/j.geoforum.2003.06.001
- Holweg, M. (2008). Chapter 2: The Evolution of Competition in the Automotive Industry. *Build to Order*, p. 13-34. DOI: https://doi.org/10.1007/978-1-84800-225-8_2
- Jacobs, K. (2009). A Tale of Two Tiers: Dividing Workers in the Age of Neoliberalism. *New Labor Forum*, 18(1), 66-77. Retrieved from <http://www.jstor.org/stable/40342795>
- Johnson, R.W. (2012). Older Workers, Retirement, and the Great Recession. *Recession Trends*. Retrieved from https://web.stanford.edu/group/recessiontrends-dev/cgi-bin/web/sites/all/themes/barron/pdf/Retirement_fact_sheet.pdf
- Johnson, S. (2002). Canadian Union Density 1980 to 1998 and Prospects for the Future: An Empirical Investigation. *Canadian Public Policy*, 28(3), p. 333-349. Retrieved from <http://www.jstor.org/stable/3552226>
- Kalleberg, A. (2009). Precarious Work, Insecure Workers: Employment Relations in Transition. *American Sociological Review*, 74(1), 1-22. Retrieved from <http://www.jstor.org/stable/27736045>
- Klier, T. & Rubenstein, J. (2013). Restructuring of the U.S. auto industry in the 2008-2009 recession. *Economic Development Quarterly*, 27(2), 144-159. doi:10.1177/0891242413481243
- Leach, B. (2016). Chapter 7: Jobs for Women? Gender and Class in Ontario's Ruralized Automotive Manufacturing Industry. *Reshaping Gender and Class in Rural Spaces*. Routledge: pp. 266
- Legal Line. (2018). Is mandatory retirement legal? *General Information*. Retrieved from <https://www.legalline.ca/legal-answers/is-mandatory-retirement-legal/>
- Lewchuk, W. (1993). Men and Monotony: Fraternalism as a Managerial Strategy at the Ford Motor Company. *The Journal of Economic History*, 53(4), 824-856. Retrieved from <http://www.jstor.org/stable/2122641>
- Lewchuk, W., Stewart, P., & Yates, C. (2001). Quality of working life in the automobile industry: A Canada-UK comparative study. *New Technology, Work and Employment*, 16(2), 72-87. doi:10.1111/1468-005X.00078
- Lewchuk, W. (2017). Precarious jobs: Where are they, and how do they affect well-being? *The Economic and Labour Relations Review*, 28(3), 402-419. DOI: 10.1177/1035304617722943

- Linkon, S.L. (2014). Men without Work: White Working-Class Masculinity in Deindustrialized Fiction. *Contemporary Literature*, 55(1), p. 148-167. Retrieved from http://resolver.scholarsportal.info.libaccess.lib.mcmaster.ca/resolve/00107484/v55i0001/148_mwwwmidf.xml
- Lowe, N. (2015). From skill mismatch to reinterpretation: challenges and solutions for manufacturing worker retention and recruitment. In *Handbook of Manufacturing Industries in the World Economy*. Ed. J.R. Bryson, J.C. Clarke, V. Vanchan. Cheltenham: Edward Elgar Publishing, pp. 528.
- MacNeil, M. (2013). Two-Tier Workplace Compensation: Issues and Remedies. Canadian Lab. & Emp. LJ, 17, 181. Retrieved from http://labourlawjournals.com/abstracts/pdf/CLELJ_17_1_Mac_Neil.pdf
- Maynard, S. (1989). Rough Work and Rugged Men: The Social Construction of Masculinity in Working-Class History. *Labour/Le Travail*, 23(Spring 1989): 159-169. Retrieved from <http://www.jstor.org/stable/25143139>
- McDowell, L. (1991). Life without Father and Ford: The New Gender Order of Post-Fordism. *Transactions of the Institute of British Geographers*, 16(4), 400-419. doi:10.2307/623027
- McMullin, J.A. & Cook, M. (2004). Ageing and Skill Shortages in Canada and Ontario. *Canadian Policy Research Networks*. Retrieved from http://oaresource.library.carleton.ca/cprn/31517_en.pdf
- Meyer, M., & Quadango, J. (1990). Ending a Career in a Declining Industry: The Retirement Experience of Male Auto Workers. *Sociological Perspectives*, 33(1), 51-62. doi:10.2307/1388977
- Meyer, S. (1999). Work, Play, and Power: Masculine Culture on the Automotive Shop Floor, 1930-1960. *Men and Masculinities*, 2(2), 115-134. DOI: 10.1177/1097184X99002002001
- Meyer, S. (2002). Rough Manhood: The Aggressive and Confrontational Shop Culture of U.S. Auto Workers during World War II. *Journal of Social History*, 36(1): 125-157. DOI: 10.1353/jsh.2002.0098
- Milkman, R. (1982). Redefining "Women's Work": The Sexual Division of Labor in the Auto Industry during World War II. *Feminist Studies*, 8(2), 337-372. doi:10.2307/3177567
- Milkman, R. (1983). Female Factory Labor and Industrial Structure: Control and Conflict over "Woman's Place" in Auto and Electrical Manufacturing. *Politics & Society*, 12(2), 159-203. DOI: 10.1177/003232928301200203
- Mordue, G. & Sweeney, B. (2017). The commoditisation of automotive assembly: Canada as a cautionary tale. *Int. J. Automotive Technology and Management*, 17(2), 169-189. Retrieved from <https://www.inderscienceonline.com/doi/pdf/10.1504/IJATM.2017.084804>
- Munnell, A., & Rutledge, M. (2013). The effects of the great recession on the retirement security of older workers. *The Annals of the American Academy of Political and Social Science*, 650(1), 124-142. doi:10.1177/0002716213499535

- Neumark, D., & Button, P. (2014). Did age discrimination protections help older workers weather the great recession? *Journal of Policy Analysis and Management*, 33(3), 566-601. doi:10.1002/pam.21762
- North, M. (2017). Young workers expect their older colleagues to get out of the way. *The Conversation*. Retrieved from <http://theconversation.com/young-workers-expect-their-older-colleagues-to-get-out-of-the-way-73194>
- Ontario Human Rights Commission (OHRC). (2006). The end of mandatory retirement (fact sheet). *Your Rights*. Retrieved from <http://www.ohrc.on.ca/en/end-mandatory-retirement-fact-sheet>
- Peters, M.A. (2009). Automobilism, Americanism and the End of Fordism. *Policy Futures in Education*, 7(2), 266-270. DOI: <https://doi.org/10.2304/pfie.2009.7.2.266>
- Pietrykowski, B. (1995). Gendered Employment in the U.S. Auto Industry: A Case Study of the Ford Motor Co. Phoenix Plant, 1922-1940. *Review of Radical Political Economics*, 27(3): p.39-48. DOI: 10.1177/048661349502700305
- Pitt-Catsouphes, M., Sano, J. & Matz-Costa, C. (2009). Unions' Responsiveness to the Aging of the Workforce. *Journal of Workplace Behavioral Health*, 24, p. 125-146. DOI: 10.1080/15555240902849065
- Quadagno, J., Hardy, M. & Hazelrigg, L. (2003). Labour Market Transitions and the Erosion of the Fordist Lifecycle: Discarding Older Workers in the Automobile Manufacturing and Banking Industries in the United States. *Geneva Papers on Risk & Insurance*, 28(4), p. 640-651. DOI:10.1111/1468-0440.00251
- Rose, J. B. (2015). The Prospects for Union Renewal in Canada. *McMaster University abstracts*, 101 - 107. Retrieved from <http://lerachapters.org/OJS/ojs-2.4.4-1/index.php/PFL/article/viewFile/600/596>
- Rutherford, T. D., & Holmes, J. (2007). "We simply have to do that stuff for our survival": Labour, firm innovation and cluster governance in the Canadian automotive parts industry. *Antipode*, 39(1), 194-221. doi:10.1111/j.1467-8330.2007.00512.x
- Rutherford, T. D., & Holmes, J. (2013). (Small) differences that (still) matter? cross-border regions and work place governance in the southern ontario and US great lakes automotive industry. *Regional Studies*, 47(1), 116-127. doi:10.1080/00343404.2011.653334
- Statistics Canada. (2017) Census in Brief: Working Seniors in Canada. *Census in Brief*. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016027/98-200-x2016027-eng.cfm>
- Statistics Canada. (2017b). Labour in Canada: Key results from the 2016 Census. *The Daily*. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/171129/dq171129b-eng.htm>
- Statistics Canada. (2017c). Labour in Canada: Key results from the 2016 Census. *The Daily*. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/171129/dq171129b-eng.htm>

- Statistics Canada. (2018a). The surge of women in the workforce. *Canadian Megatrends*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/11-630-x/11-630-x2015009-eng.htm>
- Statistics Canada. (2018b). Table 282-0002: Labour force survey estimates (LFS), by sex and detailed age group annual (persons unless otherwise noted). *CANSIM*. Retrieved from <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1410001801>
- Statistics Canada. (2018c). North American Industry Classification System (NAICS) Canada 2017 Version 1.0. *Statistical Classifications*. Retrieved from <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=307532&CVD=307534&CPV=336&CST=01012017&CLV=1&MLV=5>
- Statistics Canada. (2018d). Table: 14-10-0064-01 - Employee wages by industry, annual. *Statistics Canada Data*. Retrieved from <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410006401>
- Statistics Canada. (2018e). Unionization rates falling. *Canadian Megatrends*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/11-630-x/11-630-x2015005-eng.htm>
- Statistics Canada. (2018f). Table 14-10-0023-01 (formerly CANSIM 282-0008) - Labour force characteristics by industry, annual (x 1,000). *Data*. Retrieved from <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1410002301>
- Statistics Canada. (2018g). Section 3: Dictionary of concepts and definitions. *Guide to the Labour Force Survey - Sections*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/71-543-g/2012001/part-partie3-eng.htm>
- Statistics Canada. (2018h). Labour Force Survey. *Information for Survey Participants*. Retrieved from <https://www.statcan.gc.ca/eng/survey/household/3701>
- Statistics Canada. (2018i). Survey of Employment, Payroll and Hours. *Information for Survey Participants*. Retrieved from: <https://www.statcan.gc.ca/eng/survey/business/2612>
- Statistics Canada. (2018j). Table 5: The Consumer Price Index for Canada, All-items CPI, not seasonally adjusted, historical data. *The Consumer Price Index*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/62-001-x/2018001/tbl/tbl-5-eng.htm>
- Statistics Canada. (2018k). Table: 14-10-0072-01 (formerly: CANSIM 282-0080) - Job permanency (permanent and temporary) by industry, annual. *Data*. Retrieved from <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410007201>
- Statistics Canada. (2018l). Table: 14-10-0070-01 (formerly: CANSIM 282-0078) - Union coverage by industry, annual. *Data*. Retrieved from <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410007001>
- Statistics Canada. (2018m). Table: 14-10-0064-01 (formerly: CANSIM 282-0072) – Employee wages by industry, annual. *Data*. Retrieved from <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410006401>

- Sugiman, P. (2001). Privilege and Oppression: The Configuration of Race, Gender, and Class in Southern Ontario Auto Plants, 1939 to 1949. *Labour/ Le Travail*, 47(Spring 2001): 83-113. DOI: 10.2307/25149114
- Sweeney, B. & Mordue, G. (2017). The Restructuring of Canada's Automotive Industry. *Canadian Public Policy*, 43(1), S1-S15. DOI: 10.3138/cpp.2016-026
- Swerdlow, M. (1989). Men's Accommodations to Women Entering a Non-Traditional Occupation: A Case of Rapid Transit Operatives. *Gender and Society*, 3(3), 373-387. DOI: 10.1177/089124389003003006
- Vidal, M., & Tigges, L. M. (2009). Temporary employment and strategic staffing in the manufacturing sector. *Industrial Relations: A Journal of Economy and Society*, 48(1), 55-72. doi:10.1111/j.1468-232X.2008.00545.x
- Williams, K., Haslam, C., & Williams, J. (1992). Ford versus 'Fordism': The beginning of mass production? *Work, Employment & Society*, 6(4), 517-555. doi:10.1177/095001709264001
- Wood, G. (2006). "Beyond the Age of Earning": Masculinity, Work, and Age Discrimination in the Automobile Industry, 1916-1939. *Labor: Studies in Working-Class History of the Americas*, 3(2), p 91-120. DOI: 10.1215/15476715-2005-011
- Woodhall, J.R. & Leach, B. (2010). Who Will Fight for Us? Union designated women's advocates in auto manufacturing workplaces? *Just Labour: A Canadian Journal of Work and Society*, 16(Spring), p. 44-58. Retrieved from: http://www.justlabour.yorku.ca/volume16/pdfs/05_woodhall_leach_press.pdf
- Yates, C. & Leach, B. (2007). Industrial Work in a Post-Industrial Age. In *Work in Tumultuous Times*, ed. V. Shalla and W. Clement. McGill-Queen's Press.
- Yates, C., Sweeney, B.A., & Mordue, G.D. (2017). Introduction: Public Policy and Canada's Automotive Industry. *Canadian Public Policy*, January 2017, Siii-Svi. Retrieved from <http://www.utpjournals.press/doi/pdf/10.3138/cpp.43.s1.siii>