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Permanent Layoff Rates in Canada, 1978 to 2016

by René Morissette and Hanqing Qiu, Social Analysis and Modelling Division

This article examines the evolution of layoff rates in Canada from 1978 to 2016, the last year for which data on permanent layoffs are currently available. The analysis uses Statistics Canada's Longitudinal Worker File and focuses on employees aged 25 to 64. The study shows that prior to the COVID-19 pandemic, permanent layoff rates did not trend upward in Canada. The study also finds that, in any given year, the majority of permanent layoffs in the commercial sector do not come from mass layoffs. This finding should be kept in mind as new reports of job losses emerge during and after the COVID-19 pandemic.

Introduction

The Canadian labour market has seen significant changes since the late 1970s. Because of technological progress and globalization, employment has shifted away from manufacturing and has moved toward both low-paid and highly paid service sector jobs. Within several sectors, skill requirements have increased, triggering an increase in the demand for workers with a university degree. Computer-based technologies have reduced the demand for labour in some segments of the economy and have also created new occupations (e.g., web security analysts, software developers and application developers). New forms of employment—such as temporary and gig employment—have emerged, reflecting changes in the employer–employee relationship. Declines in unionization rates have been observed for several groups of workers and have shifted the bargaining power between employers and employees. Employers have offered traditional defined-benefit registered pension plans less often than in the past. With increased life expectancy and relatively low returns on financial markets, a growing proportion of older Canadians have—either by choice or by necessity—remained active in the labour market since the mid-1990s. Because of population aging, employment in health-related occupations has grown sharply since the early 2000s. Since mid-March 2020, the COVID-19 pandemic has led to an unprecedented number of work interruptions and layoffs.

Prior to COVID-19, technological advances caused by the growth in computing power and artificial intelligence led to concerns about the ability of advanced economies to create enough jobs in the coming years. Concerns also emerged regarding the potentially disruptive effect of these technologies on the task content of jobs (Brynjolfsson and McAfee 2014; Acemoglu and Restrepo 2019).

These concerns have become increasingly relevant in the wake of COVID-19. It is conceivable, for example, that in response to the COVID-19 pandemic, firms might speed up the automation of codifiable tasks in jobs that **cannot be done at home**. Meanwhile, growing pressures to reduce greenhouse gas emissions have led some national governments to reduce their economic reliance on traditional energy-producing sectors such as coal mining and oil and gas extraction. Therefore, similar to how past shifts away from manufacturing led to job displacement in the manufacturing sector, shifts away from traditional energy-producing sectors or from jobs where telework is not feasible could lead to job displacement in new sectors and occupations in the future.

Whether they are caused by globalization, technological advances, environmental pressures, or pandemic-induced labour market downturns, inter-sectoral and inter-occupational employment shifts will pose challenges for the workers who are directly affected and for the policies that help workers adjust to job displacement. The same is true for future changes in the task content of jobs. For example, economists generally agree that employees whose tasks can be easily codified will face a greater risk of job loss and job transformation than other employees (Frenette and Frank 2020) and that interpersonal and problem-solving skills are likely to increase workers' resilience to negative labour demand shocks.

In this context, an important question is the degree to which current training, job search assistance and transfer programs—some of which were designed several years ago—will best serve the needs of the future cohorts of displaced workers.

To gain some perspective on these issues, it is important to take a long-term view and assess how the magnitude of job displacement has evolved over the past few decades in Canada. Using Statistics Canada's Longitudinal Worker File (LWF), this study provides this long-term perspective by documenting the evolution of permanent layoff rates in Canada from 1978 to 2016, the most recent year for which data on permanent layoffs are available. A more in-depth study of job displacement during that period can be found in Morissette and Qiu (2020).

Permanent layoff rates, 1978 to 2016

To assess how the risk of job loss has evolved from 1978 to 2016, three waves of the LWF are pooled: LWF 1978 to 1989, LWF 1983 to 2010, and LWF 1989 to 2017. The first two waves represent a 10% random sample of all employees in Canada, while the 1989-to-2017 wave covers all employees. To produce comparable figures, the 10% version of LWF 1989 to 2017 is also used. These three waves of the LWF allow for analyses based on consistent definitions of layoffs and post-displacement outcomes, and allow for a disaggregation of statistics by worker age, sex, tenure and province. Because industry classifications have changed over time—from the 1980 Standard Industrial Classification during the 1980s to the North American Industry Classification System from 1991 onward—consistent industry codes cannot be produced at a detailed level. Nevertheless, it is possible to produce displacement statistics for the manufacturing sector and for sectors outside manufacturing for the 1978-to-2016 period.

Layoff rates are measured using the concept of permanent layoffs. A permanent layoff occurs when a laid-off worker does not return to their employer in the year of the layoff or in the following year.¹ Otherwise, a layoff is considered temporary. Since the third wave of the LWF ends in 2017, and since one extra year of data is needed to identify whether a layoff is permanent, the observation period considered in this study ends in 2016.²

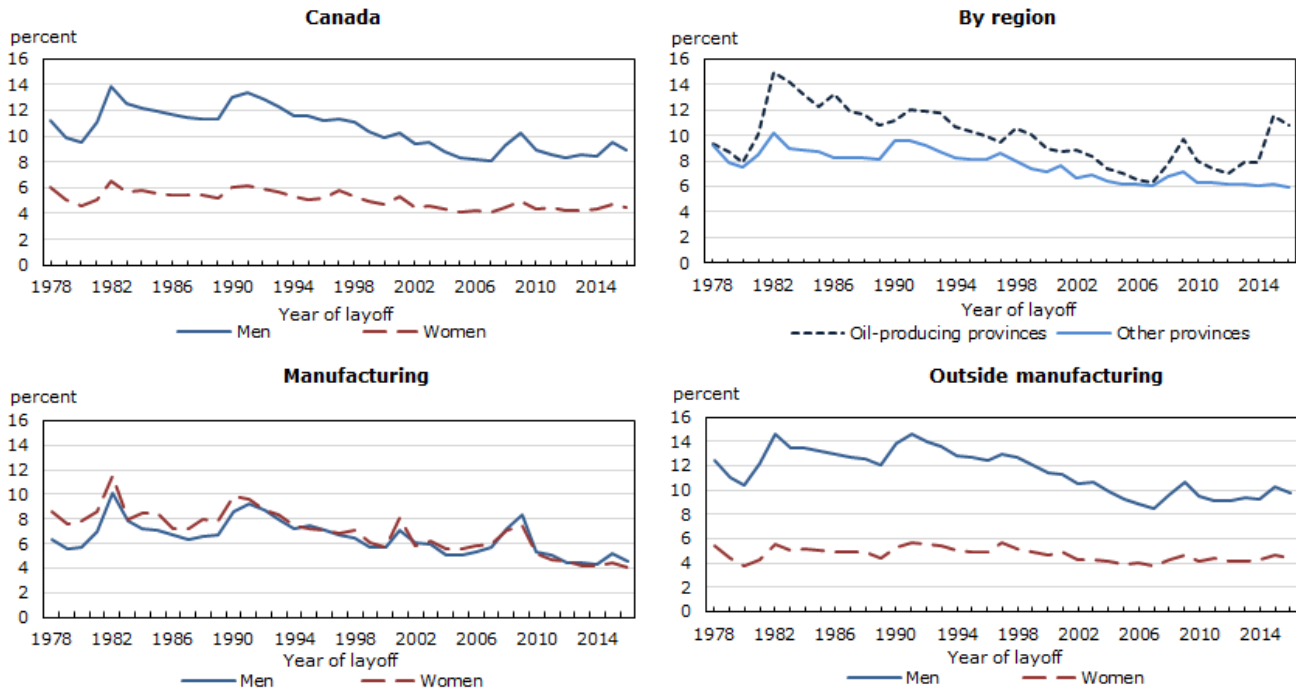
Chart 1 and Table 1 show the layoff rates for Canadian employees aged 25 to 64 from 1978 to 2016. As expected, layoff rates increased during the recessions of 1981 to 1982, 1990 to 1992 and 2008 to 2009, and fell during subsequent expansionary years. However, despite the aforementioned changes in the economic environment, layoff rates have not trended upward in Canada since the late 1970s. In 2007—prior to the last recession—layoff rates were more than 2 percentage points lower than in 1989, the peak of the economic expansion that occurred during the second half of the 1980s. Although layoff rates increased from 2007 to 2009, as soon as 2010, they reached lower levels than those observed during the late 1970s or the second half of the 1980s. As a result, layoff rates averaged 6.6% from 2010 to 2016,

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1. Layoffs are identified from the Record of Employment using Code A, which refers to "shortage of work." When contracts for temporary jobs held by paid workers end, this is also included in Code A.
 2. For simplicity, the term "layoff rates" is used in the remainder of the study to refer to "permanent layoff rates."

Permanent Layoff Rates in Canada, 1978 to 2016

about 1.7 percentage points lower than the average value of 8.3% observed over the 1978-to-1980 period. Layoff rates did not trend upward from 1978 to 2016 for both men and women,³ in manufacturing and outside manufacturing (Chart 1).

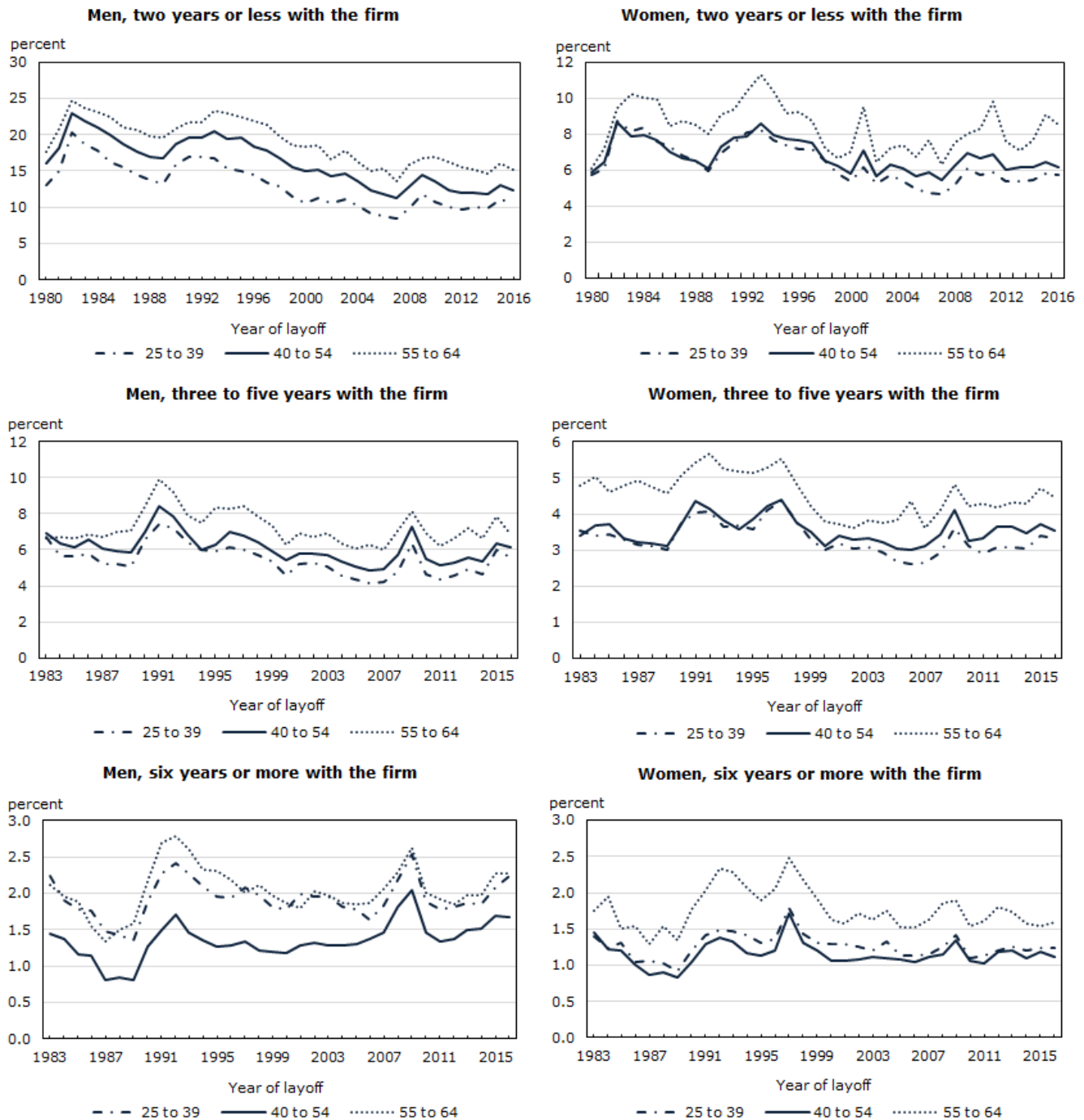
Chart 1
Permanent layoff rates of Canadian employees aged 25 to 64, 1978 to 2016



Note: Oil-producing provinces include Newfoundland and Labrador, Saskatchewan and Alberta.
Source: Statistics Canada, Longitudinal Worker File.

3. Layoff rates are lower for women than men outside manufacturing. Morissette, Lu and Qiu (2013) show that about 80% of this gender difference reflects the overrepresentation of women in four-digit industries that typically have low layoff rates.

Chart 2
Permanent layoff rates of Canadian employees aged 25 to 64, by age, sex and tenure



Source: Statistics Canada, Longitudinal Worker File.

The absence of increases in layoff rates in manufacturing from 2000 to 2016 may seem surprising since manufacturing employment fell by about half a million during this period. Layoff rates in manufacturing did not increase during that period because manufacturing firms adjusted to reduced labour demand, to a large extent, by reducing hiring rates (Morissette, Lu and Qiu 2013).

The data also indicate that, although layoff rates in the oil-producing provinces of Alberta, Saskatchewan, and Newfoundland and Labrador rose sharply in 2015 and 2016 following declines in oil prices, layoff rates in other provinces were fairly stable from 2010 to 2016 (Table 2).⁴

The absence of an upward trend in layoff rates is robust at the national level. When data are disaggregated by worker age, sex and tenure, there is generally no evidence of an upward trend (Chart 2).⁵ The only exception occurs for high-tenure men (men who have been employed with the same firm for six years or more). For this group, the likelihood of job loss was between 0.5 and 0.7 percentage point higher during the 2010s than it was during the late 1980s. For all other age–gender–tenure combinations, there is no evidence that the risk of job loss increased over the past few decades.⁶

Mass layoffs

Although the risk of job loss has not increased in Canada in general since the late 1970s, media reports often highlight mass layoffs that occur in certain cities or regions. Generally, little attention is paid to job losses that occur outside mass layoffs. This raises the following question: of all job losses that occur in a given year in Canada, what percentage comes from mass layoffs?

Table 3 answers this question by quantifying, for selected years, the share of layoffs that came from mass layoffs in the commercial sector (i.e., in all industries except public administration, education, health care and social assistance).⁷ Results are shown for employees aged 25 to 64. Mass layoffs are defined as layoffs that occurred in enterprises that had at least 50 employees in year t-1 (the year prior to job loss), that had positive payroll in both year t-1 and year t, for which total permanent layoffs in year t represented 10% or more of employment in year t-1, and for which total payroll fell by at least 10% from year t-1 to year t+1.⁸

One limitation of the LWF is that layoffs are measured at the enterprise level rather than the establishment level. This distinction is important because if an enterprise has many establishments in Canada, an establishment closure will not necessarily cause the firm to experience layoffs that represent 10% or more of its aggregate employment in year t-1. Therefore, an establishment closure will not necessarily result in a mass layoff, according to the definition outlined above. Ideally, mass layoffs would be measured at the establishment level rather than the enterprise level. Since this is not possible with the LWF, the following methodology is used.

Layoffs that occur during non-mass layoffs (according to the aforementioned definition) are disaggregated into layoffs that occur in firms with fewer than 50 employees and in larger firms (i.e., firms with 50 employees or more). Since layoffs that occur in firms with fewer than 50 employees are, by

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4. Two-thirds of the increase in layoff rates in Prince Edward Island from 1995 to 1996 can be accounted for by increases in layoffs in the construction sector in this province during this period, a pattern that coincides with the end of the construction of the Confederation Bridge in 1996.
 5. Chart 2 also shows that layoff rates are negatively correlated with tenure, and that—conditional on tenure—workers aged 55 to 64 are more likely than those aged 25 to 39 to lose their job. The first point likely reflects the fact that, in many firms, layoffs are implemented on a “last-in-first-out” basis. The second point can be studied in future empirical analyses.
 6. Analyses of layoff rates by broad industrial sector, defined using the 2012 North American Industry Classification System, also reveal no upward trends in layoff rates from the early 1990s (or the late 1990s) onward.
 7. The goal here is to answer the question, “Of all workers **laid off** in a given year, what percentage are laid off in mass layoffs versus non-mass layoffs?” A related question is, “For every worker who is laid off in a mass layoff, how many workers quit pre-emptively—i.e., shortly before the mass layoff—as a precautionary measure?” Addressing this second issue is beyond the scope of the study.
 8. The definition of mass layoffs follows Jacobson, Lalonde and Sullivan (1993) by restricting attention to firms with at least 50 employees.

definition, non-mass layoffs, computing the share of all layoffs that occur in such firms provides a lower bound on the share of layoffs that would be labelled as non-mass layoffs if the LWF had establishment-level data.

Conversely, since some of the non-mass layoffs that occur in larger firms mask some establishment-level mass layoffs, these job losses would be labelled as mass layoffs if the LWF had establishment-level data. As a result, adding non-mass layoffs that occur in larger firms to those that occur in smaller firms provides an upper bound on the true share of layoffs that come from non-mass layoffs (i.e., layoffs that would be labelled as non-mass layoffs if the LWF had establishment-level data).

Table 3 shows that, of all layoffs experienced by men and women aged 25 to 64 in 2015, 44% were non-mass layoffs that occurred in firms with fewer than 50 employees, and 32% were non-mass layoffs that occurred in larger firms. Therefore, in 2015, between 44% and 76% (44% plus 32%) of all layoffs that occurred in the commercial sector for these employees were non-mass layoffs. The corresponding percentages for 1995 suggest that between 61% and 92% of the layoffs experienced by these employees that year were non-mass layoffs. Averaging these estimate ranges—upper bounds and lower bounds—over the entire 1995-to-2015 period indicates that between 53% and 87% of the layoffs in the commercial sector from 1995 to 2015 were non-mass layoffs.⁹ The corresponding average range of estimates for high-tenure workers—those who were with the same employer for six years or more—amounts to roughly 45% to 80%. This finding is important: it shows that assistance policies that would target only employees displaced by mass layoffs would overlook a substantial portion of displaced Canadian workers.

Summary

Recent concerns about future waves of automation make it imperative for analysts and policy makers to update their knowledge regarding job displacement in Canada and to assess the ability of current policies to assist future cohorts of displaced workers. Using the LWF, this study contributes to the first task by documenting the evolution of layoff rates in Canada since the late 1970s.

In line with Morissette, Qiu and Chan (2013), the study finds no evidence that the likelihood of job loss trended upward prior to COVID-19. This finding holds for men and women, for employees holding jobs in manufacturing or outside manufacturing.

This study has several limitations. While layoff rates have not trended upward from 1978 to 2016, it is far from clear that this pattern will hold after the COVID-19 pandemic is over. Specifically, the degree to which the labour market downturn caused by COVID-19 will cause job losses in the longer term remains unknown to date. It is also unclear whether the sectors that were the most impacted during previous downturns will still be the most impacted during the current downturn.

Because the LWF does not have information on workers' educational attainment, it does not allow for an assessment of how layoff rates have evolved within education levels since the late 1970s. This limitation is worth noting since the Canadian workforce has become more educated over the past four decades and since highly educated workers tend to have lower-than-average layoff rates. The fact that layoff rates have not trended upward within age groups does not rule out the possibility that they might have trended upward within some age–education cells. In other words, the absence of upward trends in layoff rates within age groups might conceal an increase in layoff rates for some groups of less educated workers.

9. These percentages will obviously increase if mass layoffs are defined as involving, for example, at least 20% of a firm's initial employment level, rather than at least 10%.

Permanent Layoff Rates in Canada, 1978 to 2016

A third limitation relates to the fact that layoff rates are measured only for paid workers and, thus, provide a measure of job security for this group of workers only. Data from the Labour Force Survey indicate that paid workers represented 84.7% of all employed Canadians in 2016, down from 87.6% in 1978. Therefore, layoff rates provide a measure of the likelihood of job loss for a somewhat smaller segment of the workforce now compared with four decades ago. Layoff rates do not indicate the degree to which job security for self-employed individuals—many of whom are involved in gig employment (Jeon, Lu and Ostrovsky 2019)—has evolved over time.

Despite these limitations, the study confirms some key findings from previous Canadian studies and offers new insights. It confirms that, both during recessions and expansionary periods, the likelihood of job loss is much lower for high-tenure workers than for other workers. It also highlights the fact that, in any given year, more than half of the layoffs in the commercial sector do not come from mass layoffs. Therefore, while mass layoffs often receive considerable media attention, they do not represent the majority of job losses in Canada. This finding should be kept in mind as new reports of job losses emerge during and after the COVID-19 pandemic.

Permanent Layoff Rates in Canada, 1978 to 2016

Table 2
Permanent layoff rates among employees aged 25 to 64, by province, 1978 to 2016

Year	Newfoundland and Labrador	Prince			Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
		Edward Island	Nova Scotia	New Brunswick						
					percent					
1978	24.4	13.1	12.7	17.0	11.0	6.7	6.4	5.9	7.8	12.4
1979	22.1	12.6	11.6	16.8	8.8	6.0	5.3	5.6	7.3	10.6
1980	18.9	13.2	9.9	14.8	8.6	5.7	5.5	5.2	6.8	9.4
1981	23.0	16.5	11.6	16.2	10.0	6.2	5.7	6.1	9.0	10.9
1982	23.6	17.1	11.3	18.3	11.4	7.8	7.3	7.5	15.1	14.4
1983	25.8	17.9	11.6	17.0	9.9	6.7	6.4	7.6	13.9	12.7
1984	28.0	18.9	12.3	17.2	10.4	6.2	6.4	7.3	12.3	12.7
1985	29.8	19.5	12.9	16.4	10.2	5.9	6.4	7.2	10.7	12.8
1986	28.3	18.2	12.2	17.0	9.3	5.5	6.6	7.5	12.2	12.8
1987	29.9	17.9	12.1	16.9	9.8	5.6	6.4	7.8	10.0	11.8
1988	28.5	19.7	12.0	15.9	10.3	5.3	6.4	8.4	9.7	11.8
1989	28.3	21.3	12.3	17.5	9.8	5.5	5.8	7.0	8.9	11.3
1990	28.5	19.2	13.3	18.2	11.0	7.3	6.7	7.1	9.4	12.5
1991	31.0	22.7	12.2	17.6	10.9	7.5	6.5	8.5	9.9	12.4
1992	29.7	20.3	12.8	17.1	10.7	7.0	6.2	9.1	9.9	11.5
1993	29.2	19.0	13.0	17.9	9.9	6.4	6.4	7.3	10.3	11.3
1994	24.5	21.6	11.6	16.2	9.7	5.8	5.7	6.8	9.6	10.9
1995	22.0	21.4	12.7	17.0	9.5	5.8	5.6	6.8	9.6	10.4
1996	25.2	28.9	10.9	17.2	9.4	5.9	5.8	7.0	8.5	10.0
1997	19.2	24.3	11.3	16.8	10.7	6.3	5.8	7.6	8.6	10.1
1998	23.6	22.1	11.0	16.4	9.4	5.9	5.7	7.6	9.4	10.0
1999	23.6	23.1	11.8	16.5	8.6	5.3	5.8	7.2	8.8	9.1
2000	20.2	19.4	11.2	17.6	8.3	5.1	4.9	7.2	7.9	8.9
2001	19.7	19.7	11.0	13.6	8.6	6.0	5.3	6.1	7.9	9.4
2002	17.5	18.5	10.2	12.5	7.2	5.2	5.3	6.5	8.4	8.5
2003	17.1	20.0	9.7	13.3	7.7	5.4	4.8	5.7	7.8	8.4
2004	15.9	15.7	9.5	12.6	7.3	5.1	4.5	5.6	6.7	7.5
2005	16.9	13.8	8.6	10.9	7.1	4.9	4.4	5.7	6.0	7.0
2006	13.1	13.9	8.0	11.7	7.0	5.2	4.4	5.5	6.0	6.7
2007	13.1	14.9	7.4	10.4	7.1	5.1	3.8	4.6	5.9	6.2
2008	11.7	12.2	7.6	10.5	7.5	5.9	4.8	4.7	8.0	7.6
2009	13.2	12.6	7.9	10.1	7.5	6.4	5.0	6.2	10.2	8.7
2010	11.9	13.0	7.2	10.6	6.7	5.4	4.5	5.6	8.2	7.9
2011	12.7	12.0	7.8	10.3	7.0	5.5	4.5	5.8	7.1	7.3
2012	12.2	11.6	7.2	9.8	6.9	5.3	4.3	5.9	6.7	7.0
2013	12.1	11.1	6.8	9.1	6.8	5.4	4.3	6.3	7.7	6.8
2014	11.9	10.5	6.6	9.5	7.1	5.3	4.4	5.8	7.9	6.5
2015	13.7	10.8	7.3	9.1	6.7	5.5	5.0	7.9	12.2	7.0
2016	15.7	10.3	6.8	9.1	6.7	5.1	5.0	7.2	11.1	6.3

Source: Statistics Canada, Longitudinal Worker File.

Table 3
Share of permanent layoffs from mass layoffs and non-mass layoffs, employees aged 25 to 64 in all industries except public services, selected years

	Number of layoffs number	Mass layoffs	Share of layoffs	
			Non-mass layoffs in firms with fewer than 50 employees percent	Non-mass layoffs in firms with 50 or more employees
Men and women aged 25 to 64				
1995	716,172	8.2	61.0	30.8
2000	687,080	12.8	54.8	32.4
2005	630,042	9.7	54.9	35.4
2007	618,924	12.0	51.9	36.1
2009	780,761	18.6	49.3	32.1
2010	688,737	9.9	52.0	38.1
2011	659,319	8.5	52.4	39.1
2014	698,151	15.2	46.8	38.0
2015	786,013	24.1	44.1	31.8

Notes: Jobs terminated by a permanent layoff from mass layoffs are jobs that end with a permanent layoff in year t from firms that had at least 50 employees in year $t-1$, that had positive payroll in both year $t-1$ and year t , for which total permanent layoffs in year t represented 10% or more of employment in year $t-1$, and for which total payroll fell by at least 10% from year $t-1$ to year $t+1$. The sample consists of employees aged 25 to 64 employed in all industries except public services.

Source: Statistics Canada, Longitudinal Worker File.

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