Precarious Employment in Canada

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Abstract: Analysis of the Statistics Canada's Labour Force Survey addresses four aspects of precarious employment. Common definitions of precarity, it is argued, do not address the critical relations between part-time work, low wages and job class – comparing permanent, term and contract, casual and seasonal employees, and self-employed workers with and without help. And these are not reducible to a single dimension of precarity. Second, between 1997 and 2018, increased term and contract employment is mainly at the expense of self-employment, with little change in permanent employees, part-time work and low-wage jobs. So, there is no evidence of a crisis of precarious employment. Third, gender, age and education have small effects on who is a permanent employee, but strongly affect employment in the five other classes. Women are more likely to have permanent jobs and low pay and much more likely to work part-time, but less likely to be self-employed. Fourth, industry and occupation effects on job class are much stronger than and independent of workers' personal characteristics. These findings are at odds with many elements of the conventional narrative of precarious employment.

Keywords; precarious employment, occupation, industry, Canada, part-time work, low wages

Résumé: L'analyse de l'Enquête sur la population active de Statistique Canada porte sur quatre aspects de l'emploi précaire. Les définitions courantes de la précarité de l'emploi, soutient-on, n'abordent pas le rapport critique entre le travail à temps partiel, les bas salaires et la catégorie des emplois - en comparant des employés permanents, ceux d'une durée déterminée et contractuel, employés occasionnels et saisonniers et travailleurs indépendants avec et sans aide. La précarité de l'emploi ne peut pas se résumer en une seule dimension de précarité. Deuxièmement, entre 1997 et 2018, on a observé une augmentation de l'emploi à durée déterminée et contractuelle au détriment du travail indépendant, avec peu de changement pour les employés permanents, le travail à temps partiel et les emplois à bas salaire. Il n'y a donc aucune preuve d'une crise de l'emploi précaire. Troisièmement, le sexe, l'âge et l'éducation semble avoir très peu d'effet sur le statut de l'employé permanent, mais semble affecter très fortement l'emploi dans les cinq autres classes. Les femmes sont plus susceptibles d'avoir des emplois permanents et de bas salaires et beaucoup plus susceptibles de travailler à temps partiel, mais elles sont moins susceptibles d'être des travailleuses autonomes/indépendantes. Quatrièmement, les effets de l'industrie et de la profession sur la catégorie d'emplois sont beaucoup plus prononcés et semble être indépendants des caractéristiques personnelles des travailleurs. Ces résultats sont en contra-

diction avec de nombreux éléments qui décrivent d'une manière conventionnelle l'emploi précaire.

Mots-clés:l'emploi précaire, occupation, industrie, Canada, travail à temps partiel, bas salaires

Precarity is the narrative of our time. It begins with the mid-1970s decline of "standard employment" – permanent full-time jobs paying a "living" or "family" wage, with benefits and pensions – in manufacturing in Western Europe, before becoming a widespread, chronic condition of the global North. For living standards, precarity extends conventional ideas of poverty to insecurity from low wage jobs and lack of savings, especially in countries where low pensions have made homeownership a fourth "pillar" of retirement support. Standing (2011) sees the creation of the "precariat," a new class of workers trapped in long-term insecure employment. Foucault and Bourdieu enlarge the concept into "a defining condition of advanced capitalist societies" and "central object of sociological concern" (Masquelier 2019: 135). These ideas are connected, but not exactly. Whether the consequence of a precarious job is a precarious standard of living depends on the jobs and resources of any other household members; and precarious employment and living standards are aspects of, but not the entirety of a precarious society.

I begin with a review of Canadian research[1] on precarious employment, set out as a narrative in four parts, each addressed in a section of data analysis using Statistics Canada's monthly *Labour Force Survey* (LFS) from 1997 to 2018. First, I show that the contractual status of a job, full- versus part-time work and low wages cannot be combined in a sensible, single measure of precarity. Moreover, six "classes" of jobs – permanent, term and contract, seasonal and casual *employees*, and self-employed workers, with and without paid help – are *not* reducible to two categories of secure and precarious jobs. Second, since 1997 only contract jobs have increased proportionately, mainly at the expense of self-employment and without a corresponding decline in permanent jobs or an increase in part-time or low wage jobs. Third, I show that gender, age and education have very little effect on who is a permanent employee,

1. A review of the large international literature is beyond the scope of this paper. Canadian theory and empirical research are cited frequently and part of the international mainstream. Perhaps because the threat arose earlier, European researchers put more emphasis on non-standard work, for example in ILO (2016). Betti (2018) provides an interesting, international review of four decades of research on precarious employment.

but strongly affect who works in the five other classes. Fourth, regression analysis shows that previous piecemeal findings on the economic context of precarious jobs mainly reflect very large industry and occupational effects on job class, while firm and establishment size, unionization, public- versus private-sector, and province have much less impact. In sum, these findings cast doubt on the conventional narrative of previous research, to which we now turn.

The Narrative of Precarious Employment, in Four Parts

Defining Precarious Employment

There is no consensus definition of precarious employment. Fleury and Cahill (2018) conclude that "Simply put, precarious employment is a 'bad job,'" and they go on "However, problems arise when we try to define and measure more precisely the characteristics that constitute a 'bad job.'" The headline for Fong's 2018 research "We don't know the extent of precarious work," echoes Rubery's view, three decades ago, that "There is no precise definition of this concept in the UK on a statistical, legal or economic basis," (1989: 49) and the conclusion of Lewchuk and his colleagues that "There is as yet no common definition of precarious employment." (2013: 17).

This ambiguity has not stood in the way of empirical research, divided mainly between binary and "multi-dimensional" definitions of precarious employment. For the first, a common strategy is to revert back to the traditional distinction between standard and non-standard employment (Kalleberg 2018: 75ff; Ori and Sargeant 2013: x-xi), with self-employed workers considered precarious unless they have at least one employee. This is the emphasis of the International Labour Organization's 2016 report *Non-standard employment around the world: Understanding challenges, shaping prospects.* Sometimes the binary criterion is more complex. Hennessy and Tranjan (2018: 9), for example, assume that "skilled professionals" are precariously employed *unless* they have one employer for whom they "expect to be working for a year from now, who provides at least 30 hours of work a week, and pays benefits." For Noack and Vosko, precarious jobs have at least three of four "key indicators of dimensions of labour market insecurity: low pay, no pension, no union coverage … and small firm size" (2010: 12). The Ontario Government's 2017 (pp.43-5) *The Changing Workplaces Review* considers all low-wage jobs with minimal or no benefits precarious; then finds that

30.4 percent of all jobs are precarious and that *full-time permanent jobs* account for nearly half of all precarious jobs.

With any binary division, the "precarious" category is heterogeneous, for example including all self-employed farmers and fishers, tradespersons, professionals and managers, "casual" cashiers, personal service workers and supply teachers, as well as many drivers and delivery persons. Part-time, therefore *non*-standard, work may or may not be voluntary, permanent, or low pay, for as little as one hour to more than three days a week.

An extension of the binary strategy is to retain standard employment as the reference, while dividing non-standard jobs into two or more precarious categories. For example, Carré and Hientz (2009) separate temporary employees, precarious part-time employees and involuntary independent contractors.

"Multidimensional" definitions of precarious employment do not apply the term in the normal statistical sense of multiple distinct dimensions, but instead refer to a *single* dimension of precarity, measured with multiple *indicators*, for example pay, benefits, pension contributions and unionization, *in addition to whether a job is, literally, permanent* (Kalleberg, 2018: 15). Cranford, Vosko and Zukewich (2003a) consider a "continuum" of four "forms" of wage work based on job permanency, hours of work and three "indicators" of precarious employment: firm size under 20, union membership and hourly wage. For their surveys of Toronto and Hamilton, Lewchuk, et al. (2013, 2016, 2018) construct a ten-item scale from a variety of conceptually different measures, including benefits, being paid for missing a day of work, knowing your work schedule a week in advance and worker's opinion on whether their work hours will be reduced. This suggests that precarity is a finely-graduated dimension without a natural division into discrete categories, as implied by their simply designating the lowest-scoring 25 percent of jobs as "precarious" (Lewchuk, et al., 2013: 27).

More recently, Vosko *et al*. (2020: 15) list numerous indicators of precarious employment "shaped by" differences between paid and self-employment, part- and full-time, and temporary and permanent *jobs*; and by *workers'* social and political characteristics, including gender, race and citizenship. Since non-standard and precarious employment "are not – and need not be – synonymous," there are standard, precarious jobs and non-standard, non-precarious jobs. Some indicators, such as unionization, are not usually applicable to and often are not measured for self-employment. *Solo* self-employment is usually considered precarious, while self-employment with any paid help is considered secure.

This multidimensional approach is more compatible with the less ideologically freighted idea of good and bad jobs.

A recent Canada House of Commons committee report (2019) exemplifies these ambiguities. Arguing that there is no "universally accepted definition … [which] … is the result of the multidimensional nature of precarious work," low wages and non-standard work are identified as two "elements that are associated with precarious employment," (pp. 9-10), which includes non-permanent employees, solo self-employment, and some part-time work. But part-time work is regarded as precarious only if it is *involuntary*, which implies that precarious work is a joint property of a job *and the job holder*. This suggests workers in low wage and non-permanent jobs are not "precarious" if their *living standard* is not precarious, because they have another or multiple jobs, investment or other income, or support from family members.

This theoretical and empirical dissensus and the uncertain separation of precarious jobs and precarious personal living standards reflect the genuine complexity of contemporary work and life. But the resulting piecemeal studies do not form a coherent and cumulative body of research, in contrast, for example, with research on the equally complex phenomenon of poverty. In social science, dilemmas of this kind can often be resolved when data analysis shows that many empirical indicators measure only a small number of theoretically sensible concepts. For employment, unfortunately, no ongoing Statistics Canada survey provides the detailed information on the multiple job characteristics linked to precarious employment. In particular, we lack measures of job benefits, work tasks and working conditions. Unfortunately, unlike many other rich nations, the Canadian research funding environment does not provide support for the large scale, high quality social surveys that would allow academics to fill this gap.

One way forward, pursued in the first section of this analysis, is to focus on the relations between three fundamental characteristics of jobs: their contractual status – comparing permanent employees to different types of non-permanent employees and the self-employed; full- versus part-time work; and low wages. This without assuming that any dimension is reducible to a binary measure or that one dimension is a "cause" of the others.[2]

2. Some research makes such assumptions. For example, Hira-Friesen (2018) predicts hourly wages from whether a job is temporary or an involuntarily part-time job. Employers may offer part-time jobs at lower pay because they believe that workers do not expect a living wage from a part-time job; but it is also possible that low wage offers are less likely to attract workers wanting full-time jobs.

Trends in Precarious Employment in Canada

The second element of the narrative is that precarious jobs are increasing, perhaps dramatically. "Precarious work is now the new norm,"[3] headlined the *Toronto Star*, reporting research by Wayne Lewchuk and his colleagues (2013, also see Lewchuk, Procyk and Shields, 2017: 4). The evidence, however, is not conclusive. Vosko and Clark (2009: 30) show that precarious employment grew in the 1980s and 1990s, but not after, with full-time permanent work declining from 68 percent of all main jobs in 1989 to 63 percent in 1997, then increasing slightly to 64 percent in 2007. The change is correlated with increased solo self-employment, up from 7 to 10 percent between 1989 and 2007, and full-time non-permanent employment, up from 4 percent in 1989 to 6 percent in 1997 and 7 percent in 2007. Consistent with national statistics, in Ontario between 1999 and 2009 Noack and Vosko (2010: 13) find no trend in unionization, pension plan coverage, employment in small firms or low wages – and therefore no increase in precarious employment; and Quebec is the same (p.15). Between 2011 and 2017 in Toronto and Hamilton, Lewchuk, et al. (2018: 25) find a small *decrease* in precarious employment. From 1998 to 2018 Vosko et al. (2020: 19), find no overall increase in their four-component measure of precarious jobs, with minor declines in three of the four indicators – including "low wages," job tenure of less than one year and small firm size – and a small increase in non-union jobs, though only from 1998 to 2008 and only in the private sector.

DePratto and Bartlett (2015) find a moderate increase in temporary employment between 1997 and 2014, though almost entirely for workers under 25; a long-run increase in part-time employment that leveled off around 2004; a steady decline in prime-age (25-54) part-time work, balanced by an increase in part-time workers age 55 and older; and a decline in seasonal employment from 2.0 to 1.2 percent of all jobs. Between 2000 and 2015 the wage gap between permanent and temporary employees shrank from 36 to 30 percent. Other indicators are stable, including involuntary part-time work, unchanged at approximately 30 percent of all part-time work. Thus, the new century did not bring a broad deterioration of the labour market that could be characterized as increased precarity.

Using the LFS for the same period as this analysis, Vosko et al. (2020: 17) shows the percentage of non-permanent employees rising slowly

3. See https: //www.thestar.com/news/gta/2015/05/21/precarious-work-is-now-the-new-norm-united-way-report-says.html, accessed 25 August 2021.

from 1997 to 2007, from around 9 percent to 12 percent in the private sector and more substantially from 10 percent to 15 percent in the public sector; after 2007 there is no further change in the private sector, but an increase to about 17 percent in the public sector between 2015 and 2018.

In the second section of analysis, I examine six classes of jobs, four categories of work hours and "low wage" and "very low wage" work. This will show, for example, whether increased *non-permanent* term and contract employees corresponds to a decline in permanent employment, or in other types of jobs. I also consider the link between atypical employment and deteriorating labour market conditions, signaled by unemployment, suggested by Rodgers (1989).

Precarious Employment Targets the Disadvantaged

The observation that vulnerable groups are concentrated in precarious jobs predates the use of the term. More than 30 years ago, in the UK, Rodgers (1989: 8) found that women, younger, less educated, lower skill and immigrant workers were more likely to be in "atypical" employment.

In Canada, thinking about disadvantage and precarious employment is framed by gender. Cranford, Vosko and Zukewich (2003a: 458-9) explain that "the feminization of employment norms … denotes the erosion of the standard employment relationship as a norm and the spread of non-standard forms of employment associated with women and other marginalized groups."

Vosko and Clark (2009: 30) found that in 2007, 67 percent of Canadian men 15 to 64 had full-time permanent jobs, compared to 61 percent of women; with an additional 5 percent of men and 16 percent of women in *part-time* permanent jobs. Combined, 76 percent of women and 71 percent of men had permanent jobs. Adding self-employed workers with help (not separating part- and full-time) to permanent employees, the tally is 79 percent of women and 78 percent of men with secure jobs. The extent of gender difference thus depends on how part-time jobs are counted.

The research on precarious employment and racialization is puzzling. Among employees age 15 to 64 in 2000, Cranford, Vosko and Zukewich (2003b) found that 72 percent of Chinese, 71 percent of Filipinos and 71 percent of West Asians and North Africans had permanent jobs, much *above* the figures of 65 percent for White, 61 percent of Black and 62 percent of South Asian workers. Noack and Vosko (2010: 27ff) found that in 2008, 29.5 percent of Black workers and 30.0 percent of Southeast Asian workers had precarious jobs, compared to 31.3 per-

cent of *non*-visible minority workers, 34.6 percent of South Asian and of Arab workers and 38.2 percent of Chinese workers. These findings contrast with convincing evidence of the lower *incomes* of Black and other groups of non-White workers, especially Hispanics and Southeast Asians, from Lightman and Good Gingrich (2018), Pendakur and Pendakur (2011) and Skuterud (2010). This suggests that patterns of precarious employment and low wages and income are dissimilar, and that racialized poverty arises primarily from permanent *low pay* jobs rather than insecure employment.

Surprisingly, there is no systematic analysis of the effects of age and education on precarious employment comparable to wage regression that became a staple of labour economics in the 1970s. Noack and Vosko (2010), for example, consider only the *separate* effects of gender, racialization, education, immigration, and family type on secure employment. This situation is not unique. Despite decades of international interest, there is no body of model-based comparative research to situate the Canadian findings. Kalleberg and Vallas (2018: 8) conclude that "because much attention has been devoted to the onset of precarious work among once-privileged groups, the relations among gender, race, and precarity have remained shrouded in ambiguity."

The third section of analysis begins with gender differences in job class, work hours and earnings, then employs regression models to estimate the effects of gender and hours of work, age, and education on job class. Immigration is not in the model because the LFS does not measure racialization and without it estimates of the effect of immigration are certainly biased, to an unknown degree.

The Economic Structure of Precarious Employment

Research on precarious employment has a supply-side bias, with only piecemeal research on the demand-side and no modelling to separate effects of location, occupation, industry, etc. Still, the observed effects are large. Noack and Vosko (2010: 22ff) and Cranford and Vosko (2006: 53ff) find that precarious employment is concentrated in certain occupations, including "chefs, cooks and other workers in the food and beverage industries" and "retail sales clerks and cashiers," and certain industries, including "accommodation and food services," agriculture and "other service." Kapsalis and Tourigny (2004) find the lowest incidence of non-standard employment in manufacturing, 15 percent, and the highest in the "primary industry and utilities," construction, "business, building and other support" and "other services" – all 50 percent or more.

More recently, Vosko et al. (2020: 24) find very large industry differences, ranging from 74 percent precarious employment in "accommodation and food services" and 55 percent in retail trade and in agriculture, compared to just 4 percent in public administration and 2 percent in utilities. These differences, however, mainly reflect just one component of their precarity measure, low wage work; with much smaller and less consistent industry differences in unionization, employment in a small firm and short-term jobs – again raising questions about the meaning and measurement of precarity. Clearly, the "structural" effects of industry and occupation are much stronger determinants of employment than workers' personal characteristics, such as gender, racialization and age.

Partly reflecting researchers' supply-side bias, there is neither a theoretical framework nor systematic empirical analysis of the structural basis of precarious employment to integrate these disparate findings. The statistical problem is simply remedied with regression models, but the theoretical problem is more difficult. I believe that Vallas (2016) captures Canadian researchers' consensus that increasing precarious employment represents a general shift in the relative power of capital and labour, due to "an increasingly anemic labor movement, neoliberal policies that have weakened economic regulations and social insurance provisions, technologies that render unskilled work superfluous, and global competition" (p.464). This broad argument, however, is not an effective guide to the specific structural aspects of precarious employment.

Following Oesch (2006), Marx (2011) provides a powerful and interesting solution to this dilemma, based on a three-fold division into: occupations in manufacturing, which are governed by "technical work logic"; occupations in bureaucratic organizations, governed by "organizational work logic"; and occupations in personal and social service work, governed by "interpersonal work logic." Within these categories, jobs are divided by skill level. Marx argues that *non*-standard employment is *highest* in personal and social services, followed by bureaucratic organizations and *lowest* in manufacturing and, second, that skilled jobs are more likely to be permanent. The results of his empirical research on six European nations are fairly consistent with these predictions, but with considerable national variation. Among *non*-permanent employees, Marx argues that less skilled workers are likely to be non-standard *employees*, while professionals are likely to be self-employed.

Eichhorst and Marx (2015: 5ff) narrow the focus to individual employers and broaden it to the institutional context of employment. They argue, first, that the advantage of non-standard jobs *to employers* depends on a worker's "replaceability," based on supply and demand in their occupation and the cost and difficulty of recruitment and training.

Non-permanent jobs increase those costs.[4] This points to the role of occupational licensing, non-statutory occupational certification (of technicians and programmers, for example) and educational credentials, which facilitate self-employment and contract work precisely because they are *not* firm-specific. They also argue that the "flexibility" to hire non-permanent employees is affected by institutional constraints on employers, including statutory minimums for pay, hours, benefits, etc. (in many European nations set at the national level, but in Canada mainly provincial), collective agreements, and industry and corporate cultures.

For Eichhorst and Marx (2015: 5ff), industry differences in permanent employment arise from their occupational structures. Within manufacturing *industries*, for example, manufacturing *occupations* are governed by technical work logic, office jobs by organizational work logic and health and training jobs by interpersonal work logic. Skilled trades are governed by technical work logic, whether a job is in the different industries of construction, school maintenance and residential repair. Note that this formulation overlooks the organization of the economy into industries producing different products and services, where competitive pressures shape technology, organization and the size of firms, and therefore conditions of employment.

The concepts of replaceability and flexibility invite international comparisons and much of the empirical research employs the vast trove of data for EU nations. For Canada alone and without detailed measures of the organizational setting of a job, this theory provides an interpretive context for the analysis of occupation, industry, firm size, and unionization, in the last section of the analysis.

Data and Measures

I consider six "classes" of jobs, dividing *employees* into four groups for permanent jobs, term and contract jobs (combined in the survey question, so not separable), seasonal jobs and casual jobs, separating "solo self-employed" workers and self-employed workers with at least one employee ("*with help*"). The LFS does not identify self-employed "dependent contractors" such as Uber and other "platform" employers, who

4. Eichhorst and Marx (2015) also argue that it is more difficult to replace workers in jobs requiring firm-specific skills, which are affected by organizational differences between firms, even within industries. Conventionally "low skill" work may involve high firm-specific skills. Addressing this empirically, however, requires information on the organization and culture of individual firms not available in the LFS.

are effectively casual employees of a single firm[5] positioned to arbitrarily change their conditions of work and pay and to dismiss them without cause. The analysis is limited to a person's "main job," which is their only job about 95 percent of the time. The LFS provides very little information on second jobs, measuring their work hours, but not wages, occupation or industry.

Hours of work are based on the LFS measure of "usual" weekly hours, expanding Statistics Canada's binary division between part- and full-time work at 30 hours/week to four categories, for jobs 1-14, 15-29, 30-34 and 35 or more hours per week (the last corresponds to five seven-hour days).

The wage measure – so only for employees – is the hourly pay of a person's main job. Following the OECD[6], "low pay" is defined as less than two-thirds the *provincial* median hourly wage of full- *and part-time* jobs, calculated annually. It is therefore somewhat lower than the OECD standard, which is based on full-time jobs only. "Very low pay" is defined as less than 55 percent of the median – roughly at the seventh percentile within each province. Until about 2015, the upper bound of "very low pay" jobs was roughly the provincial minimum wage. The mid-2010's growth of demands to raise the minimum wage resulted in sizeable increases in Alberta, British Columbia and Ontario and federally, beginning around 2016.[7] This caused a decline in "very low wage" workers, because the value of the median wage, which anchors the metric, is unaffected by changes in the shape of the lower half of the distribution.

5. It is the nature of academics to complain about the shortcomings of official surveys, designed primarily to provide very accurate measures of labour force and other conditions. But it is still fair to say that the LFS has been too slow to change. By any reasonable account, wage rates have always been a fundamental aspect of employment, but were only added to the LFS in 1997. The natural risk-aversion and conservatism of the LFS design is driven by the goal of producing absolutely consistent time series, compounded by Statistics Canada obligations to government departments using them. A more innovative LFS might be less effective at serving governmental needs and could not take the place of a more wide-ranging and continuing monitor of employment – perhaps in the form on an annual survey, perhaps longitudinal and linked to employer administrative data and individual tax records.

6. See https: //data.oecd.org/earnwage/wage-levels.htm, accessed 13 May 2021.
7. A listing is at https: //open.canada.ca/data/en/dataset/390ee890-59bb-4f34-a37c-9732781ef8a0, accessed 28 May 2021.

The LFS[8] gathers data for every household member 15 and older for a national sample of Canadian *households* for six consecutive months. The analysis employs observations from every month, rather than following the common practice of choosing a "typical" month or months, so the data cover the pre-Christmas spike in temporary jobs and seasonal employment in tourism, farming, logging and fishing.

There is some similarity in the jobs of household members, but much more similarity between the jobs held by the same individual at one-month intervals, since most workers do not change jobs in a six-month period. Correctly calculating the sampling error therefore requires linking the observations of household members and jobs of the same person, which is not possible with the "public use" data files employed in this analysis. With the most conservative assumption that no one changes jobs in six months and moderate within-household correlations, the approximately 1.2 million observations each year have the precision of a simple random sample of about 400,000, by rough calculation further reduced to about 200,000 using the weights to compensate for oversampling smaller communities (for the survey design, see Statistics Canada, 2017). The LFS surveys the three northern territories, but their data are not in the public use files; and Reserves and other Indigenous settlements are not surveyed. All the estimates employ the population weights provided by Statistics Canada, which compensate for the LFS's unequal probabilities of selection in different labour markets, non-response and coverage error. To reduce selection effects of post-secondary schooling of young persons and retirement, the analysis is restricted to ages 20-64; and part- and full-time students are excluded from Tables 4-9.

Analysis

A Binary Measure or Single Dimension of Job Precarity?

Table 1 shows that 61.6 percent of Canadians had permanent jobs for 35 or more hours/week in 2018, 66.8 percent using Statistics Canada's lower 30-hour/week criterion for full-time jobs. Permanent part-time jobs under 15 hours/week and 15-29 hours/week account for another 1.6 and 6.8 percent of all jobs, respectively, for a total of 75.4 percent permanent jobs. Self-employed workers with help add 4.5 percent to the total of conventionally defined non-precarious jobs. There is more solo self-employment, accounting for 10.2 percent of jobs, and almost as

8. For very extensive documentation of the LFS see http: //www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3701#a4, accessed 08 November 2019.

many permanent part-time jobs as the total of conventional "precarious" term and contract, casual and seasonal jobs, respectively 5.9, 2.3 and 1.9 percent of all jobs.

About 90 percent of permanent employees and self-employed workers with help worked 30 or more hours/week, compared to 80 percent of seasonal workers, 75 percent of term and contract workers and 73 percent of solo self-employed workers. Casual jobs are most distinctive: just 41.5 percent were 30 hours/week or more, 36.5 percent 15-29 hours and 22.1 percent under 15 hours/week.

With two-thirds the provincial median wage as the criterion, 16.3 percent of permanent jobs have low wages, compared to 21.9 percent of term and contract jobs, 34.9 percent of seasonal jobs and 41.7 percent of casual jobs. Because 81.9 percent of low pay jobs are permanent, eliminating all low pay seasonal and casual jobs would decrease the overall rate of low pay by just 10.5 percent, and eliminating all low pay term and contract jobs would lower it by 8.4 percent. Work hours has a stronger effect on low pay than job class: 42.4 percent of 15-29 hour jobs have low pay and 50.0 percent 1-14 hour jobs. Surprisingly, 30-34 hour jobs have more than double the low pay rate of 35 or more hour jobs, 28.7 versus 12.2 percent, even though 30 hours is Statistics Canada's starting point for "full-time" jobs.

Permanent employees lose the most from working part-time: 54.5 percent of 1-14 hour/week jobs are low pay, compared to 11.5 percent of 35 or more hour jobs. About half of seasonal and casual 1-14 hour/week jobs, compared to about one-quarter of the corresponding full-time jobs are low pay. Under 30 hours/week, one-third of term and contract jobs are low pay, *less* than for permanent jobs. Only permanent employees working at least 35 hours/week earn more than term and contract workers working similar hours.

Separating the effects of class and hours on low pay, Table 2 shows that accounting for work hours considerably decreases the wage differences between permanent and non-permanent employees, but job class does little to explain the much lower pay of part-time jobs. The patterns of low and very low pay, in Table 2, are essentially similar. Again, work hours has a much stronger effect on very low pay than job class: 17.2 percent of jobs under 15 hours/week have very low pay, 13.2 percent of 15-29 hour jobs, 8.6 percent of 30-34 hour jobs and 3.1 percent of 35 or more hour jobs. Strikingly, for jobs less than 30 hours/week, having a permanent job provides no protection from low pay. The figures for median and mean hourly pay, also in Table 2, provide additional evidence of the lower pay of part-time workers. Under 15 hours/week, the median pay of *permanent* and seasonal and causal jobs is just $15.00/

hour, and only about $2 more for 15-29 hour/week jobs. The median wage of permanent jobs for 30-34 hours/week is $20.00, compared to $26.40 for jobs 35 or more hours/week. Under 35 hours/week, term and contract jobs have *higher* pay than permanent jobs.

The four often combined categories of precarious jobs are quite different. Seasonal and casual jobs are much more likely to have low pay than permanent *or term and contract jobs*, and casual jobs are much more likely to be part-time. While job classes vary in the degree of part-time work, the much lower pay of part-time workers is essentially unrelated to job class. The complex relations between job class, work hours and low pay argue against combining them in a single measure of precarious employment. Statistics Canada's 30 hours/week criterion for full-time jobs conceals the very large pay difference between jobs just over the 30-hour boundary and jobs for at least 35 hour per week.

Trends, 1997-2018

Over 21 years, marginal *increases* in permanent employees and *non*-low-wage jobs are accompanied by a small decrease in 35 or more hour jobs, see Figure 1. This is not a meaningful trend, let alone a crisis in employment. The low-wage measure is slightly more volatile, fluctuating between 78.0 and 81.5 percent of all jobs, compared to the 21-year range between 77.0 and 79.2 percent full-time jobs and between 74.2 and 75.5 percent permanent employees. For reference, dashed lines in Figure 1 give the official unemployment and labour force participation rates[9]. Trends in labour force participation appear unrelated to the three job measures. Unemployment is more volatile, ranging from 5.8 to 9.1 percent, and *higher* unemployment is associated with a *lower* percentage of permanent employees. Though beyond the scope of this analysis, this would be interesting to pursue formally, as the hazards of descriptive correlations of time series are well known.

Between 1997 and 2018, Figure 2 shows that the percentage of term and contract jobs increased by about one third, from 4.4 to around 6.0 percent of all jobs, in parallel with decreased self-employment with help, down from 6.1 to 4.6 percent, and solo self-employment, down from 11.3 to 10.4 percent. Seasonal and casual jobs barely changed, while permanent jobs *increased* slightly, from 74.1 to 74.9 percent of all jobs. The similar blips in solo self-employment and official unemployment in 2009 suggest they are linked. The gradual rise in term and contract

9. Statistics Canada. Data Table 14-10-0327-01 "Labour force characteristics by sex and detailed age group, annual, inactive," at https://www150.statcan.gc.ca/n1/en/type/data, accessed 25 August 2021.

jobs roughly parallels the decline in self-employment with help, but not solo self-employment, even though solo-self-employment seems like the more natural alternative to contract work.

The increase in term and contract jobs does not correspond to increased part-time or low pay jobs, except for the presumably unrelated increase in nominally full-time, 30-34 hour jobs from 6.3 to 7.6 percent, at the expense of 35 or more hours/week jobs. Low pay jobs declined slightly from an average of 21.4 percent over 1997-1999 to 18.9 percent in 2016-18. Until 2016, there were about equal numbers of *very* low pay jobs and low pay jobs *above* the very low pay limit – each accounting for about 10 percent of all jobs. Very low pay jobs fall to 8.9 percent in 2017 and to just 5.2 percent in 2018, while low jobs above the very low pay limit increase from 8.7 to 11.6 to 12.4 percent low pay in the three years. This is consistent with a tightening at the low end of the labour market. Steady around seven percent from 2013 to 2016, the unemployment rate fell to 6.3 percent in 2017 and 5.8 percent in 2018 – correlated with increased minimum wages.

Who Has a Precarious Job?

Table 3 shows that women are slightly *more* likely to be permanent employees, by a margin of 77.0 to 73.3 percent, though twice as many men, 6.2 percent versus 2.7 percent of women, are self-employed with help. Combining these two conventionally secure job categories, there is no gender difference. More women than men had term and contract jobs, 6.6 versus 5.1. percent, and casual jobs, 3.1 versus 1.6 percent; while more men had seasonal jobs, 2.3 versus 1.3 percent, and were solo self-employed, 11.5 percent versus 9.3 percent.

Women are more than twice as likely to work part-time: 5.6 percent of women and 2.3 percent of men worked less than 15 hours/week, 15.6 percent of women and 6.1 percent of men 15-29 hours/week; in addition, 10.5 percent of women and 4.9 percent of men worked 30-34 hours/week. Job class does not explain the gender difference in work hours, but accounting for part-time work *increases* the gender difference in permanent jobs, to 79.3 percent for women and 71.7 percent for men; as shown by the modelled distributions at the bottom of each panel of Table 3.

In 2018, 6.3 percent of women had very low pay jobs, compared to 3.8 percent of men. An additional 15.6 percent of women had low, but not very low pay jobs, compared to 10.0 percent of men. Accounting for women's concentration in part-time jobs reduces the gender difference in low pay by half, but job class does not affect gender differences in low pay.

Table 4 shows the modelled effects of age, education, and the combination of gender and work hours on job class, with results reported as the predicted percentage distribution, often called "margins."[10] The model includes everyone with a job, between 20 and 64, who is not a full- or part-time student. Accounting for gender, age and education does not materially change the very strong effect of work hours on permanent employment, observed in Table 1. Just 43 percent of women and 37 percent of men working less than 15 hours/week are permanent employees, compared to 84 percent of women and 77 percent of men working full-time. Reflecting the greater institutionalization of part-time work in women's working lives, for jobs under 15 hours and 35 or more hours/week, women are about 5 percent more likely than men to be permanent employees, but the gender difference favouring women is much larger, about 15 percent, for part-time jobs for 15-29 hours/week and minimally full-time jobs for 30-34 hours/week.

Part-time workers who are *not* permanent employees are most likely be in solo self-employment, which accounts for about one-third of workers under 15 hours/week, compared to just 6.1 percent of women and 9.6 percent of men working full-time. Part-time workers are somewhat more likely to have term and contract jobs, accounting for about 10 percent of jobs under 15 hours/week, compared to about 5 percent of full-time jobs. About 10 percent of part-time workers have casual jobs, compared to just one percent of full-time workers.

Between the ages of 25 and 54, the percentage of permanent employees varies only between 75.6 and 78.3 percent; it is somewhat lower for the 20-24 and 55-59 age groups, around 73.5 percent, and for the 60-64 age group, 71.5 percent. Education has a similar U-shape: 75.3 to 77.9 percent of workers with some high school up to an undergraduate degree are permanent employees, 71.6 percent of the now very small number (1.2 percent) of workers with no high school and 70.2 percent of the much larger group (10.3 percent) with a graduate degree.

Up to age 30, term and contract, seasonal or casual jobs are the main alternatives to permanent employment; but from age of 30 the principal alternative is self-employment. The 20-24 year group is most distinct: 14.3 percent have term or contract jobs and another 4.5 percent each have seasonal and casual jobs (remember, part- and full-time students are excluded). Solo self-employment increases from just 2.8 percent of

10. An alternative model allowing gender differences in the effects of age and education (not shown) increased the explanatory power only slightly, from a pseudo R2 of .0692 to .0705, at the cost of obscuring the impact of gender and considerably increasing the complexity of the model.

workers under 25, to 6.8 percent at ages 25-29 and 9.3 percent at ages 30-34; then grows more gradually to 14.5 percent of workers age 60-64. The age profile of self-employment with help is similar, but this accounts for just 0.6 percent of workers 20-24, 2.1 percent at ages 25-29 and 3.6 percent at ages 30-34. From age 35, there are roughly twice as many solo self-employed workers as self-employed with help.

Term and contract jobs increase with education, accounting for about 3.5 percent of high school graduates, 5 percent of post-secondary graduates without a degree, 6.6 percent of bachelor graduates, and 9.3 percent of post-graduates. In contrast, seasonal jobs decline steadily from 5.0 percent of workers with no high school to just 0.3 percent of post-graduates. Education has very little effect on self-employment, though it is slightly U-shaped, being higher for workers with no high school or an advanced degree; and the pattern is similar for self-employed workers with or without help.

The dissimilar effects of gender, age and education on the three classes of non-permanent employees show these are distinctly different alternatives to a permanent job, whereas the similar effects of age and education suggest that solo self-employment and self-employment with help represent similar phenomena. This could be because "help" is defined by Statistics Canada so minimally, as potentially one part-time employee – the LFS question merely asks if the respondent has "any employee." More detail could be captured at minimal cost and additional respondent burden, since questions about self employment with help apply only to about five percent of the sample. The corresponding decline in term and contract jobs and rise of self-employment across age groups suggests that individual workers make this transition, recognizing this observation is no substitute for longitudinal analysis.

Arguing against the idea that job class and pay can be combined into a measure of precarity, the relatively small and highly non-linear effects of age and education on permanent employment are very different from their effects on pay.

An additional model of job class, not reported in a table, added family composition to the predictors in Table 4, compared unattached people, lone parents and couples, and separated couples and lone parents based on the age of their youngest child (under 6, age 6-12, 13-18 and 19-24), with different effects for women and men. This raised the explanatory power of the model in Table 4 only marginally, from a pseudo-R^2 of .0692 in Table 4 to .0717, and did not materially change the observed effects of age, education and gender by hours of work. Likely, the effects of household composition on job class are captured by the more proximate effect of part-time work, which is strongly related to gender.

Industry and Occupation

Industry and occupation differences in job class, in Tables 5 and 6 respectively, are much greater *and largely independent of* the effects of gender by hours of work, age and education. Industry and occupation strongly affect the likelihood of having a permanent job. In sharp contrast, Table 4 showed that the personal characteristics have little effect on permanent employment and mainly affect the distribution among the five other classes. Multinomial models give a pseudo R^2 of .047[11] for the combined effects of gender by hours of work, age and education; compared to .203 for occupation and industry; and to .227 for all the variables. Inspection of the coefficients showed that personal characteristics have very little effect on the specific, much larger industry and occupation differences in class.

As the occupational categories in Table 6 show, industry enters the definition of most of the 40 "major groups" of occupations, defined by Statistics Canada's 2016 *National Occupational Classification*[12]. The question is whether the closely-related effects of occupation and industry can be separated. Using multinomial logit models again, the pseudo R^2 of the effect of industry on job class is .145, of occupation .087, and of industry and occupation combined .203.

Thus, industry and occupation have *largely separate effects* on job class, with industry roughly twice as powerful. Even though Marx's framework makes sense of occupational and industry effects, the much stronger effect of industry on job class is not what you would expect from an "occupational" model of employment – in the titles of the work by Marx (2011) and Eichhorst and Marx (2015). Analysis based on "detailed" occupations – numbering between about 300 and 500 in the classifications of national statistical agencies – might produce different results and demonstrate the primacy of occupational divisions, but not likely. First, considering detailed occupations it would make sense to also use detailed categories of industry, which would increase the effect of industry; second, in this analysis the 40 occupation categories are more detailed than the 21 industry categories.

Subtracting the pseudo R^2 values above: the effect on class of industry *net of occupation* is .116 and the effect of occupation *net of industry* is .058, leaving .029 as the component for the overlap of industry and

11. For variables with multiple discrete outcomes, such as job class, pseudo R2 values based on log likelihoods provide an approximate measure of the explanatory power of the variables included in a model. Like ordinary R2 values ranging from zero for no explanatory power to 1 for perfect prediction.

12. For details see https://noc.esdc.gc.ca, accessed 25 August 2021.

occupation. We can therefore focus on the simple distributions of job class in Tables 5 and 6, rather than the "modelled" distributions, which are essentially the same. The only exceptions are the "fishing, hunting and trapping" and agriculture *occupational* groups, with their high levels of seasonal jobs and self-employment.

In the most distinctive industry, "fishing, hunting and trapping," self-employment accounts for just over one half of all jobs, there are 30.1 percent seasonal jobs and just 15.9 percent permanent jobs. Agriculture has 34.5 percent permanent jobs and 7.6 percent seasonal jobs. Excluding these two outliers, permanent jobs are distinctly lower, between 58.8 and 66.7 percent of jobs in construction, "real estate and rental and leasing," "transportation and wharehousing," "information, culture and recreation," and three different service industries: "business, building and other support services," "professional, scientific and technical services" and "other services." Except for construction, which has many seasonal jobs, these industries have 25 percent or more self-employment.

The remaining 13 industries have 74.6 percent or more permanent jobs, which are highest in durable manufacturing, 91.9 percent, non-durable manufacturing, 89.1 percent, and utilities, 89.8 percent. With 15.5 percent term and contract jobs, "educational services" is an outlier compared to the next highest industry, public administration, 9.5 percent. Casual work is unusually high in "health care and social assistance," "accommodation and food services," and educational services, but still accounts, respectively, for only 4.1, 3.3 and 3.2 percent of all the jobs in these industries.

The *industry* differences in job class are consistent with Marx's (2011) model of *occupations*: permanent employment is highest in manufacturing industries, intermediate in white collar industries and lowest in personal and social service industries. His idea that service industries have fewer permanent jobs can be extended from its usual reference to personal and social services to include professional and business services, with self-employment the more common alternative in personal and social services and non-permanent jobs the more common alternative in goods-producing and bureaucratic industries. This suggests that services, whether to individuals or to firms and organizations, tend to be individualized and small in scale.

Permanent jobs range from just 36.4 percent of arts and culture professionals, who are 53.1 percent self-employed, to 96.8 percent of workers in "front-line public protection services." Except for the high level of seasonal jobs in "harvesting, landscaping and natural resources labourers," self-employment is the principal alternative in occupations with less than 60 percent permanent jobs. Self-employment *with help* is

highest in arts and culture, primary production, management and health occupations.

In the other 32 occupational groups with at least 66 percent permanent jobs, the principal alternative varies radically. Seasonal jobs are more common in the trades, outdoor work, and transportation; term and contract jobs and, to a lesser degree, casual jobs are more common in health, social services, nursing and "office support occupations." Self-employment *with help* is a common alternative for professionals in business and finance and retail supervisors, while supervisors and technical occupations in industry and primary industry are more often in solo self-employment.

Consistent with Marx, permanent jobs are highest in occupations involving hierarchical coordination or cooperation – including supervisors and managers (except for trades and transportation) and coordinated production – including machine operators and manufacturing assembly workers, and professionals and managers in offices, sales and health care.

Six occupational groups have more than twice the overall average of 10.5 percent solo self-employment, including professionals in art and culture, 49.3 percent, two groups of middle managers, professionals in health (except nursing), technical occupations in art, culture, recreation and sport, and "supervisors and technical occupations in natural resources, agriculture and related production." This suggests that professional and trades licensing facilitates both self-employment and term and contract work. The exceptions are "professional occupations in nursing," and "professional occupations in natural and applied sciences," suggesting that class also depends on an occupation's status and main employers. Middle managers have high levels of solo self-employment *and* self-employment with help, suggesting these occupations combine small businesses proprietors and the managers of larger businesses with individual employment contracts.

There is evidence of government privatization. The three occupational groups with more than 10 percent term and contract jobs are "professional occupations in educational services," 17.8 percent, "care providers and legal, social, community and education services," 13.3 percent, and paraprofessional occupations in legal, social, community and education services, 10.4 percent. Further evidence, the highest levels of casual employment are in "assisting occupations in support of health services," 6.6 percent, and "care providers and educational, legal and public protection," 5.6 percent. Table 5 shows that the "educational services" industry has the highest level of term and contract work, 15.2 percent, while "health care and social protection" and educational services have 4.1 and 3.4 percent casual jobs, respectively.

Province, Firm and Establishment Size and Unionization

Neither theory nor a body of Canadian empirical research is available to frame the effects of province, employer and establishment size and unionization on job class. Comparing provinces, higher employment standards and enforcement might reduce non-permanent employment, but there is no consensus on the nature of these differences. Similarly, absent direct measures of the organization of work, we can only theorize the impact of size. Workers in larger establishments might be more interdependent, placing a value on permanent jobs, but perhaps larger organizations are better able to use *non*-permanent workers effectively, while smaller workplaces lack the redundancy needed to compensate for the higher turnover of non-permanent jobs. Similar ambiguity arises for unionization. That unions oppose precarious employment and seek to protect permanent jobs is not evidence they succeed, and unions *have* sought to organize non-permanent workers, such as post-secondary contract faculty. The large public-private difference in unionization in Canada suggests that unionization might have different effects in the two sectors.

Table 7 reveals quite limited provincial variation in permanent jobs, ranging only between 73.3 and 78.4 percent, except for Prince Edward Island, 69.9 percent. The principal trend is a steady and sizeable increase in self-employment moving west, from 8.3 percent in Newfoundland to 17.8 percent in British Columbia. For term and contract employment, Newfoundland is a high outlier at 8.3 percent, with a range from 4.2 to 5.9 percent in the other nine provinces. Prince Edward Island and Newfoundland have high seasonal employment, 7.4 and 6.5 percent of all jobs respectively, followed by New Brunswick and Nova Scotia, 4.6 and 3.3 percent, with a range from just 1.2 to 2.1 percent in the other provinces. Casual employment is also somewhat higher in Atlantic Canada. A regression model shows that except for high seasonal employment in Atlantic Canada, provincial differences in job class *cannot* be attributed to occupational and industry differences.

Firm and establishment size weakly affect job class, Table 8 shows. Firms with less than 20 employees have the lowest percentage of permanent jobs, 87.5 percent, but this is only slightly below the range for larger firms, from 88.2 to 91.8 percent (these figures are higher on average, because size is not measured for self-employment). The only consistent pattern is that seasonal employment decreases from 4.4 percent for firms of less than 20 employees to just 0.7 percent of jobs in establishments of 100 or more of firms with 500 or more employees. The percentages of permanent, term and contract, and casual jobs are not related to firm

and establishment size in any uniform way. Accounting for industry decreases these already small effects by about one-third. There is no basis for the argument that bigger firms provide more secure jobs.

In the private sector, 90.1 percent of union jobs are permanent, compared to 90.8 percent of non-union jobs and 89.9 percent of "union covered" jobs, where the compensation of non-members is tied to union rates in the same workplace. Accounting for occupation, industry, firm and establishment size and province changes the figures very slightly to 90.2 percent of union members in permanent jobs, versus 89.7 percent of non-members. Very similar, 88.2 percent of unionized public sector workers have permanent jobs, compared to only 79.3 percent of non-union jobs and 80.2 percent of union-covered public sector jobs – this balanced by high levels, around 15 percent, of term and contract jobs. While unions might succeed in protecting permanent jobs in the public sector, private sector unionization is not connected to whether a job is permanent.

Conclusions

These results challenge several aspects of the narrative of precarity. The relationships between job class, hours of work and low pay, and the very large differences between job classes – in terms of gender, age and education, occupation and industry – argue against the proposition that precariousness is the fundamental measure of job quality. There are good and bad jobs, evidenced by strong correlations between pay, benefits, pensions, etc., but an index based on these indicators does not make it a measure of precarity in any literal sense.

There is reason to build on the tradition of research on "standard employment," because permanent employees account for around three-quarters of all jobs and about 90 percent of those are full-time. But the dichotomy between permanent and all other jobs, originally designed to understand the 1970s early wave of de-industrialization, is no longer so central, because of the wide variation in the wages of permanent jobs and the gaps between full-time jobs and much lower pay, highly feminized part-time jobs. Also, there are very different alternatives to standard employment. Population groups, industries, and occupations with about the same percentage of permanent jobs differ radically in whether the principal alternative is a term or contract, seasonal or casual job, or self-employment, with or without help. This undermines the view that permanent *employees* have the best jobs, even adding self-employed

workers with help. It is a mistake to combine term and contract jobs with solo self-employment in a larger category of precarious jobs.

The evidence of the growth of precarity is increased term and contract jobs, from 4.3 percent in 1997 to 5.8 percent in 2011, though with little change thereafter. Rather than a decline in permanent jobs, which *increased* slightly, the growth in term and contract jobs is mainly offset by lower self-employment; while casual and seasonal jobs are unchanged. Part-time and low wage employment is also stable, except for a dramatic decline in very low wage jobs from 2016. Thus, the growth in term and contract jobs does not signal a broad decline in the lower end of the labour market.

Not only are women *more* likely to have permanent jobs, gender differences in part-time work are much larger and part-time work is a stronger predictor of low pay than job class. Of course, the cost of part-time work would be much larger considering weekly instead of hourly wages. Education and age, the two conventional measures of human capital, are weak predictors of having a permanent job, but good predictors of the multiple alternatives. For example, term and contract jobs are much more common for workers under 25 and still high for ages 25-29; seasonal and casual work drops by about two-thirds between the 20-24 and 30-34 age groups; and solo self-employment is just 2.8 percent for workers age 20-24, jumping to 10.8 percent for the workers age 35-39, with the comparable figures for self-employment *with help* increasing from 0.6 to 4.5 percent. Rather than workers with low education, university graduates and especially graduate and professional degree holders are most likely to have term and contract jobs, which is inconsistent with the blanket interpretation of non-standard employment in terms of disadvantage. This suggests that most employers are more concerned with assuring the continuity and reliability of their operations than with lower labour cost of non-permanent jobs, which carry the risk of greater turnover and higher recruitment and training costs. These results also suggest that researchers pay more attention to age and the life course, intersecting with gender, and to self-employment.

The effects of occupation and industry on job class are much larger and essentially independent of workers' personal characteristics, with the industry effects roughly twice as large as occupational effects. Firm and establishment size, unionization and province have much less impact, even without accounting for occupation and industry. Roughly, the differences are consistent with Marx's *occupational* model of non-standard employment, and the industry and occupation patterns are consistent. The stronger and independent effect of industry on job class, however, suggests that the need for an explicit theorization of industry differences

in job class, separate from occupation. The levels of price competition, subsidies and tariffs, imports and exports, and government employment immediately affect industry size and technological change, compared to the slower and less predictable effects of changes in occupational skills on job gains and losses.

The deep connections between industry, occupation and job class stand in the way of regulatory efforts to increase permanent employment, which also would also do little to improve the position of women or decrease low wages. The low pay of part-time and many permanent jobs disproportionately affects women, who are much more likely to work part-time throughout their working years. Nor is it easy to decrease the numbers of part-time jobs, about two-thirds of which are voluntary and often tied responsibilities for care. Rather than focussing on job security, increasing minimum wages and benefits, systematic efforts – perhaps modelled on pay equity strategies – to raise part-time pay, and effective enforcement of higher workplace "minimum standards" are more effective reforms.

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Figure 1. Permanent Employees, Full-Time Hours and NOT Low Wages by Year

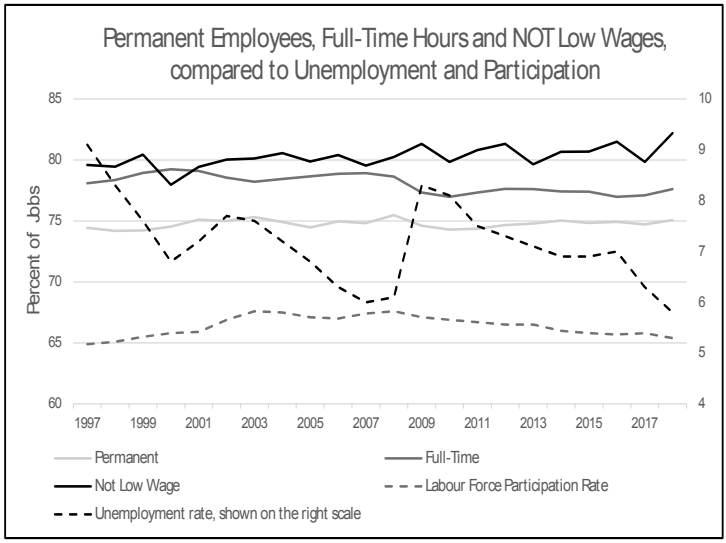

Figure 2. Job Class, Work Hours and Wages of Main Job by Year

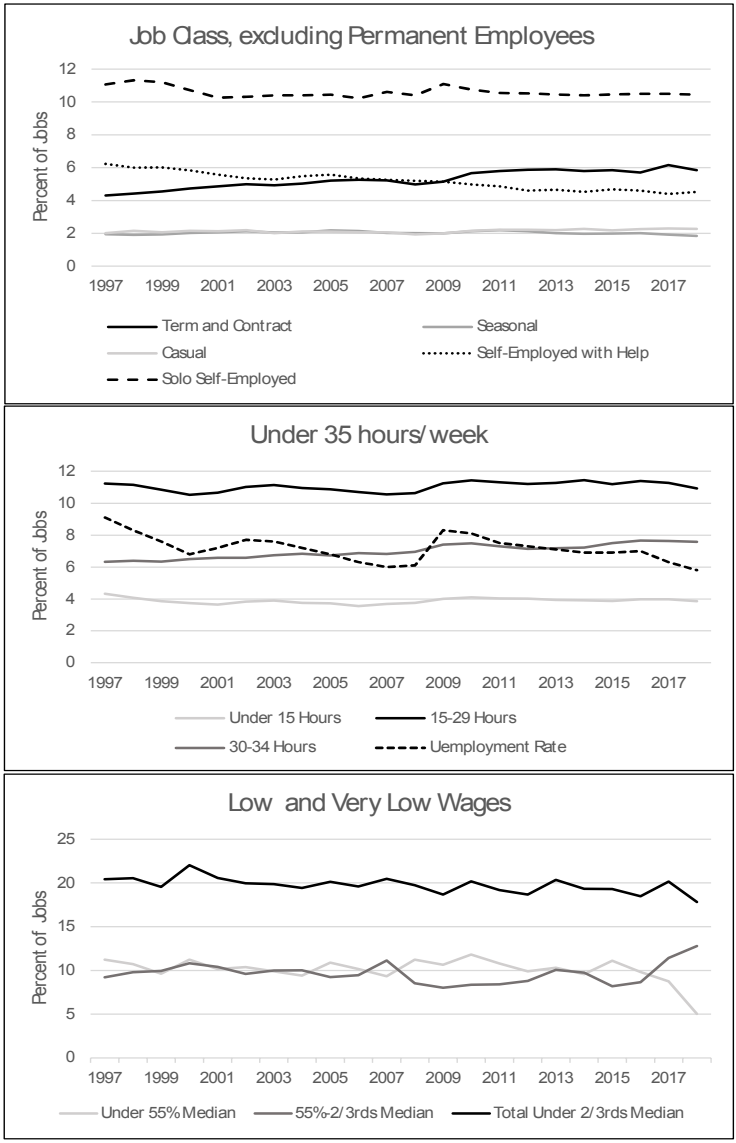

Table 1. Job Class and Work Hours, 2018

Job Class	Work Hours					Sample Size
	1-14	15-29	30-34	35 or more	Total	
	Percent of All Jobs					
Permanent Employee	1.6	6.8	5.3	61.6	75.4	498,603
Term or Contract	0.5	1.0	0.5	3.9	5.9	35,187
Seasonal	0.1	0.3	0.2	1.3	1.9	16,303
Casual	0.5	0.8	0.3	0.7	2.3	15,397
Self-Employed With Help	0.1	0.3	0.3	3.9	4.5	30,691
Solo Self-Employed	1.0	1.8	1.1	6.3	10.2	63,093
Total	3.9	10.9	7.6	77.6	100.0	659,274
	Percent Work Hours by Job Class					
Permanent Employee	2.2	9.1	7.0	81.8	100.0	
Term or Contract	8.8	16.7	8.9	65.6	100.0	
Seasonal	6.5	13.4	8.8	71.3	100.0	
Casual	22.1	36.5	11.5	30.0	100.0	
Self-Employed With Help	1.8	6.1	5.8	86.2	100.0	
Solo Self-Employed	9.9	17.3	11.2	61.6	100.0	
Total	3.9	10.9	7.6	77.6	100.0	
	Percent Job Class by Work Hours					
Permanent Employee	42.5	62.6	69.2	79.4	75.4	
Term or Contract	13.3	9.0	6.9	5.0	5.9	
Seasonal	3.1	2.3	2.2	1.7	1.9	
Casual	13.0	7.6	3.4	0.9	2.3	
Self-Employed With Help	2.1	2.5	3.5	5.0	4.5	
Solo Self-Employed	25.9	16.1	14.9	8.1	10.2	
Total	100.0	100.0	100.0	100.0	100.0	
Sample Size	24,976	70,456	50,345	513,497	659,274	

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64

Table 2. Hourly Wage by Job Class by Work Hours, 2018

Job Class	Work Hours 1-14	15-29	30-34	35 or more	Total	Total, adjusted for Work Hours*
	Percent low pay (less than 2/3rds the provincial median)					
Permanent Employee	54.5	42.1	27.9	11.5	16.3	17.2
Term or Contract	32.7	34.8	24.9	16.8	21.9	17.8
Seasonal	55.1	57.0	52.3	26.7	34.9	32.0
Casual	51.5	48.9	36.5	27.6	41.7	24.2
Total	50.0	42.4	28.7	12.2	17.8	
Total, adjusted for Job Class*	47.5	41.4	28.4	12.4		
	Percent very low pay (under 55% of the provincial median)					
Permanent Employee	19.5	13.4	8.5	2.9	4.6	4.9
Term or Contract	10.5	9.8	7.0	4.6	6.2	4.8
Seasonal	15.5	13.2	13.6	6.5	8.6	7.4
Casual	17.1	16.7	10.7	8.0	13.5	6.6
Total	17.2	13.3	8.6	3.1	5.0	
Total, adjusted for Job Class*	16.3	13.0	8.6	3.1		
	Median pay in 2018 dollars/hour					
Permanent Employee	15.00	17.00	20.00	26.40	25.00	24.46
Term or Contract	19.40	19.00	21.87	23.08	22.00	23.46
Seasonal	15.00	15.00	15.00	19.00	18.00	19.46
Casual	15.00	15.85	18.12	19.86	17.23	21.46
Total	15.30	17.00	20.00	26.00	24.04	
Total, adjusted for Job Class*	16.74	17.74	20.07	25.74		
	Mean pay in 2018 dollars/hour					
Permanent Employee	18.86	21.24	24.63	29.71	28.35	28.15
Term or Contract	24.71	22.50	25.16	25.92	25.17	26.18
Seasonal	17.45	17.18	18.21	21.25	20.19	20.75
Casual	19.41	19.26	21.06	21.95	20.30	24.03
Total	19.98	21.08	24.36	29.25	27.74	
Total, adjusted for Job Class*	21.01	21.48	24.48	29.14		
Sample Size	17,911	57,651	41,814	446,913	564,289	

* The first and second panels employ multinomial logistic regression, the third panel employs median regression and the fourth panel employs ordinary least squares regression.

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64

Table 3. Gender and Job Class, Work Hours and Low Wages, 2018

	Job Class, percent							
Gender	Permanent Employee	Term or Contract	Seasonal	Casual	Self-Employed With Help	Solo Self-Employed	Total	Sample Size
	Simple Distribution							
Women	77.0	6.6	1.3	3.1	2.7	9.3	100.0	321,152
Men	73.3	5.1	2.3	1.6	6.2	11.5	100.0	340,462
	Adjusted for Work Hours*							
Women	79.3	6.2	1.2	2.4	2.8	8.1	100.0	
Men	71.7	5.5	2.5	2.1	5.9	12.4	100.0	

	Work Hours, percent				
	1-14	15-29	30-34	35 or more	Total
	Simple Distribution				
Women	5.6	16.2	10.5	67.7	100.0
Men	2.3	6.1	4.9	86.7	100.0
	Adjusted for Job Class*				
Women	5.5	16.1	10.5	67.9	100.0
Men	2.3	6.2	4.9	86.6	100.0

	Low Wage, percent			
	Very Low Wage	Low Wage	Not Low Wage	Total
	Simple Distribution			
Women	6.3	15.6	78.1	100.0
Men	3.8	10.0	86.3	100.0
	Adjusted for Work Hours*			
Women	5.4	14.0	80.5	100.0
Men	4.5	11.4	84.1	100.0
	Adjusted for Job Class and Work Hours*			
Women	5.5	14.1	80.4	100.0
Men	4.5	11.3	84.2	100.0

* marginal distributions from a multinomial logit model

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64

Table 4. Modelled Effects* of Gender, Age and Education on Job Class, 2018

Effect	Job Class, percent							Percent of the Population	Sample Size
	Permanent Employee	Term or Contract	Seasonal	Casual	Self-Employed With Help	Solo Self-Employed	Total		
Gender x Work Hours									
Women 1-14 hours/week	43.3	9.5	2.1	11.6	2.4	31.1	100.0	2.7	17,870
Women 15-29 hours/week	66.3	7.3	1.5	6.2	2.6	16.1	100.0	7.8	51,476
Women 30-34 hours/week	74.3	6.3	1.5	3.4	2.5	11.9	100.0	5.0	34,714
Women 35+ hours/week	83.6	5.2	1.1	1.1	2.9	6.1	100.0	32.4	215,971
Men 1-14 hours/week	37.0	9.7	3.1	9.8	4.1	36.3	100.0	1.2	7,106
Men 15-29 hours/week	52.9	8.0	2.8	6.1	3.8	26.3	100.0	3.2	18,980
Men 30-34 hours/week	59.3	6.2	2.6	2.5	6.1	23.3	100.0	2.6	15,631
Men 35+ hours/week	76.7	4.3	2.1	0.7	6.5	9.6	100.0	45.2	297,526
Age									
20-24	73.4	14.3	4.5	4.4	0.6	2.8	100.0	9.5	55,115
25-29	78.0	8.4	2.3	2.4	2.1	6.8	100.0	12.2	69,956
30-34	78.3	5.7	1.4	1.7	3.6	9.3	100.0	12.2	76,092
35-39	77.1	4.7	1.3	1.6	4.5	10.8	100.0	12.1	79,257
40-44	77.8	3.8	1.1	1.5	5.1	10.8	100.0	11.8	78,458
45-49	76.5	3.7	1.3	1.3	5.5	11.7	100.0	11.3	78,562
50-54	75.6	3.0	1.4	1.3	6.2	12.5	100.0	12.2	84,318
55-59	73.6	3.2	1.6	1.5	6.9	13.1	100.0	11.3	82,310
60-64	71.5	3.7	1.8	1.7	6.8	14.5	100.0	7.5	55,206
Education									
0-8 Years	71.6	3.7	5.0	1.6	5.2	12.9	100.0	1.2	9,409
Some High School	75.4	3.5	3.7	1.7	4.7	11.0	100.0	4.7	37,715
High School Graduation	77.9	3.5	2.5	1.6	4.6	9.9	100.0	18.2	130,522
Some Post-Secondary	75.3	4.9	2.6	1.9	5.0	10.4	100.0	5.8	38,364
Post-Secondary Certificate, Diploma	77.4	4.7	1.7	2.0	4.2	10.0	100.0	37.5	263,209
University Degree	75.4	6.6	0.9	2.1	4.7	10.4	100.0	22.3	124,445
Advanced Degree	70.2	9.3	0.3	1.6	6.2	12.4	100.0	10.3	55,610
Total	76.0	5.2	1.8	1.9	4.7	10.4	100.0	100.0	659,274

* the table entries are predicted percentages, often called "effects" or "margins", from a multinomial logit model.

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64, excluding full- and part-time students

Table 5. Job Class by Industry, 2018

	Job Class, percent								
Industry	Permanent Employee	Term or Contract	Seasonal	Casual	Self-Employed With Help	Solo Self-Employed	Total	Percent in the Industry	Sample Size
Fishing, hunting and trapping	15.9	2.1	30.1	0.1	20.9	30.9	100.0	0.1	3,025
Agriculture	34.5	1.8	7.6	0.5	15.9	39.8	100.0	1.3	26,607
Real estate and rental and leasing	58.8	1.9	0.7	0.9	5.8	31.9	100.0	1.8	20,113
Forestry and logging and support activities	60.9	3.7	18.4	0.6	7.7	8.8	100.0	0.3	5,936
Construction	61.1	5.4	5.6	1.0	10.3	16.7	100.0	8.2	108,201
Business, building and other support services	61.6	7.9	4.0	2.1	6.0	18.4	100.0	4.2	48,049
Other services (except public administration)	64.7	4.7	0.6	1.1	8.1	20.7	100.0	4.3	56,094
Professional, scientific and technical services	65.3	4.1	0.5	0.6	6.6	22.9	100.0	8.2	78,327
Information, culture and recreation	66.7	8.0	5.3	2.3	2.3	15.4	100.0	3.9	41,609
Educational services	74.6	15.5	1.1	3.2	0.9	4.6	100.0	6.9	95,867
Transportation and warehousing	75.2	3.2	2.1	1.7	3.4	14.4	100.0	5.5	68,649
Health care and social assistance	77.4	5.4	0.2	4.1	3.4	9.5	100.0	13.4	185,187
Accommodation and food services	80.0	3.5	2.8	3.3	7.7	2.8	100.0	5.1	65,795
Retail trade	83.9	2.7	1.1	2.5	5.1	4.7	100.0	10.1	131,091
Mining, quarrying, and oil and gas extraction	85.2	4.2	2.7	0.5	1.7	5.7	100.0	1.6	31,965
Wholesale trade	85.9	2.6	0.5	0.6	4.6	5.8	100.0	3.8	42,890
Finance and insurance	86.5	3.6	0.1	0.6	2.3	6.8	100.0	4.8	49,560
Public administration	87.8	9.5	1.2	1.5	0.0	0.0	100.0	5.6	78,103
Manufacturing - non-durable goods	89.1	3.5	1.8	0.8	2.8	2.1	100.0	4.6	56,248
Utilities	89.8	8.2	1.0	0.9	0.1	0.0	100.0	0.8	11,921
Manufacturing - durable goods	91.9	3.1	0.8	0.5	2.4	1.3	100.0	5.4	68,256
Total	75.8	5.4	1.8	1.9	4.6	10.5	100.0	100.0	1,273,493

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64, excluding full- and part-time students

Table 6. Job Class by Occupation, 2018, First Panel

Occupation	Job Class, percent							Percent in the Occupation	Sample Size
	Permanent Employee	Term or Contract	Seasonal	Casual	Self-Employed With Help	Solo Self-Employed	Total		
Professional occupations in art and culture	36.4	7.5	0.6	1.5	4.8	49.3	100.0	1.0	10,120
Middle management occupations in trades, transportation, production and utilities	39.6	1.0	0.4	0.1	23.0	36.0	100.0	3.0	42,780
Harvesting, landscaping and natural resources labourers	40.6	5.5	33.8	1.2	1.1	17.8	100.0	0.5	7,871
Professional occupations in health (except nursing)	42.1	6.5	0.0	1.6	22.5	27.3	100.0	1.8	21,416
Middle management occupations in retail and wholesale trade and customer services	43.6	0.6	0.3	0.1	33.4	22.0	100.0	3.1	37,831
Technical occupations in art, culture, recreation and sport	47.0	9.7	4.3	2.3	3.7	33.1	100.0	1.7	16,611
Supervisors & technical occupations in natural resources, agriculture, related production	58.9	2.1	7.3	0.3	15.2	16.2	100.0	0.9	18,374
Paraprofessional occupations in legal, social, community and education services	66.3	9.8	1.2	3.1	2.1	17.5	100.0	2.5	32,059
Transport and heavy equipment operation and related maintenance occupations	67.1	3.2	6.4	1.8	0.9	20.6	100.0	3.8	54,514
Industrial, electrical and construction trades	69.4	6.3	3.4	1.0	7.3	12.6	100.0	5.3	72,142
Care providers and educational, legal and public protection	70.0	13.3	1.9	5.6	0.3	8.8	100.0	1.4	21,280
Trades helpers, construction labourers and related occupations	70.9	10.4	15.2	3.4	0.0	0.1	100.0	0.9	12,331
Workers in natural resources, agriculture and related production	71.7	5.0	19.8	1.2	0.1	2.3	100.0	0.5	10,583
Professional occupations in business and finance	73.1	4.6	0.1	0.4	4.8	17.0	100.0	4.4	44,403
Professional occupations in law and social, community and government services	74.2	9.0	0.2	0.7	5.1	10.7	100.0	2.7	32,930
Finance, insurance and related business administrative occupations	74.9	2.4	0.6	1.0	5.0	16.1	100.0	1.3	17,298
Professional occupations in education services	75.9	17.8	0.7	3.0	0.5	2.1	100.0	4.0	53,418
Service support and other service occupations, n.e.c.	77.0	4.3	3.1	4.3	0.3	10.9	100.0	4.1	55,926
Retail sales supervisors and specialized sales occupations	78.1	1.4	0.3	0.5	3.6	16.2	100.0	3.7	44,461
Service supervisors and specialized service occupations	78.4	2.9	1.8	1.8	5.0	10.1	100.0	3.3	43,655

Table 6. Job Class by Occupation, 2018, Second Panel

	Job Class, percent								
Occupation	Permanent Employee	Term or Contract	Seasonal	Casual	Self-Employed With Help	Solo Self-Employed	Total	Percent in the Occupation	Sample Size
Maintenance and equipment operation trades	78.5	2.3	1.3	0.4	10.5	7.0	100.0	3.6	52,980
Technical occupations in health	79.0	3.5	0.2	4.2	1.6	11.6	100.0	2.2	29,108
Professional occupations in natural and applied sciences	80.1	5.6	0.2	0.3	2.6	11.3	100.0	5.0	47,566
Other installers, repairers and servicers and material handlers	81.6	6.2	3.6	2.4	0.7	5.5	100.0	1.6	18,385
Service representatives and other customer and personal services occupations	82.7	5.0	1.9	3.4	1.2	5.9	100.0	4.1	50,059
Technical occupations related to natural and applied science	84.3	6.3	1.9	0.9	1.2	5.4	100.0	3.5	42,936
Sales support occupations	84.7	4.7	1.6	5.2	0.2	3.6	100.0	2.2	29,452
Labourers in processing, manufacturing and utilities	85.1	7.7	4.6	2.6	0.0	0.0	100.0	0.9	11,380
Sales representatives and salespersons - wholesale and retail	85.6	3.0	1.5	3.1	2.4	4.4	100.0	3.8	45,510
Processing, manufacturing and utilities supervisors and central control occupations	85.7	2.0	0.8	0.4	10.4	0.8	100.0	1.2	17,109
Assemblers in manufacturing	86.7	5.3	1.0	0.9	0.5	5.7	100.0	1.1	13,563
Office support occupations	87.2	9.0	0.9	2.6	0.1	0.3	100.0	3.5	45,561
Senior management occupations	88.6	7.5	0.0	0.6	0.8	2.5	100.0	0.3	3,362
Assisting occupations in support of health services	88.7	4.3	0.3	6.6	0.0	0.2	100.0	2.0	29,179
Administrative and financial supervisors and adminstrative occupations	89.7	6.0	0.6	1.1	0.6	2.0	100.0	5.6	70,443
Professional occupations in nursing	89.7	3.9	0.0	5.7	0.1	0.6	100.0	2.0	27,176
Distribution, tracking and scheduling co-ordination occupations	89.9	4.7	0.9	2.3	0.2	2.0	100.0	1.7	21,790
Processing and manufacturing machine operators and related production workers	90.9	3.5	1.8	0.8	0.2	2.8	100.0	1.8	23,570
Specialized middle management occupations	93.7	2.8	0.1	0.2	2.6	0.6	100.0	3.3	35,599
Occupations in front-line public protection services	96.8	2.1	0.3	0.8	0.0	0.0	100.0	0.7	8,762
Total	75.8	5.4	1.8	1.9	4.6	10.5	100.0	100.0	1,273,493

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64, excluding full- and part-time students

Table 7. Job Class by Province, 2018

	Job Class, percent								
Province	Permanent Employee	Term or Contract	Seasonal	Casual	Self-Employed With Help	Solo Self-Employed	Total	Percent in the Province	Sample Size
Newfoundland	73.3	8.3	6.5	3.6	3.2	5.1	100.0	1.2	19,040
Prince Edward Island	69.9	5.8	7.4	2.4	6.1	8.4	100.0	0.4	16,989
Nova Scotia	76.0	4.9	3.3	2.9	4.9	8.1	100.0	2.5	30,676
New Brunswick	76.3	5.0	4.6	3.3	4.3	6.6	100.0	1.9	29,462
Quebec	77.6	5.9	2.0	1.4	4.0	9.1	100.0	22.7	108,270
Ontario	76.3	5.4	1.5	1.6	4.6	10.7	100.0	39.0	170,157
Manitoba	78.4	4.2	2.0	2.0	4.5	9.0	100.0	3.4	57,701
Saskatchewan	75.0	4.6	2.1	2.0	5.4	11.0	100.0	3.0	49,391
Alberta	74.2	5.0	1.7	2.1	5.3	11.6	100.0	12.7	74,965
British Columbia	74.2	4.2	1.2	2.5	5.3	12.5	100.0	13.2	75,699
Total	75.8	5.4	1.8	1.9	4.6	10.5	100.0	100.0	632,350

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64

Table 8. Job Class by Size of Firm and Establishment, 2018

Size of Firm	Size of Establishment	Job Class, percent: Permanent Employee	Term or Contract	Seasonal	Casual	Total	Percent of All Employees	Sample Size
Under 20	Under 20	87.5	5.6	4.4	2.5	100.0	17.7	97,948
20-99	Under 20	88.2	6.7	2.7	2.4	100.0	2.8	16,336
20-99	20-99	89.5	5.3	3.3	1.9	100.0	13.6	72,518
100-499	Under 20	89.3	6.1	2.2	2.4	100.0	2.8	16,942
100-499	20-99	90.8	5.7	1.7	1.9	100.0	4.9	26,096
100-499	100-499	89.4	6.5	2.5	1.7	100.0	7.6	39,440
500 or more	Under 20	88.8	6.5	1.6	3.0	100.0	7.7	46,235
500 or more	20-99	89.9	6.7	1.1	2.3	100.0	15.1	84,957
500 or more	100-499	91.8	5.8	0.7	1.6	100.0	13.7	70,347
500 or more	500 or more	89.7	7.2	0.7	2.4	100.0	14.3	69,167
Total		89.5	6.2	2.1	2.2	100.0	100.0	539,986

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64

Table 9. Job Class by Private/ Public Sector by Unionization, 2018

Sector	Unionization	Job Class, percent					Percent of All Employees	Sample Size
		Permanent Employee	Term or Contract	Seasonal	Casual	Total		
Private Sector								
	Non-Union	90.8	4.9	2.5	1.8	100.0	62.5	319,305
	Union covered	89.9	7.2	1.5	1.5	100.0	1.2	6,153
	Union	90.1	5.5	2.4	2.0	100.0	11.3	63,572
Public Sector								
	Non-Union	79.3	15.3	1.7	3.7	100.0	5.8	32,723
	Union covered	80.2	14.5	0.9	4.4	100.0	0.8	4,755
	Union	88.2	7.8	0.8	3.3	100.0	18.4	113,478
Total		89.5	6.2	2.1	2.2	100.0	100.0	539,986

Source: Statistics Canada Labour Force Survey, all months of 2018, for ages 20-64