# Waiting for Recovery: The Canadian Labour Market in June 2020

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Le marché du travail canadien émerge actuellement d'un scénario persistant de surcroît anormal de travailleurs en chômage temporaire (ou licenciés en rappel), ceux qui sont « employés mais absents du travail » pour des raisons qui ne sont pas précisées ou ceux qui, dans l'attente d'un rappel, ne font pas partie de la population active. Deux signes encourageants apparaissent évidents. Les nouveaux affichages de postes à pourvoir se sont redressés, passant de 50 pour cent à environ 80 pour cent de leur niveau antérieur à la crise, et les données semblent en outre indiquer que la hausse de l'emploi en mai 2020 est attribuable au retour au travail de certains des travailleurs en attente de rappel. Ces éléments d'information laissent supposer que le marché du travail pourrait se rétablir rapidement. Les signaux d'alerte sont les suivants : les proportions de personnes au chômage qui n'ont pas de lien d'emploi et des personnes en attente de rappel qui sont à la recherche d'un emploi sont à la hausse.

**Mots clés :** chômage, COVID-19, emploi, postes à pourvoir

The Canadian labour market is currently emerging from a holding pattern with unusually high numbers of people in temporary (or "recall") unemployment, people who are "employed but absent from work" for unspecified reasons, or people who are not in the labour force while waiting to be recalled. Two encouraging signs are evident. New postings of vacancies have recovered from 50 percent to about 80 percent of their pre-crisis level. Also, data suggest that the increase in employment in May 2020 is due to the re-entry into employment of some of those waiting to be recalled. These patterns suggest that the labour market might rebound quickly. Warning signs are that the shares of unemployed persons without job attachment and of those on recall engaged in job search are beginning to increase.

**Keywords**: COVID-19, vacancies, unemployment, employment

## Introduction

The epidemic spread of coronavirus disease 2019 (COVID-19) in spring 2020 and the ensuing shutdown of the economy have plunged Canada's labour market into crisis. Within weeks, employment dropped by 15 percent and hours worked dropped by 32 percent (Lemieux et al. 2020).[1] As noted elsewhere and as we document here, much of the employment decline resulted in a rapid increase in temporary layoff unemployment. At the same time, job matching in the open market—the forming

of new employment relationships between previously unconnected job seekers and employers — contracted sharply.

The length and depth of the ensuing recession will to a large degree depend both on whether those laid off in March and April remain attached to the labour market and on how quickly hiring in the open market recovers. Should either fail, the increases in non-employment could potentially take years to unwind.

In this article, we examine the state of the labour market in early summer 2020 with an eye toward two broad, interrelated questions. First, are hiring intentions on the open labour market recovering? For example, do we observe firms beginning to be active in hiring beyond simply recalling workers previously put on furlough or temporary layoffs? Second, do those separated in March and April maintain their links to the labour market? Do they remain closely connected to their prior employers, maybe awaiting recall? How is search activity affected among those who are non-employed?

Three months into the COVID-19 crisis, we aim to answer these questions using data from the Canadian Labour Force Survey (LFS) and from a set of online job boards.[2]

Traditionally, the process of hiring is conceptualized as one in which individuals search for jobs and employers search for workers. The dynamics of the labour market in June 2020 have largely become disconnected from this process. Large parts of the workforce are waiting to rejoin their employers, and how quickly they are recalled will determine the dynamics of employment and unemployment in the next few months. In the background, however, the traditional matching process is still taking place. We provide evidence that the rate of posting new vacancies in Canada has recovered to about 80 percent of the pre-crisis level. Also, among non-employed persons, there are signs that the number of individuals searching for jobs is increasing. This duality in the labour market between temporary separations and the open labour market will likely persist through the summer and fall.

We rely heavily on the LFS, a data set that requires little introduction. In addition, we use data on vacancies provided to us by Employment and Social Development Canada (ESDC). In the following section, we use these data together with data from Indeed Canada to measure the dynamics of labour demand. In the third section, we present how employment, unemployment, and non-participation (i.e., not in the labour force, or NILF) evolved over the past few months. We also explore more detailed information on subgroups within these categories to explore which parts of the workforce are temporarily or perhaps more permanently separated from their former places of work. The fourth and fifth sections provide supplemental evidence on heterogeneity of impacts across industries and occupations as well as provinces.

## New Vacancy Postings during the COVID-19 Crisis

### Job Bank Data

The vacancy data were provided to us by ESDC and contain new vacancies posted on the Job Bank, a job board maintained by ESDC, and new vacancies posted on job boards maintained by external providers. The external providers are provincial job boards maintained by Employment Quebec, Saskjobs, and WorkBC and some private job boards such as Monster.com, Careerbeacon, Jobillico, PSC, and ZipRecruiter. In the following discussion, we refer to these data as the *enhanced Job Bank data*.

The disadvantage of the enhanced Job Bank data provided by ESDC is that they are clearly not a representative sample of job openings in Canada, such as those, for instance, provided by Statistics Canada's Job Vacancy and Wage Survey (JVWS). As we document in the online appendix, the distribution of postings across provinces is very uneven, more so than the variation in the size of their labour markets warrants. To account for this, we re-weight the data to match the population distribution across provinces estimated using 2016 Census data. More worrisome still is that between 2015 and 2018, the time-series of postings according to the enhanced Job Bank data deviates substantially from the time-series obtained from the JVWS. The crucial advantage of the enhanced Job Bank data is that they provide weekly, up-to-date information on the number of new vacancies posted. In contrast, the JVWS is a quarterly survey published with long lags.[3]

However, because we are concerned about the degree to which the enhanced Job Bank data are representative, we have obtained an alternative index from Indeed Canada, a private online job board and job search company. This alternative index is based on new postings directly on Indeed as well as on new postings retrieved by Indeed from the Internet. In the Appendix, we show this index for the period 1 February–5 June 2020. This evidence is consistent with our finding from enhanced Job Bank data that new posted vacancies declined by about 50 percent between late March and early April and have since increased substantially, although the increase in the Indeed data is less pronounced.[4]

### Aggregate Trends in Vacancy Postings

Figure 1 shows the evolution of new vacancies posted on job banks between 5 January 2020 and 9 June 2020. Postings declined rapidly to about 50 percent of the level before 15 March. However, since the beginning of April, the rate at which new vacancies are posted on the job banks has staged a remarkable comeback. The most recent data (referring to the week ending on 9 June) suggest that vacancies rebounded to roughly 80 percent of the level attained in the weeks before the COVID-19 crisis.[5]
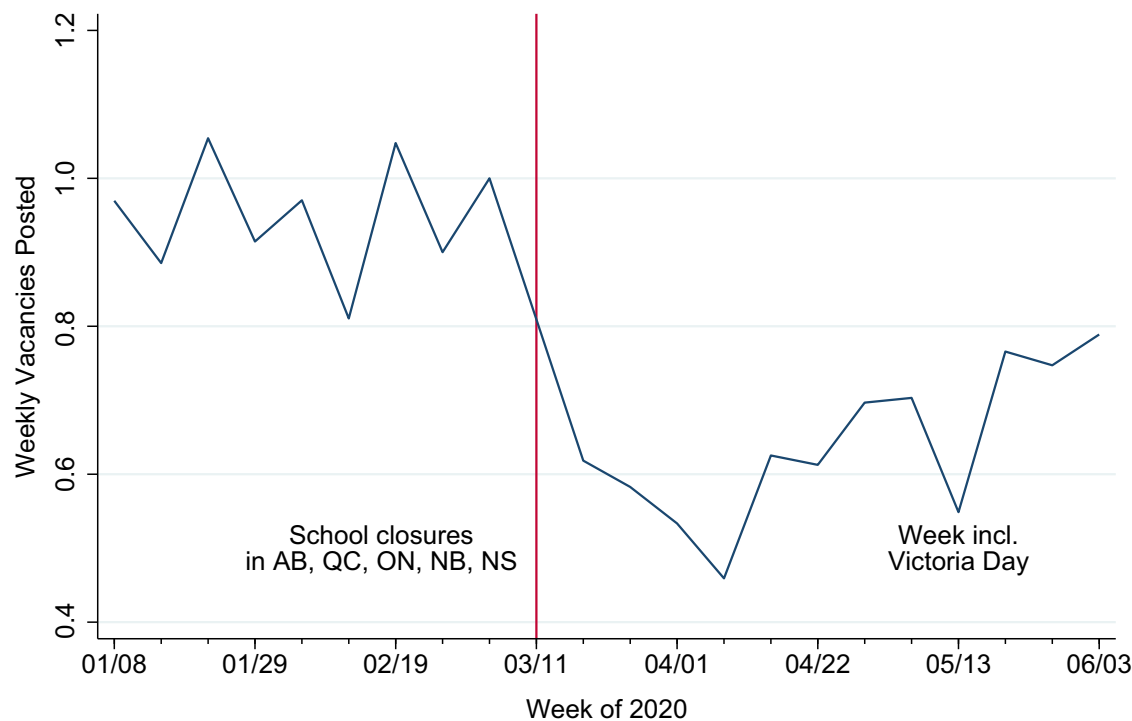
**Figure 1:** Total Job Postings on Job Bank and External Sources, January–June 2020

Notes: Weekends omitted. Weighted to distribution across provinces. Weeks are defined as starting on Wednesdays following Stata convention.

Source: Enhanced Job Bank data provided by Employment and Social Development Canada.

## Employment, Unemployment, and Labour Force Participation

We now turn to the question of how closely attached to the labour market those who lost employment in spring 2020 remain. We rely on the public use version of the LFS from January 2018 to May 2020. This is a nationally representative survey of the Canadian population. We restrict the sample to those aged 20–64 years, the age range also used by Lemieux et al. (2020).[6]

To begin, we consider the standard labour force states employment *E,* unemployment *U,* and non-participation *NILF*. We note, and return to this later, that the standard categories have some ambiguities. These grey areas are even more pronounced at present, in part because of the nature of the COVID-19 downturn and also to some extent because of policy responses.

Figure 2 plots employment and unemployment as a fraction of the population and the non-participation rate (1-labour force participation rate) monthly from January 2018 to May 2020.[7]

Several key points are evident. The employment rate declines sharply by approximately 10 percentage points from February to April before rebounding modestly in May. As expected, a significant fraction of the employment loss is reflected in higher unemployment—hence the steep rise in the proportion of the population that is unemployed over February through May. However, much of the employment decline also shows up in the form of a sharp reduction in labour force participation between February and April. For example, the March LFS reported that more than one million workers lost jobs in the previous month (Statistics Canada 2020), yet unemployment increased by less than 450,000. According to the standard division between unemployment and non-participation (NILF), which is based on reported job searches, more than one-half of these job losers withdrew from the workforce and a bit fewer than one-half increased the stock of unemployed persons.[8]

We next illustrate and discuss the margins between employment and non-employment and, within those who are non-employed, between unemployment and non-participation. Our objective is both to provide a broad picture of the nature of the COVID-19 downturn in the labour market and to assess the extent to which non-employed persons want to return to work. The principal findings are as follows:

- The decrease in measured employment vastly understates the decline in work performed during April and May 2020. An additional 8–9 percentage points of the population are now reporting full-week

absences from work, and most of these people are not being paid by their employers.

- Most unemployed persons are not traditional job seekers but rather are waiting to be recalled to their former jobs. The majority of those awaiting recall are not currently searching for work. Since March, the number of unemployed persons who are seeking new employment has increased by only about 1 percentage point.
- Among those NILF, there has been a marked rise in people displaying marginal attachment to the labour force, reporting a desire for work but not currently engaged in a job search.

## *Employment Rates*

The margin between employment and non-employment is usually viewed as being well defined. However, during the COVID-19 downturn, this margin has become less well defined in that a significant share of workers reported being absent from work for unspecified reasons. Many of these workers have not been paid during this period.

Figure 3 shows the composition of those who are employed (as a proportion of the population) who report being absent from work for the full week in the period since January 2018. In normal times, about 5–6 percent of the population is absent from work. The main reasons

offered to explain these absences are being on vacation, illness or disability, and personal or family reasons. It is not surprising that vacations have a strong seasonal pattern, with many employees being on vacation in July and August and a smaller spike in March during the school break period. The "other" category is usually small. By contrast, March and April 2020 saw huge increases in those reporting absence for other reasons, followed by a modest decline in May.[9] The question is, are these individuals any different from those who report being on recall and are categorized as unemployed on temporary layoff?

One clue to the answer to this question is to ask whether those absent from work were paid or not. This information is only available for full-week absences and also excludes self-employed unincorporated workers. Figure 4 shows that initially in March, around half the full-week absences were paid and half were not paid.[10] However, by the reference period in May, paid absences had returned to pre–COVID-19 levels, whereas unpaid absences continued to be unusually elevated.

To summarize, in addition to a decline in the employment rate of the working-age population of about 10 percentage points (Figure 2), the share of those with full-week absences from work increased by an additional 8–9 percentage points (Figure 3), most of whom are not being paid during their absence (Figure 4).[11] There is thus a very sizable part of the workforce that is not productive and is
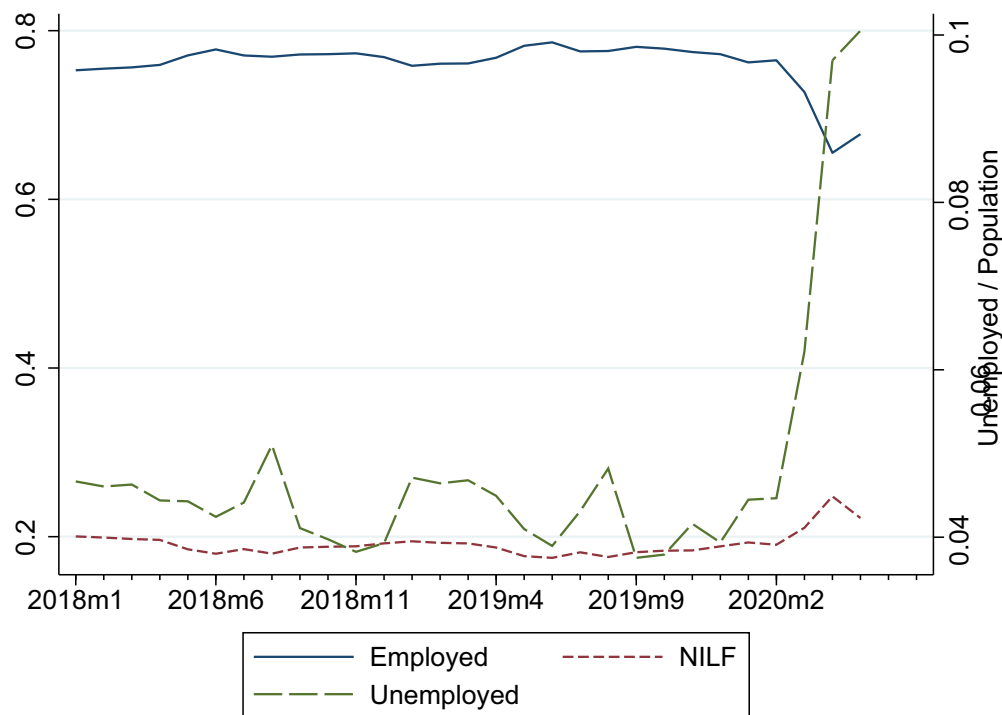


**Figure 2:** Labour Force Shares of the Population

Notes: Left-hand scale is for those who are employed and NILF. Right-hand scale is for those who are unemployed. NILF = not in labour force.
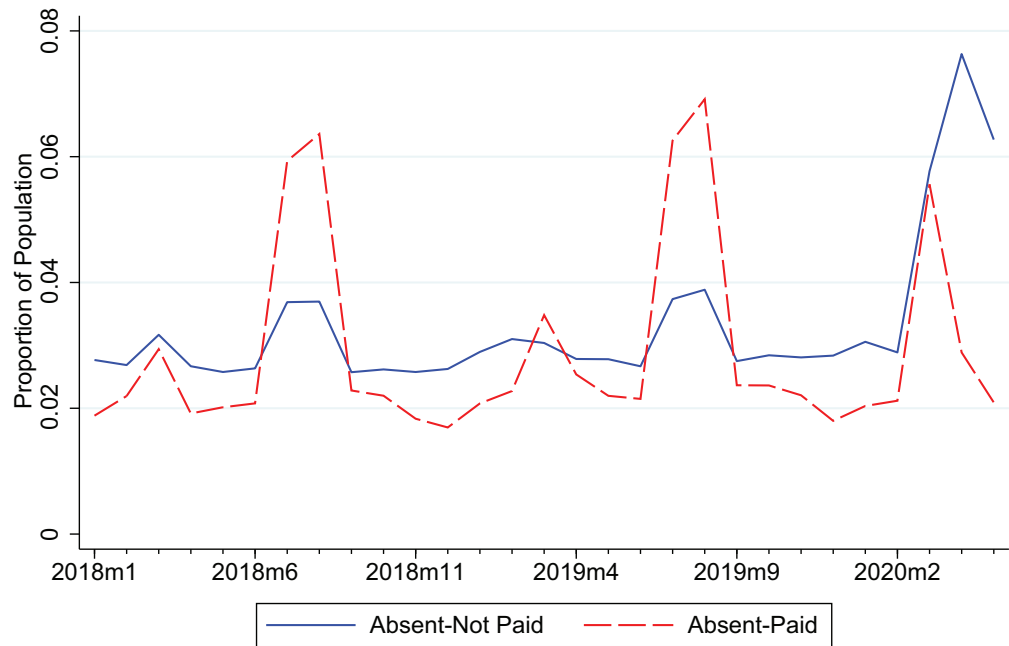
Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.
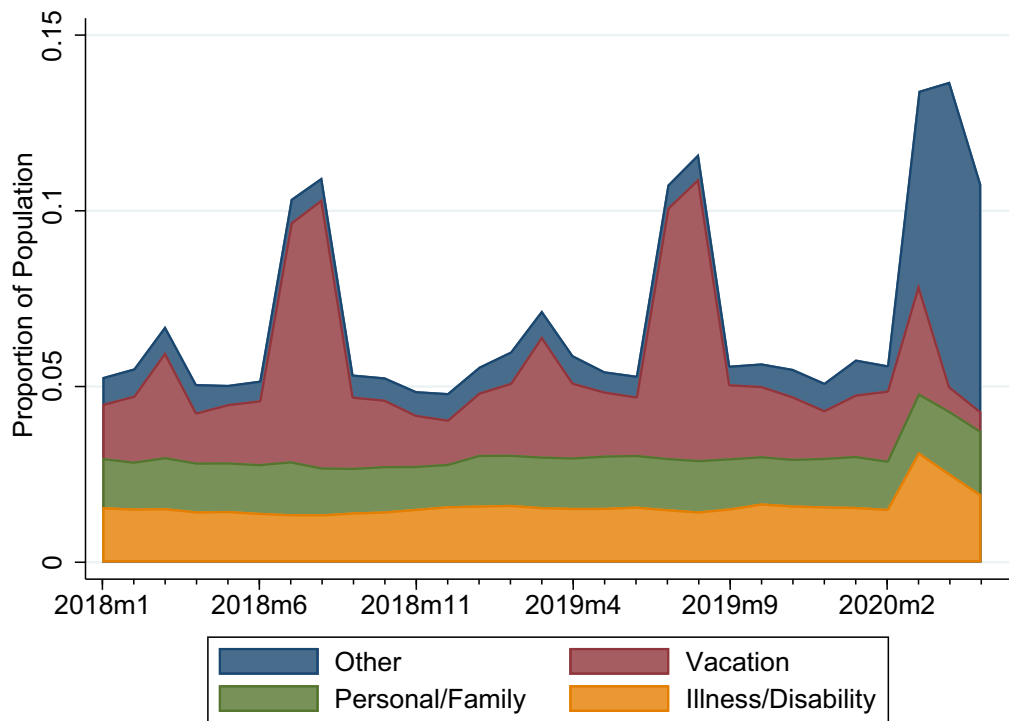
**Figure 3:** Share of Employed Population With Full-Week Absence from Work by Reason

Notes: "Other" includes no work available, seasonal business, strike or lockout, and other related reasons. "Personal/family" includes caring for own children, caring for elderly relative, maternity or paternity leave, and other related personal or family reasons. m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.



**Figure 4:** Paid for Time Off, Full-Week Absences

Notes: The paid-for-time-off information is not available for self-employed unincorporated workers. "Other" includes no work available, seasonal business, strike or lockout, and other related reasons. "Personal/family" includes caring for own children, caring for elderly relative, maternity or paternity leave, and other related personal or family reasons. m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.

not being paid but that still reports being attached to their employers. This group may be vulnerable to more formal separation from their employer if the economic downturn deepens or lengthens.

### Unemployment Rates

In addition to complicating the employment–non-employment margin, the upheavals of the COVID-19 era have generated dramatic changes in how unemployment is conceptualized, calling into question standard modes of labour market classification. Although official statistics show an unemployment rate of 13.7 percent in May 2020, down slightly from April, the composition of this unemployment is in many ways the larger story.

In normal times, the vast majority of official unemployment is made up of job searchers who are currently available for work, with both temporary layoffs (people who must be available for work but do not have to report job search) and short-term future job starts (within the next four weeks) being very small in comparison. The levels for 2018 and 2019 in the pre–COVID-19 period in Figure 5 illustrate the relative magnitudes of these subgroups that are usually observed within the unemployed group. To illustrate the extent to which those who lost employment during the COVID-19 crisis are engaged in job search, we identified all job losers with a duration

of joblessness of three months and less. Among these, in May 2020, 23.1 percent are unemployed and actively searching for employment (whether on temporary layoff or not). In comparison, the percentage was 58.2 percent in the analogous group in May 2019.

Since March 2020, however, unemployment has dramatically risen as a result of temporary layoffs such that this component of unemployment is now as large as the group of job searchers (Figure 5). Figure 5 shows that most of this increase in temporary layoffs results from those who are not searching for jobs. Overall, we believe that this means that among those who are unemployed, a much higher proportion than ever before maintains close ties with a previous employer. We also note that the entire decline in unemployment from April to May 2020 comes from a reduction in those who are temporarily unemployed who are not currently looking for work, plausibly as a consequence of first efforts to reopen the economy, especially in Quebec (see the "Province-Level Differences" section).

The data also show that search unemployment is increasing, even if substantially less rapidly than unemployment, among those who are not engaged in a job search. Adding in those on temporary layoff who are currently also looking for a job and regular job searchers, we determine that the fraction looking for work has risen by
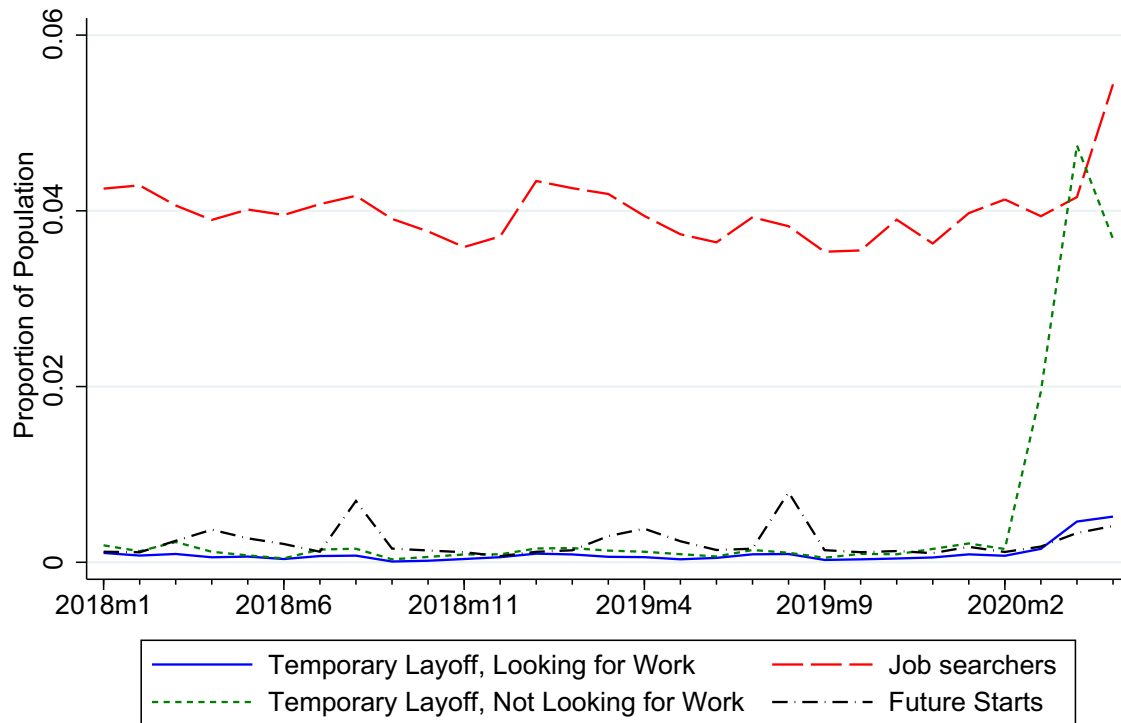


**Figure 5:** Categories under Unemployed

Note: m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.

about 1 percentage point between March and May. This is likely because (a) the decline in labour demand (see "New Vacancy Postings during the COVID-19 Crisis" section) makes it harder for job searchers to find employment and (b) some of those who are temporarily unemployed started separating from their former employment. These statistics on job seekers are, we believe, particularly noteworthy and bear following closely in subsequent months to gauge how much longer-lasting damage is being inflicted on the labour market.

### Marginal Attachment and Those Not in the Labour Force

Past labour market research on the heterogeneity of the NILF group has highlighted the importance of the "want work" question, with individuals professing a desire to work being distinct from the balance of non-participants. Members of this group, termed the *marginally attached,* display subsequent movement into employment at transition rates that are typically not much below the average rate for those who are officially unemployed (Jones and Riddell 1999). As such, they represent a group that exhibits substantial attachment to the labour market. Moreover, a body of work shows that such marginal attachment behaviour is found in both Canada and the United States (e.g., Jones and Riddell 2019), as well as in a number of other economies.[12]

Figure 6 shows the huge increase in the share of those who are marginally attached and those NILF in the COVID-19 era. Between February and April 2020, the relative importance of marginal attachment rose markedly, with about 1.5 million individuals exhibiting that level of attachment in April (official unemployment in that month was 2.4 million). The small signs of improvement in the labour market in May are also evident in the marginal attachment series in Figure 6, with the drop in May paralleling the dip in temporary layoff unemployment seen in Figure 5.

Among those who are marginally attached, Figure 7 shows a substantial compositional change, analogous to the change in the composition of official unemployment seen in Figure 5. Those who are marginally attached can be classified according to the reason they give for not searching, although they report a desire for work, and the resulting classification includes "discouraged workers" (who report a belief that no work is available), those not searching for personal reasons, and those waiting for replies to past job search efforts or recall to a former job.[13] Evidence suggests that, at least in normal times, the "waiting" subgroup displays the highest degree of labour market attachment (Jones and Riddell 1999).

Since February 2020, the dramatic composition change in marginal attachment has been largely due to growth
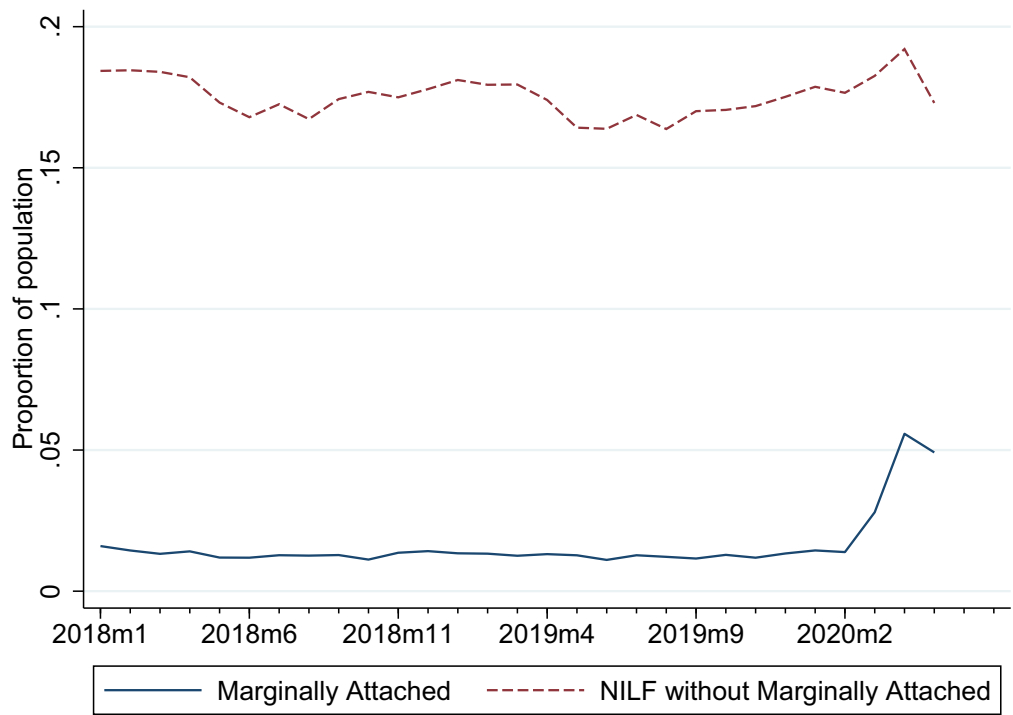
**Figure 6:** NILF Who Are and Are Not Marginally Attached

Notes: NILF = not in the labour force; m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.

in those awaiting recall or those who are NILF for other reasons. These two categories account for approximately 4 percentage points of the total increase in those who are marginally attached. In addition, a clear rise has occurred in the discouraged worker group, although quantitatively it remains a small part of the marginal total.

Overall, a substantial fraction of the increase in those NILF consists of individuals who are on recall and waiting to be rehired by their former employers. We do not know how many among those who are marginally attached for other reasons are permanently separated from their employers and how many should be thought of as waiting to be rehired. Although we do not have direct evidence, we suspect that the availability of child care and the timing of school reopenings may have important effects on the composition of this marginally attached group within those who are NILF.

## Essential and Non-Essential Industries and Work from Home

Occupations differ in the ability of workers to perform work from home rather than on site. Occupations that allow work from home have, to a degree, shielded workers from job loss. For example, in the United States, Kahn, Lange, and Wiczer (2020) show that initial unemployment claims increased by more in occupations not amenable to work from home.

However, Kahn et al. also found that vacancy postings declined by more in occupations that could be performed from home than in those that required being on site.[14]

In this section, we explore to what extent labour demand (as measured by vacancies) varies across occupations by whether they can be performed from home or not and by whether they are in the health sector. We rely on the Dingel and Neiman (2020) score (hereinafter referred to as the *DN score*) to determine the ability to work from home. Dingel and Neiman use O*NET data to assign to each occupation a score varying between 0 and 1 that measures the ability to work from home in that occupation. For the enhanced Job Bank data provided by ESDC, we map the DN score onto the four-digit National Occupational Classification (NOC) system at our disposal and classify an occupation as work from home if the score is above 0.5.[15] Unfortunately, the public use version of the LFS provides only two-digit NOC codes. We therefore make use of the detailed NOC counts from the 2016 Census as weights to account for the relative size of each four-digit NOC within a two-digit NOC category.[16]

Looking first at the enhanced Job Bank data, Figure 8 shows that the health sector follows its own patterns in that the decline in vacancies is less pronounced in the immediate aftermath and that current rate of vacancy postings is running at or above that seen before mid-March.
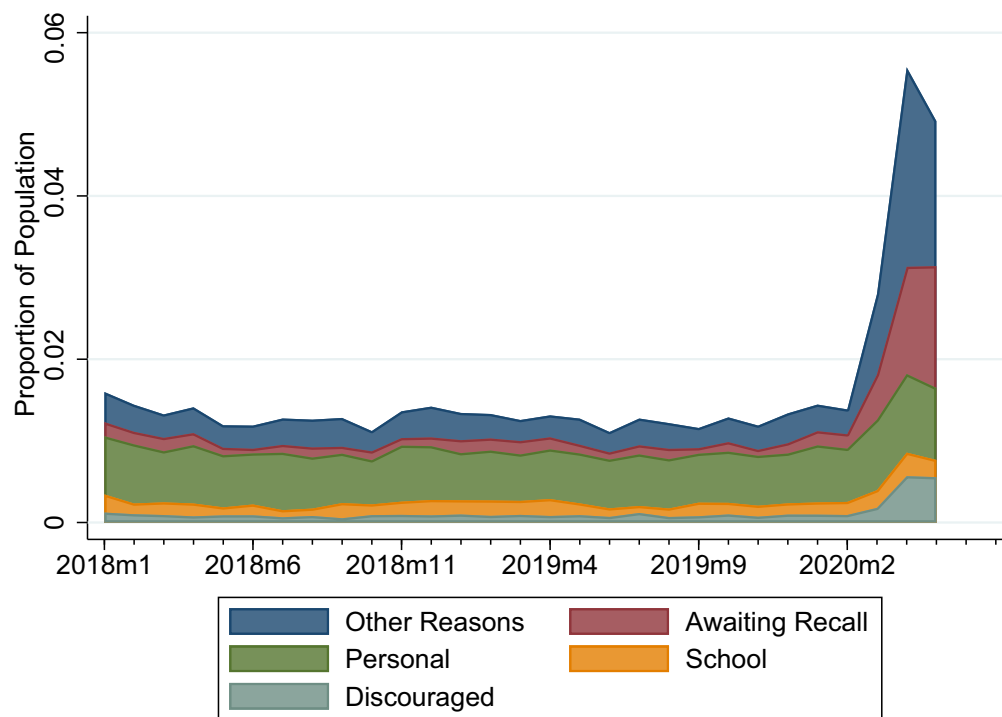


**Figure 7:** Categories Included in Marginally Attached

Notes: Categories are stacked; height represents monthly cumulative total. m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.

The ability to work from home, however, has no impact on labour demand as measured by vacancy postings. For both categories, we see that demand declined by about 50 percent in the first four weeks of the crisis with a recovery close to 80 percent in recent weeks. We interpret this as evidence that the deterioration of labour demand in March and early April was broad and driven by factors beyond the immediate ability to perform the work. We also observe that the recovery in postings since mid-April has been similarly broad.

In Figure 9, we see that non-employment has increased (top panel, short dashes) by about 10 percentage points in the 20–64 age group.[17] Much of this increase comes from a decline in employment in occupations that are not amenable to work from home in non-essential industries. However, there are also sizable declines in other industry groups. In particular, there is a large percentage point decline in employment in occupations amenable to work from home in non-essential industries. Overall, we see that only work from home, essential industries, and the health sector did not see employment fall considerably.

In Figure 10, we further break up the absent category and combine information on whether or not the job can be done from home, whether the job is in the health sector, and whether the job is categorized as essential or non-essential. All jobs have a large increase in those who are absent, but again, as is seen with the overall values in Figure 3, the increase is mostly concentrated in the "other" category. This increase is particularly pronounced for those not working from home in non-essential industries, who make up almost half of the overall increase in those absent from work seen in Figure 3.

## Province-Level Differences

Our final breakdown examines the variation across provinces and time. First, looking at the vacancy postings from the enhanced Job Bank data provided by ESDC, Table 1 shows the decline across the three-week periods before and after the pivotal 15 March date. The table shows that the decline in vacancy postings was broad based and of roughly similar magnitude across Canada. Among the larger provinces, the decline was more pronounced in Quebec, where vacancies declined to about 56 percent of the pre–15 March period, whereas vacancies in British Columbia, Alberta, and Ontario declined by a little more than about one-third.

Quebec also stands out in that the number of new vacancies posted has recovered more rapidly than in the other provinces. Figure 11 shows job bank vacancies posted in Quebec and the other three most populous
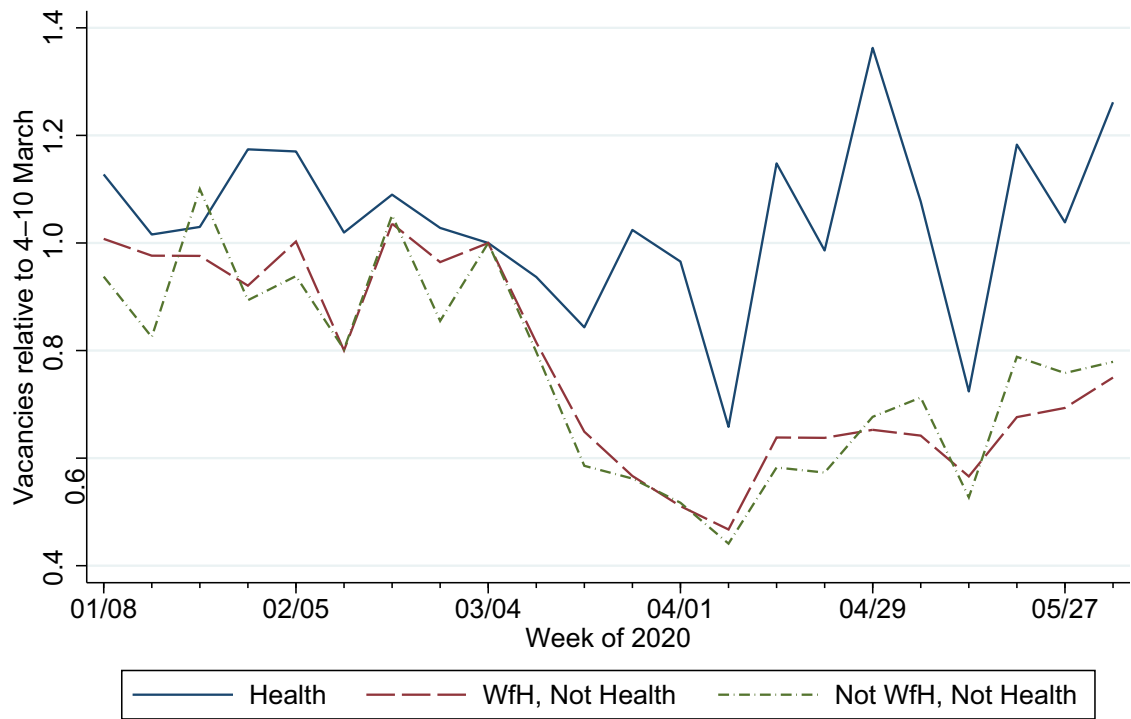


**Figure 8:** Vacancy Postings by Ability to Work from Home

Notes: The graph shows the ratio of vacancies posted in health (three-digit National Occupational Classification code) to the ability to work from home (Dingel–Neiman score > 0.5) normalized to the week of 4–10 March 2020. WfH = work from home.

Source: Enhanced Job Bank data provided by Employment and Social Development Canada.
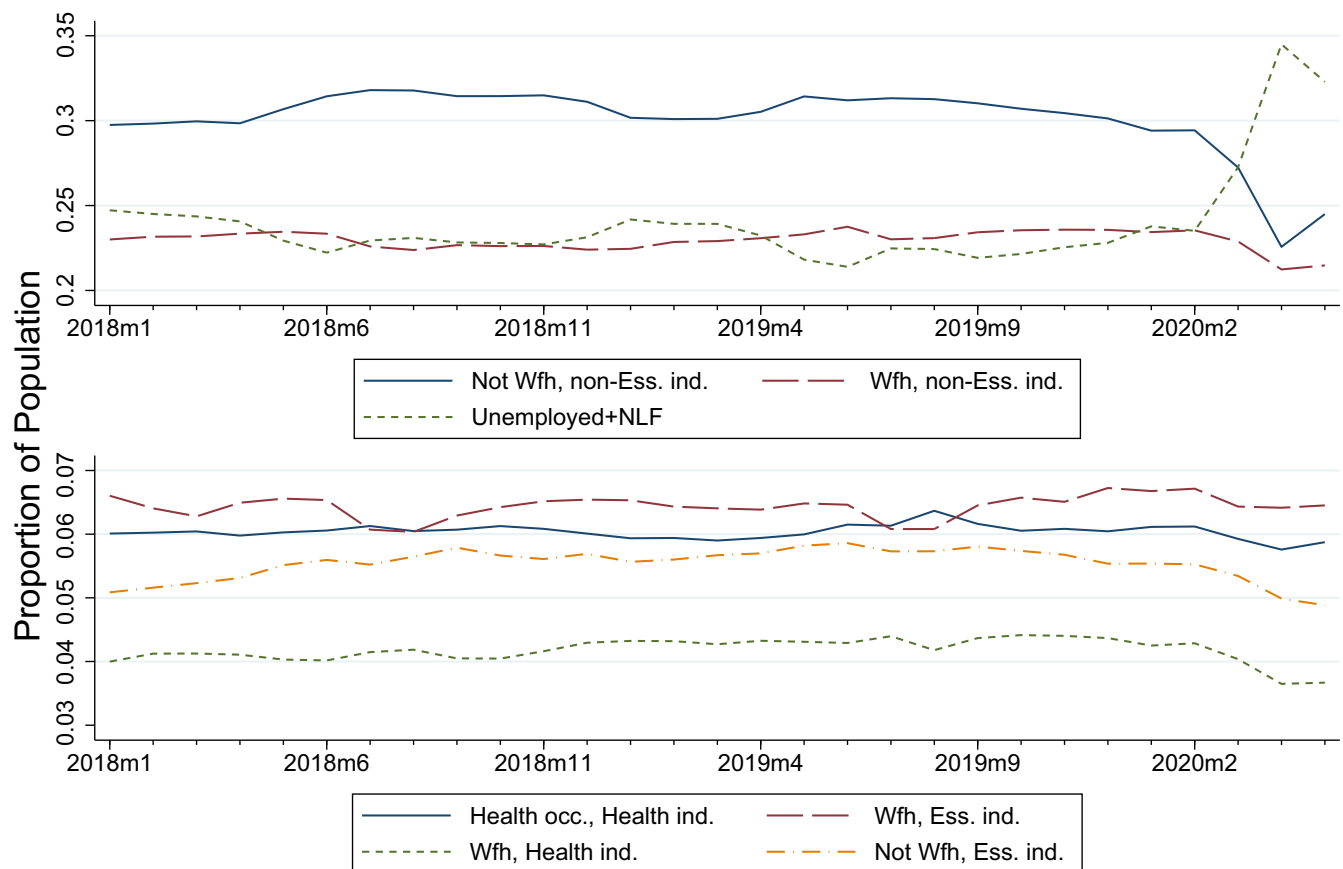
**Figure 9:** Share of Those Employed by the Health Sector, Working from Home, Not Working from Home Essential Worker, and Non-Essential Worker

Notes: Not wfh, non-Ess. ind. = not working from home, non-essential industry; Wfh, non-Ess. ind. = working from home, non-essential industry; Unemployed+NLF = unemployed and not in labour force; Health occ., Health ind. = health occupation, health industry; Wfh, Ess. ind. = working from home, essential industry; Wfh, Health ind. = working from home, health industry; Not Wfh, Ess. ind. = not working from home, essential industry; m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.
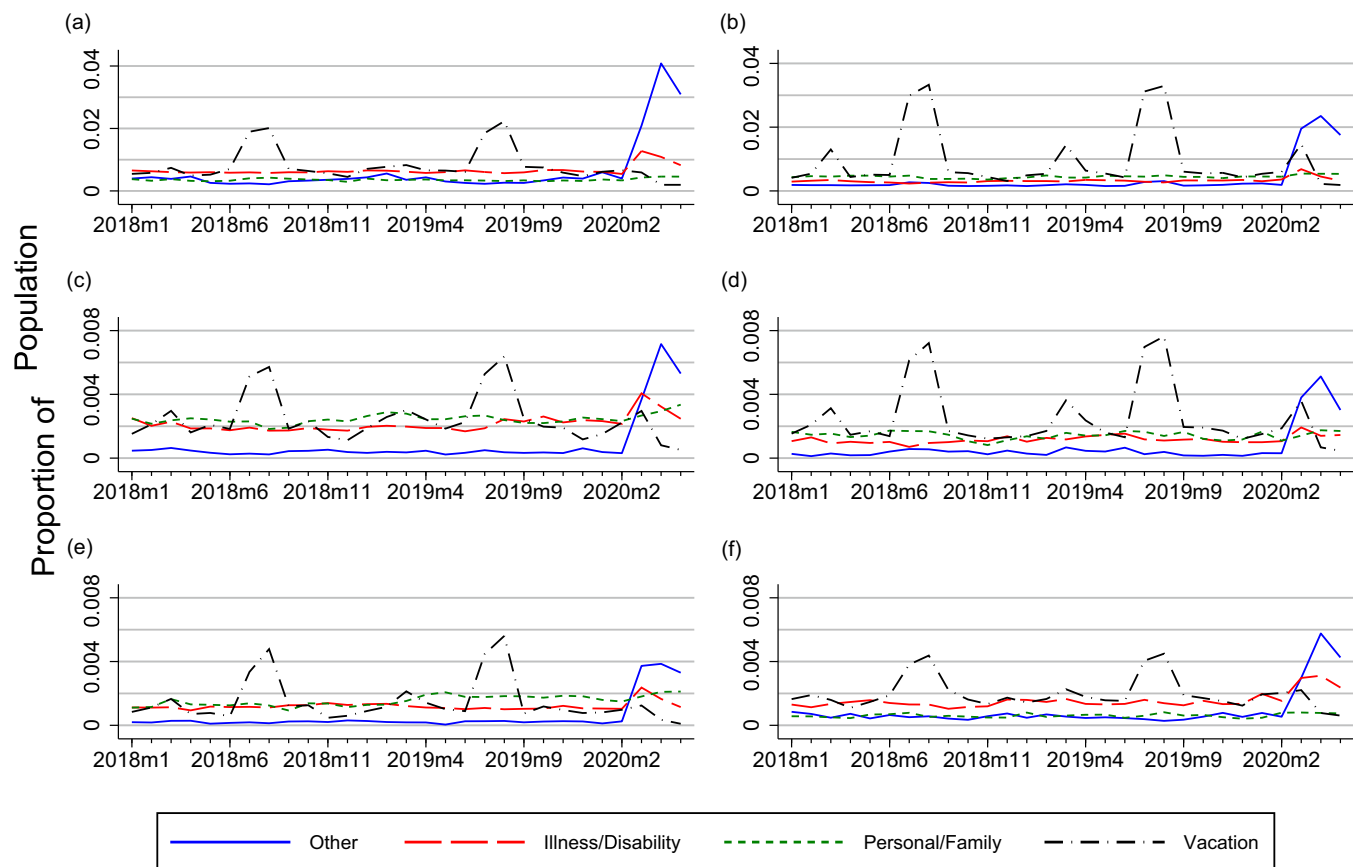
**Table 1:** Ratio of Vacancies Before and After 15 March by Province

| Province | Ratio |
| --- | --- |
| Newfoundland and Labrador | 0.48 |
| Prince Edward Island | 0.49 |
| Nova Scotia | 0.61 |
| New Brunswick | 0.48 |
| Quebec | 0.56 |
| Ontario | 0.64 |
| Manitoba | 0.54 |
| Saskatchewan | 0.51 |
| Alberta | 0.65 |
| British Columbia | 0.65 |
| Northern Canada | 0.44 |
| Total | 0.55 |

Source: Authors' calculations using enhanced Job Bank data provided by Employment and Social Development Canada.

provinces. In Quebec, the recovery in vacancies began earlier and was substantially larger than in other provinces. Figure 12 illustrates how employment varied across the same provinces. We find that the decline in employment is roughly the same order of magnitude in these four provinces, although it is slightly larger in Quebec. However, employment also recovers more rapidly in Quebec than in Alberta, Ontario, or British Columbia.

Although Figure 12 highlights the large drop in employment across the provinces, we know from the absent-from-work analysis that employment itself may be misleading. Again, the true fraction of those employed actually engaged in work may be overstated as a result of workers being absent but counted as employed. Another way to examine this issue is through hours of work, which would not only account for the effect of those absent from work but would also capture any drop in hours for those present at work. In Figure 13, we see that

(a)

(b)

(c)

(d)

(e)

(f)

Proportion of Population

| Other | Illness/Disability | Personal/Family | Vacation |

**Figure 10:** Breakdown of Absent Category by Occupation and Industry: (a) Not Wfh, non-Ess. ind., (b) Wfh, non-Ess. ind., (c) Health occ, Health ind., (d) Wfh, Ess. ind., (e) Wfh, Health ind., and (f) Not Wfh, Ess. ind.

Notes: Other includes no work available, seasonal business, strike or lockout, and other related reasons. "Personal/Family" includes caring for own children, caring for elderly relative, maternity or paternity leave, and other related personal or family reasons. Not wfh, non-Ess. ind. = not working from home, non-essential industry; Wfh, non-Ess. ind. = working from home, non-essential industry; Health occ, Health ind. = health occupation, health industry; Wfh, Ess. ind. = working from home, essential industry; Wfh, Health ind. = working from home, health industry; Not wfh, Ess. ind. = not working from home, essential industry; m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.

the decline in the hours worked per employed worker was substantially more pronounced in Quebec. However, again, we observe that for this measure as well, recovery was relatively pronounced in Quebec compared with the other large provinces.

Overall, we observe that the labour market in Quebec seems to have rebounded more rapidly than in the rest of Canada, even though across the country there is still a long way to go to return to a normal state of affairs.

## Conclusion

The Canadian labour market has been hit hard by the COVID-19 crisis. The first half of 2020 saw unprecedented changes in both employment and unemployment and in the underlying behaviours not adequately captured by the labour force classifications as traditionally measured. It also saw a 50 percent drop in labour demand, measured

by new vacancy postings, with some signs of a recovery in the past two months. There was important variation by occupation, particularly as it affected the ability to work from home, and by province.

Going forward, we think three groups will be critical in how the labour market develops: (a) those who are employed but absent from work, (b) those who are unemployed on layoff but not searching for a job, and (c) those who are marginally attached and NILF who want work but are not searching for a variety of reasons.

First, the attachment to employment of those individuals—paid or unpaid—who report remaining attached to a job but absent from work may be maintained in part by the Canada Emergency Wage Subsidy (currently in place to 19 December 2020), the Canada Emergency Response Benefit (currently available for a maximum of 24 weeks to the beginning of October 2020),
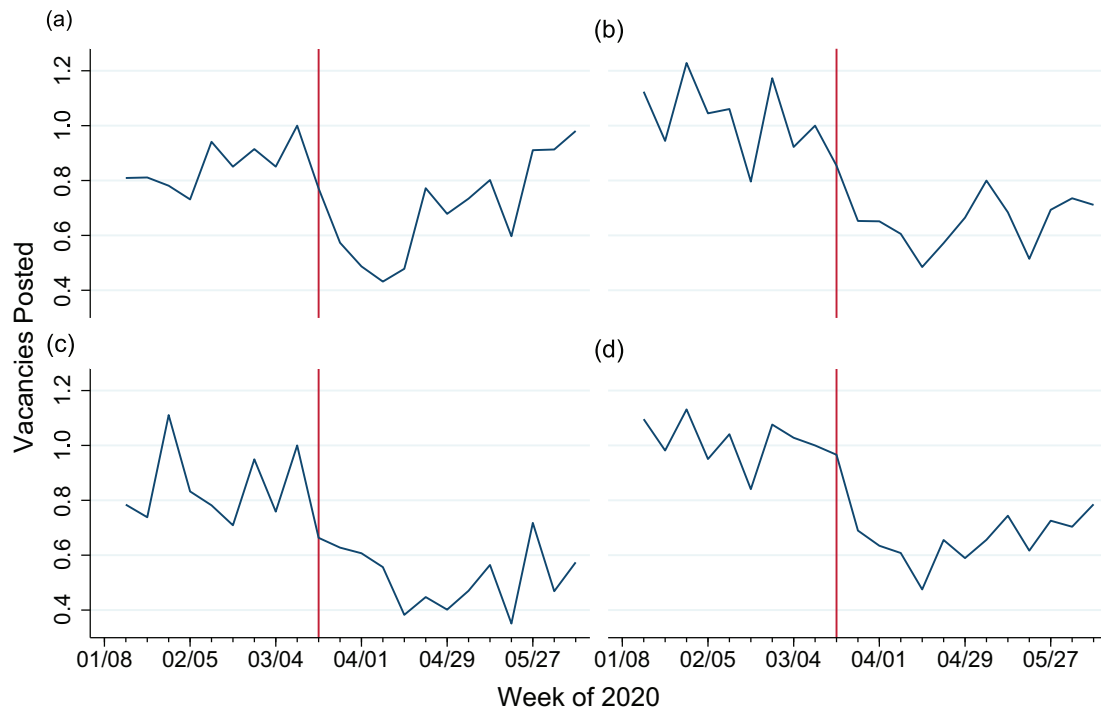
**Figure 11:** Vacancy Postings across the Four Largest Provinces: (a) Quebec, (b) Ontario, (c) Alberta, and (d) British Columbia

Notes: Normalized against 4–10 March.

Source: Enhanced Job Bank data provided by Employment and Social Development Canada.
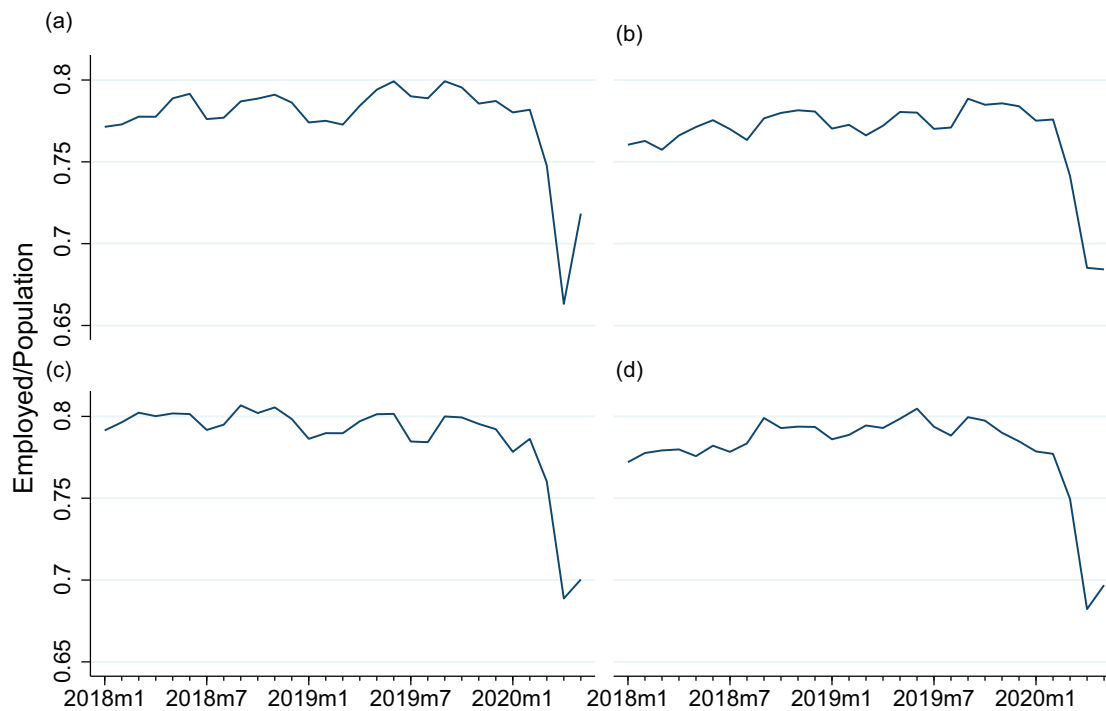


**Figure 12:** Employment Rates across the Four Largest Provinces: (a) Quebec, (b) Ontario, (c) Alberta, and (d) British Columbia

Note: m = month.

Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.
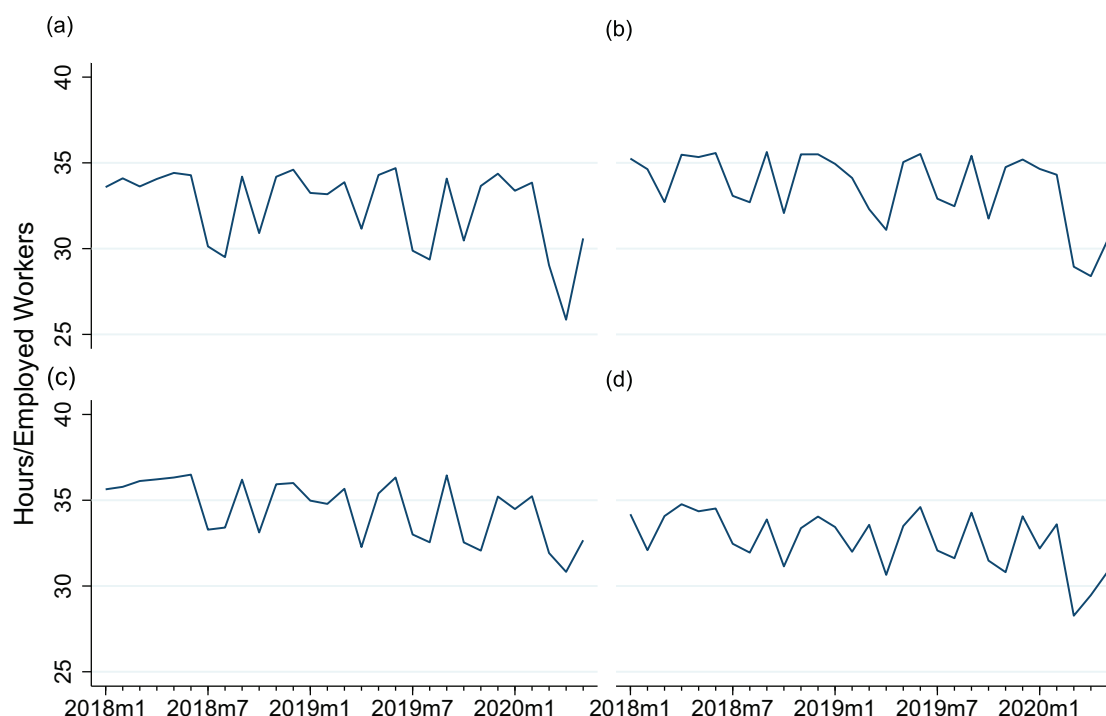
**Figure 13:** Total Hours and Employed Workers across the Four Largest Provinces: (a) Quebec, (b) Ontario, (c) Alberta, and (d) British Columbia
Source: Authors' calculations based on the Labour Force Survey. Calculated as a share of the population aged 20–64 y.

and existing (pre–COVID-19) programs such as Employment Insurance. It will be important to study the effects of these policy responses as evidence becomes available. Maintaining the match-specific gains of established employer–employee relationships is likely critical to a restoration of job productivity in the recovery.

Second, there has been an unprecedented rise in temporary layoff unemployment such that, for the first time, there were more people unemployed on layoff than were engaged purely in job search. To date, a large majority of this temporary layoff group have not reported job search, which perhaps means that these individuals retain relatively strong ties to their past job. However, the fraction of the laid-off unemployed who were job searching rose in April and May, potentially a response to the growing opportunities seen in the vacancy data, and this may also indicate some rupture of past employer–employee relationships. A key issue as unemployment spells lengthen will be whether temporary layoffs become permanent separations and whether rates of transition into employment exhibit marked duration dependence as the jobless period continues. Although some evidence suggests that such dependence is less pronounced in weak labour markets (Kroft, Lange, and Notowidigdo 2013), consistent with an employer screening model, it is an open question whether these results are robust to the widespread weakness of labour markets experienced in the COVID-19 era. As with the employed but absent

group, we also note the critical role of labour market policies relating to unemployed persons in shaping the evolution of worker–firm attachments.

Third, the first half of 2020 has seen a huge growth in the number of those who are marginally attached, although the balance of those not in the labour force has remained relatively stable. To the extent that the marginal group remains "closer" to the labour market than the NILF group as a whole and have better employment prospects going forward, this may be a positive sign. If some of the growth in the marginal group is instead the result of a lack of job search by individuals who might otherwise have been categorized as unemployed, however, the degree of attachment to the labour market may have fallen. If the recall anticipated by many of these marginally attached workers does not transpire, the longer-term prospects are for a further breakdown of linkages to the labour market.

In closing, we comment on the data available in Canada for analysis of labour market developments in the current circumstances. The LFS is a key Canadian data source for timely information on the labour market impact of the ongoing COVID-19 crisis, with monthly data released only a few weeks after collection. Statistics Canada also responded to the pandemic by adding to the LFS questions specific to COVID-19. However, to paint a more complete picture of how the economy is performing, it is also imperative to have timely and

accurate vacancy data. Currently, the JVWS, a key quarterly dataset for determining labour market demand in Canada, has a long lag before it is released for analysis. At time of writing, the most current JVWS data are from the third quarter of 2019. Moreover, we understand that JVWS data collection has been temporarily suspended since the onset of the COVID-19 crisis. We believe that vacancy data remain critical for an understanding of the prospects for and the shape of eventual recovery in Canada's labour market.

## Acknowledgements

## Notes

1  Lemieux et al. (2020) estimate the impact of the pandemic on employment and hours of work relative to a no-COVID-19 counterfactual.

2  The vacancy data span 5 January–10 June 2020. We measure weeks from Wednesday–Tuesday, following the convention used by Stata (StataCorp, College Station, TX). The LFS data include the May data released in early June 2020.

3  The most recent available data are for the third quarter of 2019. They are ill suited for assessing in which direction the labour market is currently heading.

4  As the enhanced Job Bank data draws on multiple sources, it is possible that a given job opening will be posted on multiple contributing sources. As long as the rate at which postings are double counted is constant, the time-variation in the Job Bank series will continue to be informative. Indeed strives to remove duplication of postings from its measure of new postings.

5  The Indeed data in the Appendix suggest that the decline in vacancies in the United States was not quite as severe as the decline observed in Canada, but likewise there has been less of a recovery in vacancies in the United States. Comparing the speed of the rebound in the enhanced Job Bank data during the COVID-19 crisis with changes in the hiring intentions index published by the Canadian Federation of Independent Business (CFIB) or the recruiter–producer ratio (Kroft et al. 2019) over the Great Recession suggests that the rebound in hiring intentions in recent months is significantly more rapid. Unfortunately, the CFIB hiring intentions index and the recruiter–producer ratio are not available in real time or at a sufficiently high frequency to use them to gauge changes in labour demand in the current crisis.

6  As seen with the US Current Population Survey, the LFS experienced a decline in the response rate with the onset of COVID-19. In March 2020, face-to-face interviews were replaced by telephone interviews. The unweighted sample size dropped from around 100,000 to around 90,000.

7  LFS data in this article are not seasonally adjusted.

8  With two exceptions, to be classified as unemployed LFS respondents must be available for work and report job search. The exceptions are temporary layoffs—those who either have a definite date to return to work or an indication from their employer that they will be recalled—and those who have a job lined up to start within the next four weeks, termed *future job starts*.

9  Similar behaviour is evident in the US Current Population Survey. Indeed, in its May release, the US Bureau of Labor Statistics (2020) drew attention to a "misclassification error" in its data and reported the official unemployment rate and the rate including an "employed absent for other reasons" group. Inclusion of this group raised the US unemployment rate by a striking 3 percentage points from 13.3 percent to 16.3 percent.

10  See Figure A.3 for the same results restricted to those absent for other reasons.

11  Lemieux et al. (2020) report that employment excluding those absent from work declined by 15 percentage points in March and April 2020 relative to the no-COVID-19 counterfactual. We refer the reader to this article for a detailed analysis of the heterogeneity in the decline in employment during the immediate onset of the COVID-19 crisis.

12  Moffat and Yoo (2015) report similar evidence for the United Kingdom based on a reported desire for work. Brandolini, Cipollone, and Viviano (2006) find similar distinct differences between "potentials" and "unattached" in many European countries, based on a past job search that does not meet the International Labour Organization cut-off of search within the past four weeks to be classified as "unemployed."

13  In the LFS, those awaiting recall to a seasonal job are not classified as temporary layoffs. Given the importance of seasonal work in Canada, this group may account for much of the "awaiting recall" category.

14  They exclude health and essential retail, mostly grocery stores, from occupations that require work on site.

15  Approximately 0.35 percent of vacancies in the enhanced Job Bank data provided by ESDC did not have a valid NOC code. We exclude these vacancies from the analysis. Most occupations have a DN score close to either 0 or 1, so our results are not sensitive to the choice of the exact cut-off on the DN scale to determine whether an occupation can be performed from home. We show the distribution of the DN score in the Appendix.

16  Gallacher and Hossein (2020) also apply the DN score to Canadian data. Using counts from the 2016 Census, they estimate that around 41 percent of jobs can be performed at home. They also use the LFS and find some evidence that being able to work remotely helped shelter workers from employment loss between March and April.

17  We use the two-digit industry and occupation variables available in the public use LFS to classify health, essential (non-health) industries, and non-essential industries. Health includes all health industries and health-related occupations. Essential industries include professional occupations in law and social services; community and government services; paraprofessional occupations in legal, social, community, and education services; occupations in front-line public protection services; and workers in agriculture, transportation and warehousing, and finance and insurance industries. Non-essential industries include all remaining occupations and industries.

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# Appendix

## *Ability to Work from Home*

Figure A.1 shows the distribution of the Dingel and Neiman (2020; DN) score in our data, binning occupations into five groups. Clearly, most occupations fall on the end points of the distribution. In this article, we categorize an occupation as one that can be performed from home if its score exceeds 0.5. It is not surprising, given the distribution shown in Figure A.1, that our estimates are not sensitive to varying the cut-off point of 0.5.

We exclude the health sector from this distribution because demand for health care workers is clearly subject to different considerations during the crisis. We therefore obtain a classification scheme with three categories: (a) health, (b) work from home, and (c) not work from home, in which the latter two only apply to non-health occupations.

## *Indeed Vacancy Index*

Indeed Canada collects data on vacancy postings from its job board as well as from other online sources. We received access to these data from Brendon Bernard, economist at Indeed Canada. Please refer to https://www.hiringlab.org/en-ca/ for more detail on and analysis of these data.

In Figure A.2, we show the vacancy index for both Canada and the United States indexed against the first full week of March. This index is constructed on the basis of a dual averaging procedure to remove daily fluctuations. Indeed first averages new postings across the past seven days and then averages the resulting number across the past seven days. Therefore, the index is based on a weighted average across the past 14 days of postings. The weight on these 14 days is 1 for postings that are 14 days old and rises linearly to 7 for postings that are seven days old. It then declines again linearly to reach 1 for the most recent postings.

The Indeed index is therefore somewhat more backward looking than the vacancy index we show in the "New Vacancy Postings during the COVID-19 Crisis" section.
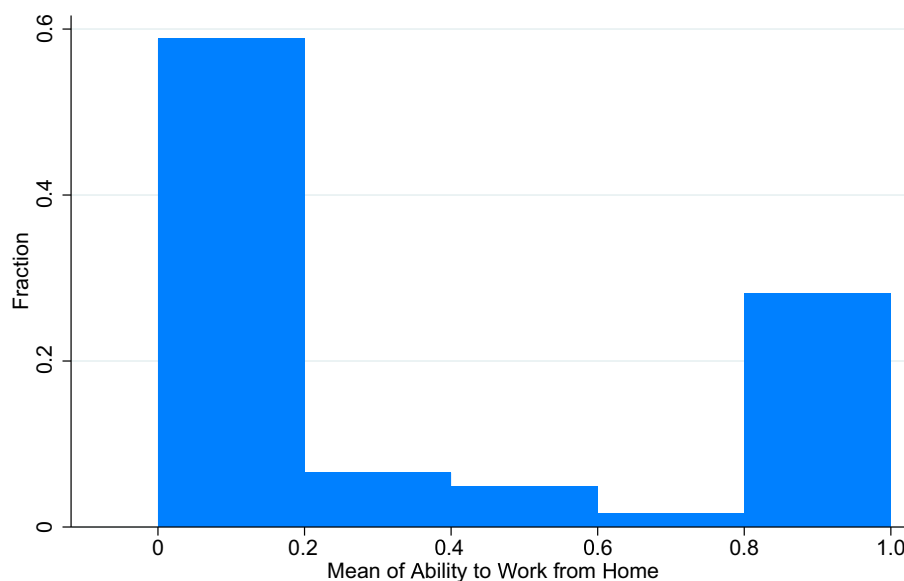


**Figure A.1:** Distribution of Ability to Work from Home

Notes: The histogram plots a five-bin histogram of vacancies posted in the three weeks before 15 March by the Dingel–Neiman score of ability to work from home. We mapped the Dingel–Neiman score onto the four-digit National Occupational Classification.

Source: Enhanced Job Bank data provided by Employment and Social Development Canada.
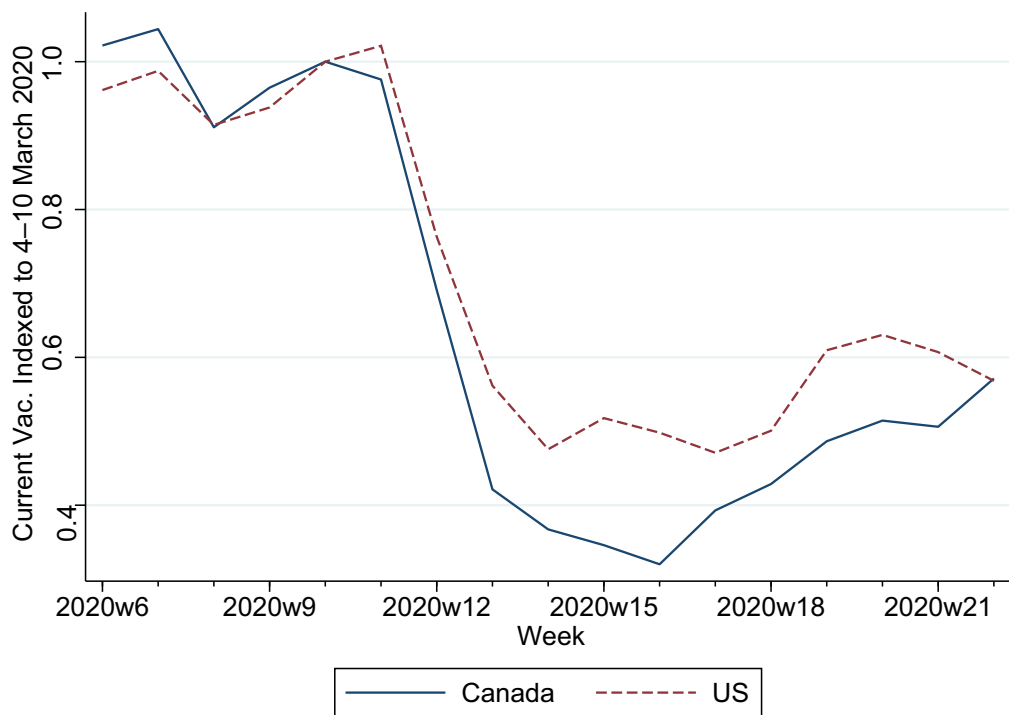
**Figure A.2:** Indeed Vacancy Index: 4 February–2 June 2020

Notes: Vac. = vacancies; m = month.

Source: Indeed Vacancy Index provided by Indeed Canada (https://www.hiringlab.org/en-ca/).
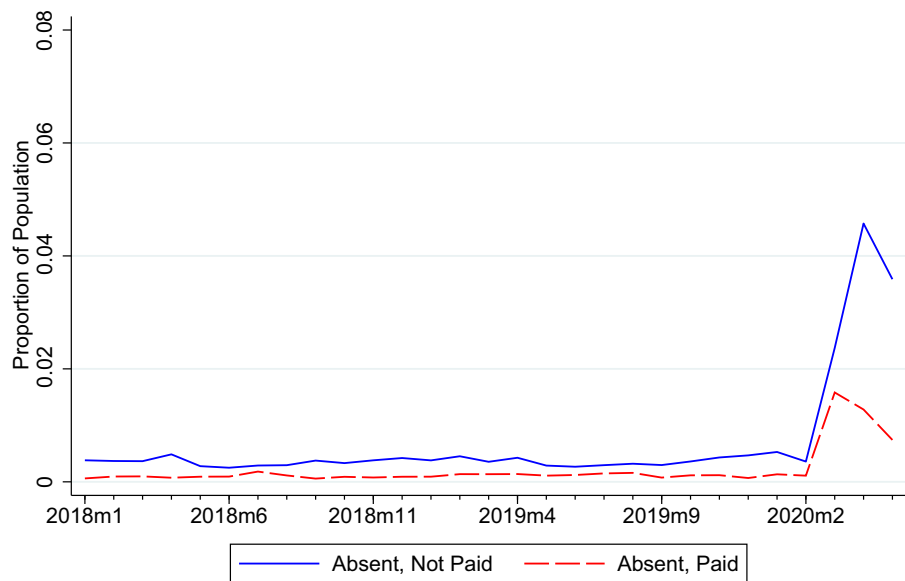


**Figure A.3:** Paid for Time Off, Full-Week Absence for Labour-Related Reasons

Notes: The paid-for-time-off information is not available for self-employed unincorporated workers. Absent is restricted to "other," which includes no work available, seasonal business, strike or lockout, and other related reasons. m = month.

Source: Authors' calculations based on the Labour Force Survey. Sample restricted to individuals aged 20–64 y.