



## **Running the economy remotely: Potential for working from home during and after COVID-19**

by Zechuan Deng, René Morissette and Derek Messacar

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# Running the economy remotely: Potential for working from home during and after COVID-19

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Physical distancing measures to stop the spread of COVID-19 have resulted in a large number of Canadians working from home, many for the first time.<sup>1</sup> This sudden transition in how the economy is operating raises questions about how many jobs can reasonably be performed from home. While working from home is a temporary response to the pandemic for many people, for others this transition might serve as the catalyst for a new way of doing business for years to come.

To provide new insights into this important issue, **this article estimates the number of jobs in Canada that can plausibly be performed from home** under normal circumstances—the “telework capacity” of the economy—and compares that estimate with actual telework activity reported early into the pandemic.<sup>2</sup> Then, it considers which types of jobs can be done from home, where they are located and who holds them.

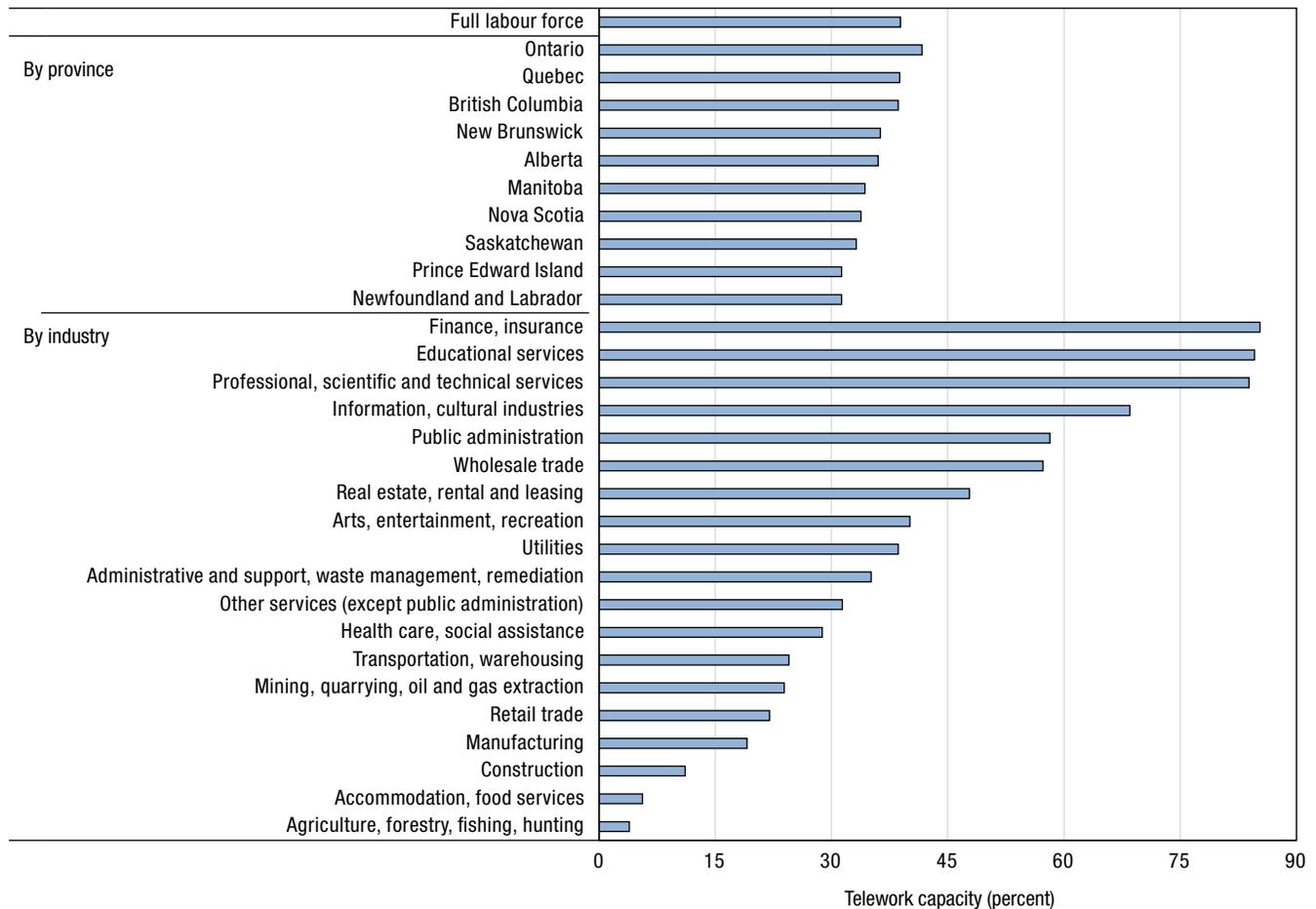
Overall, approximately **four in ten** (38.9%) Canadian workers are in jobs that can plausibly be carried out from home (Chart 1).<sup>3</sup> By comparison, Statistics Canada’s March 2020 Perspectives Survey Series found that as many workers (39.1%) were teleworking during the last full week of March (Statistics Canada 2020). Taken together, these findings suggest the Canadian labour market responded very quickly to the onset of the pandemic by increasing its prevalence of telework to the maximum capacity.

Telework capacity varies substantially across industries (Chart 1). Most jobs in finance and insurance (85%), educational services (85%), and professional, scientific and technical services (84%) can potentially be performed from home while those in accommodation and food services (6%) and agriculture, forestry, fishing and hunting (4%) have almost no telework capacity.<sup>4</sup>

1. The terms “telework” and “working from home” are used interchangeably in this article, although telework also includes working remotely from other locations when lockdown rules are not in place.
2. The approach used follows Dingel and Neiman (2020) and assesses the task content of occupations. Specifically, an occupation cannot be performed at home if it meets at least one of several criteria, such as the need to perform for or work directly with the public; to work outdoors; to operate or repair machinery and equipment; to inspect equipment, structures or materials; to wear common or specialized protective or safety equipment; to handle or move objects; or perform general physical activities. Otherwise, the occupation can be performed from home. The analysis is based on the March and September 2019 waves of Statistics Canada’s Labour Force Survey for workers (employees and self-employed) aged 15 and older.
3. By comparison, Dingel and Neiman (2020) estimate that approximately 37% of jobs can be done from home in the United States.
4. The approach used in the study assumes that all teaching jobs can be done from home. If one assumes that teaching jobs in **elementary and secondary schools cannot** be performed at home, the estimate of telework capacity in educational services decreases from 85% to 49%. However, this assumption has a small effect overall, reducing the aggregate telework capacity from 38.9% to 36.3%.



**Chart 1**  
**Telework capacity in 2019, by province or industry**



Source: Statistics Canada, Labour Force Survey, 2019 and O\*Net.

Telework capacity also varies across provinces (Chart 1). This is important since measures to re-open the economy are province-specific. Three of the six provinces with low telework capacity have relatively large shares of workers in mining, oil and gas extraction (i.e., Alberta, Saskatchewan and Newfoundland and Labrador). The inability to work from home in the agricultural industry may help explain the low telework capacities in the Prairies and possibly Prince Edward Island.

Financially vulnerable workers appear to have the lowest telework capacities, including those who are under the age of 25 (21%) and who have a high school diploma (25%) or less than a high school diploma (13%) (Table 1). Since these characteristics are often associated with minimum-wage and low-income workers, the pandemic might be reducing workhours to a greater extent among them than among other workers.<sup>5</sup>

5. The association between telework capacity and education reflects the sorting of less educated and highly educated workers into occupations with varying degrees of telework feasibility, rather than a direct impact of education on telework capacity.



**Table 1**  
**Telework capacity in 2019, by selected characteristics**

	Both sexes	Female	Male
	telework capacity (percent)		
Full labour force	38.9	46.4	32.1
<b>Age group</b>			
Less than 25	20.5	23.5	17.5
25 to 34	40.7	48.4	33.5
35 to 44	44.2	52.7	36.4
45 to 54	42.9	50.5	35.8
55 to 64	38.5	48.5	29.8
65 and over	39.6	46.3	35.2
<b>Education</b>			
Less than high school	12.7	16.8	10.3
High school diploma	25.0	34.5	18.0
Some postsecondary	28.1	34.3	22.2
Trades certificate or diploma	19.5	34.7	12.8
College diploma	39.7	46.5	31.6
University certificate below Bachelor's	47.0	51.3	41.7
Bachelor's degree or higher	60.0	60.7	59.2

Source: Statistics Canada, Labour Force Survey, 2019 and O\*Net.

## Conclusion

About four in ten Canadian workers are in jobs that can plausibly be done at home. In contrast, the percentage of employees usually doing **any** scheduled hours from home changed very little from 2000 to 2018: it varied from 10% to 11% from 2000 to 2008 (Turcotte 2010) and stood at about 13% in 2018 (Statistics Canada 2018). These findings suggest that there was unused capacity in the economy for telework before the pandemic began.

It should be emphasized that the numbers presented in this study do not fully capture the degree to which workers can participate in the economy during the pandemic. Many workers who need to work outside home either provide essential services or hold jobs that can be performed with proper physical distancing measures.

An important question is the extent to which telework arrangements will persist as the new norm in some sectors when the economy is fully reopened. An increase in telework is likely to have far-reaching social and economic implications, including reduced traffic congestion and air pollution and perhaps, increases in online learning in colleges and universities. Whether the growth in telework will improve workers' mental health, their work-life balance and productivity remains to be seen.

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