

Economic and Social Reports

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Release date: January 24, 2024



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Published by authority of the Minister responsible for Statistics Canada

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Working from home and public transit use in Canada, 2016 to 2023

by *Tahsin Mehdi and René Morissette*

DOI: <https://doi.org/10.25318/36280001202400100002-eng>

In May 2023, 20.1% of Canadians usually worked most of the time from home, down from 24.3% in May 2021 and almost three times the rate of 7.1% observed in May 2016.¹ While this increase in work from home likely reduced commuting and greenhouse gas (GHG) emissions caused by transportation (Morissette, Deng and Messacar, 2021), it also put downward pressure on the revenues and ridership of urban public transit systems, many of which experienced deficits in recent years (Griffin, 2023). Partly as a result of telework growth, the number of passenger-trips in urban transit systems in September 2023 was 18% lower than in the same month in 2019.²

The increase in work from home triggered by the COVID-19 pandemic directly decreased public transit use by reducing the number of passenger-trips taken by former public transit commuters who started working partly or exclusively from home (Savage and Turcotte, 2020). It may also have reduced public transit use indirectly by reducing commute times and traffic, leading some non-teleworkers to shift from public transit to commuting by car.

Other factors related to the COVID-19 pandemic may also have reduced public transit use. During the pandemic, fear of catching the virus may have led some workers to switch from public transit to car commuting and to stick to this new habit afterward. Along with health concerns, stay-at-home orders and physical distancing measures likely reduced public transit use directly during the pandemic. They may also have reduced traffic, providing additional incentives to transition from public transit to car use. In sum, these other factors may have led to a permanent change in commuting modes for some workers and—along with telework growth—may have led some public transit authorities to manage the resulting deficits by decreasing the number of routes. This may have reduced public transit use further.

There is evidence that some commuters—workers who usually travel to a work site outside their residence—reduced their use of public transit during the pandemic. The proportion of urban commuters using public transit fell from 14.8% in May 2016 to 9.3% in May 2021 and rebounded partly afterward, standing at 11.8% in May 2023 (Table 1).

1. [The Daily — Commuting to work by car and public transit grows in 2023 \(statcan.gc.ca\)](#)

2. [The Daily — Urban public transit, September 2023 \(statcan.gc.ca\)](#).

Table 1
Work from home and public transit use, May 2016 to May 2023

	All areas	Urban areas percent
1. Percentage of workers usually working most of the time from home		
May 2016	7.1	6.1
May 2021	24.3	25.4
May 2023	20.1	20.7
2. Percentage of commuters using public transit		
May 2016	12.6	14.8
May 2021	7.8	9.3
May 2023	10.1	11.8
		millions
3. Total employment in May 2023	19.93	16.99
4. Number of commuters in May 2023	15.93	13.48
4a. Hypothetical number of commuters in May 2023 if the percentage of workers working from home had remained at its 2016 rate	18.51	15.95
5. Number of public transit commuters in May 2023	1.61	1.58
5h1. Hypothetical number of public transit commuters in May 2023 if the percentage of workers working from home had remained at its 2016 rate	1.87	1.87
6. 5h1. minus 5.	0.26	0.29
5h2. Hypothetical number of public transit commuters in May 2023 if the percentage of workers working from home and the percentage of commuters using public transit had remained at their 2016 rates	2.33	2.36
7. 5h2. minus 5.	0.72	0.78

Note: The sample consists of workers aged 15 to 69 working in Canada, excluding those living in the territories, on reserves or in collective dwellings and those who are full-time members of the Canadian Armed Forces.

Sources: Statistics Canada, Census of Population, 2016 and 2021; and Labour Force Survey, May 2023.

To inform discussions on the implications of work from home for public transit, this article assesses the degree to which the increase in work from home observed in Canada in recent years may have reduced the number of public transit commuters from 2016 to 2023 in urban areas.

The increase in work from home triggered by the COVID-19 pandemic appears to have reduced the number of urban public transit commuters by 0.29 million to 0.78 million, depending on the scenario considered

Of the 16.99 million Canadians employed in urban areas in May 2023—an estimate based on non-seasonally adjusted data from the Labour Force Survey (LFS)—13.48 million were commuting to a location outside their home for work during that month (Table 1). The remaining workers—20.7% of the urban workforce—usually worked most of the time from home. Had the percentage of Canadians working from home in urban areas that month stood at its May 2016 rate of 6.1% and employment remained unchanged, at 16.99 million, the corresponding number of commuters would have been 15.95 million (93.9% times 16.99 million workers). Thus, simple calculations suggest that the increase in work from home observed from 2016 to 2023 may have reduced the number of commuters by about 2.47 million during that period.

This downward pressure on the total number of commuters had obvious implications for public transit use. Table z1 shows that, of the 13.48 million urban commuters observed in May 2023, 1.58 million used public transit that month.

Assuming telework growth affected only the number of commuters and not the percentage of them using public transit, one might consider the following scenario: what would be the hypothetical number of urban public transit commuters in May 2023 if the percentage of Canadians working from home in urban areas had remained unchanged at its May 2016 rate of 6.1%? Under these conditions, the number of urban public transit commuters would have been 1.87 million instead of 1.58 million (a difference of 0.29 million or 290,000).

However, the increase in work from home may have indirectly reduced public transit use by leading some non-teleworkers to leave public transit and start commuting by car. If so, an alternative scenario becomes relevant: what would be the hypothetical number of urban public transit commuters in May 2023 if the percentage of Canadians working from home in urban areas and the percentage of urban commuters using public transit had remained unchanged at their May 2016 rates of 6.1% and 14.8%, respectively? In this scenario, the number of public transit commuters would have been 2.36 million instead of 1.58 million (a difference of 0.78 million or 780,000).

Thus, the increase in work from home appears to have reduced the number of urban public transit commuters by 0.29 million to 0.78 million, depending on the scenario considered.

The resulting hypothetical reduction in the number of urban public transit commuters accounts for a substantial share of the drop in ridership observed in urban public transit systems in recent years

The first scenario rules out any impact of telework growth on the percentage of commuters using public transit, while the second scenario assumes that the entire drop in this percentage (from 14.8% in May 2016 to 11.8% in May 2023) was caused by telework growth. Since both telework growth and factors related to the COVID-19 pandemic likely reduced the percentage of commuters using public transit, the reality likely lies between these two extremes.

If one assumes that telework growth led to an average reduction of 0.535 million urban public transit commuters (0.29 million plus 0.78 million, divided by 2) and that all of them would have commuted 40.0 times per month (i.e., 2 times per day, times 5 days per week, times 4 weeks per month), the resulting decrease in the monthly number of passenger-trips amounts to 21.4 million passenger-trips.

Alternatively, if one assumes that all of these commuters would have commuted 35.0 times per month—the average number of commutes per month inferred for urban public transit commuters from LFS data in May 2023—then the resulting decrease in the monthly number of passenger-trips would have amounted to 18.7 million passenger-trips.

Since the Monthly Passenger Bus and Urban Transit Survey—which covers urban transit companies that represent at least 75% of revenues in each province and territory—shows that the number of passenger-trips in urban transit systems fell by 32.3 million from May 2019 to May 2023 (Statistics Canada, Table 23-10-0251-01), both hypothetical reductions in the number of passenger-trips likely represent a substantial share of the entire drop in ridership observed in urban transit systems in recent years.³

Conclusion

The increase in work from home observed in Canada since the onset of the COVID-19 pandemic has introduced greater flexibility in the work arrangements of many Canadian workers and has reduced commuting, potentially lowering workers' direct GHG emissions caused by transportation.⁴ However, it has also reduced the demand for public transit, with adverse financial consequences for urban transit systems.

The fact that several public transit authorities have experienced deficits in recent years is not unique to Canada. Similar financial challenges have been observed in the United States (Dunn and Rivard, 2023). One risk is that such deficits lead to fare hikes and a reduction in the number of routes, both of which will likely further reduce the demand for public transit. In the longer term, a reduced supply of public transit services would likely lead to reduced mobility for individuals who cannot afford cars and to increased car use for those who can, partially offsetting the reduction in GHG emissions caused by transportation that may have been initially achieved by telework growth.

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3. This conclusion holds even after accounting for the hypothetical increase in the number of passenger-trips taken by urban teleworkers who work under hybrid work arrangements (29.5% of them did so in May 2023). Assuming that 11.8% of them use public transit and do so 17.9 times per month (the average inferred from the LFS in May 2023), the hypothetical increase in the number of passenger-trips taken by these individuals in a given month amounts to 1.5 million. Subtracting this estimate from the estimated reductions in the number of passenger-trips by urban public transit commuters (21.4 million and 18.7 million) yields net reductions of 19.9 million and 17.2 million passenger-trips per month.

4. Work is currently underway at Statistics Canada to quantify the degree to which the increase in work from home reduced workers' direct GHG emissions caused by transportation in recent years.

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