



Short-term rentals and housing affordability in Ontario

Market overview, causal modelling and regulatory analysis

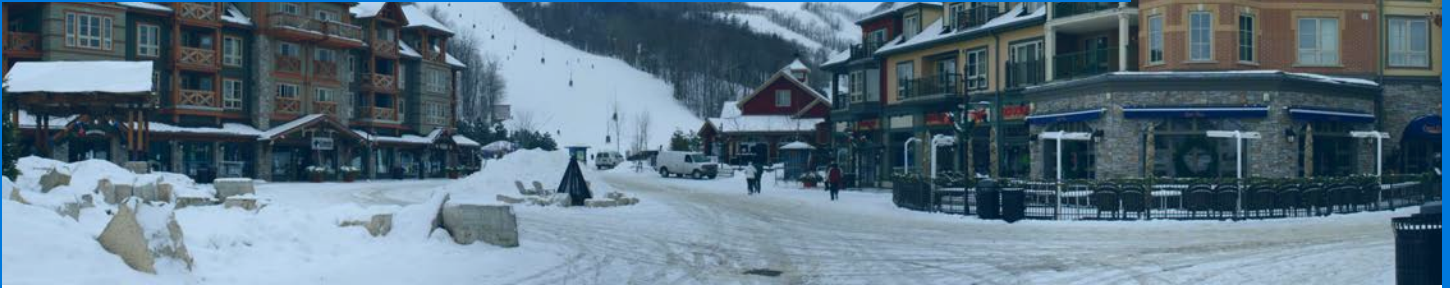
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A report prepared by researchers from
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Executive summary



This report analyzes short-term rentals (STRs) in the province of Ontario, and applies the results of a new Canada-wide study of the impact of STR activity on rents to Ontario communities. It estimates the amount of rent increases in Ontario caused by STRs, demonstrates the effectiveness of principal-residence requirements at driving down rents, and lays out a set of STR regulatory principles for Ontario, based on Canadian best practices.

SHORT-TERM RENTALS IN ONTARIO: MARKET OVERVIEW

- In December 2023, there were 74,000 short-term rental listings operated out of housing units in the province of Ontario displayed on Airbnb, 51.4% of which (38,000) we estimate were active on given day.
- At the summer peak, in July 2023, these **hosts collectively earned \$258 million in monthly revenue—an average of \$6,700 per listing, which is nearly five times the \$1,408 average monthly rent** in Ontario recorded in the 2021 census.
- Ontario's STR market has fully recovered from the pandemic; growth is strong across the province (20% year-over-year in 2023), and listings hit an all-time high in 2023.
- **The province's STR market is dominated by commercial operators**

—the top 10% of hosts earned 43.8% of all revenue, while the top 1% of hosts—just 2,260 operators—earned 15.3% of revenue.

- Multilistings—listings operated by hosts with other listings—account for 43.1% of Airbnb listings.
- Over the course of 2021 and 2022, a majority of Airbnb listings in Toronto and Ottawa were shifted to 28-day minimums to avoid municipal regulations.

THE IMPACT OF STRS ON HOUSING AVAILABILITY AND AFFORDABILITY IN ONTARIO

- **In December 2023, STRs were taking 12,860 housing units off of Ontario's long-term market. This was a 11.2% increase compared to December 2022**, driven by rapid growth in the non-Toronto portion of the GTHA and other urban areas without strong STR regulations.

- Province-wide, dedicated STRs have not yet caught up to their pre-pandemic growth trend, which implies more growth should be expected in the absence of regulatory change.
- A new study by Wachsmuth and St-Hilaire (2024) measures the total causal effect of STR activity on rent change in Canada.
- Applying its results to Ontario suggests that **Ontario renter households have paid \$2.6 billion dollars in additional rent since 2017 because of the presence of STRs in Ontario communities.**
- **In the cities which have implemented principal-residence restrictions on STRs, rent impacts are modest.** Only an estimated 1.9% of Ottawa’s rent growth in 2022 was caused by STR activity.
- In high-tourism communities without regulations, by contrast, STR activity is a major driver of rent growth. **In Niagara Falls, an estimated 17.3% of 2022 rent growth was caused by STR activity.**
- By the end of 2023, **Canadian neighbourhoods with principal-residence restrictions in place at the beginning of 2023 had rents which were \$54 less than they would have been without those restrictions—a 3.3% difference.**
- The result is that **STR regulations across Ontario are currently saving Ontario renters more than \$1 billion each year in lower rent payments.**
- **If the Province of Ontario were to extend principal-residence requirements to all communities that don’t currently have them, this would be expected to save Ontario renters at minimum a further \$566 million per year.**

THE EFFECT OF PRINCIPAL-RESIDENCE REQUIREMENTS ON RENTS IN ONTARIO

- Wachsmuth and St-Hilaire’s (2024) new study finds that STR principal-residence requirements directly cause rents to decrease.

STR REGULATORY OPTIONS IN ONTARIO

- The evidence is clear that principal-residence requirements work to bring down housing costs.
- The Province of Ontario should consider following British Columbia’s lead and implementing province-wide STR regulations that combine mandatory registration, a principal residence requirement, and platform accountability.



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1. Introduction

Until recently, no empirical research existed in a Canadian context to evaluate the impact of STRs on housing prices or rents. In the last several years, there have been several policy reports which have produced estimates of the impact of STRs on rents in Canada, but these have been limited to particular geographies, have not been conducted with transparent data and academic methodologies, or have presented purely correlational analyses which don't rigorously establish causal relationships.

Now for the first time, a forthcoming academic study has examined the relationship between STR activity and rents across all Canadian cities using causal methods. "Supply, demand, or stickiness? A causal analysis of the effects of short-term rental activity on residential rents" by David Wachsmuth

and Cloé St-Hilaire is currently undergoing peer review at an academic journal, and is freely available online as a public preview here: https://upgo.lab.mcgill.ca/publication/canada-str-rent/wachsmuth_st_hilaire_public_preview.pdf.

Wachsmuth and St-Hilaire (2024) use causal inference techniques to establish the true impact of STR activity on rents. Their study design distinguishes between supply effects (commercial STRs taking long-term housing off the market), demand effects (home sharing STRs leading residents to demand more housing), and price-stickiness effects (high STR prices make landlords more willing to demand high rent increases in the long-term rental market). The study uses cutting-edge techniques for addressing temporal and spatial autocorrelation.





The study also includes a causal analysis of the impact of STR principal-residence requirements on average rent levels. This is the first such academic analysis conducted in Canada, and it provides systematic evidence about the effectiveness of principal-residence rules at addressing housing affordability challenges in Canadian communities. Wachsmuth and St-Hilaire use the “difference-in-differences” framework which is widely deployed by economists and other social scientists to measure the true causal impact of a policy change when a random trial cannot be devised. The approach uses regression analysis to compare jurisdictions which implemented a policy change with others which did not implement it in order to determine what would have happened had the former jurisdictions not implemented the policy change, and thus the true causal impact of the policy.

Researchers from the Urban Politics and Governance research group (UPGo) at McGill University were commissioned by the Ontario Restaurant Hotel & Motel Association to analyze the implications of Wachsmuth and St-Hilaire’s (2024) study for Ontario communities, and summarize the results for a non-academic audience.

This report is the result of that effort. Specifically, in this report we provide:

1. A general market overview of short-term rentals in the province, including the volume, revenue, type, size and distribution of units, the presence of dedicated commercial operations, and the impact of Covid-19 on the STR market.
2. An analysis of the impact of dedicated STRs on housing availability and affordability in Ontario, specifically by applying the results of Wachsmuth and St-Hilaire (2024) to the Ontario case.
3. An analysis of the impact of principal-residence restrictions on rents in Ontario.
4. A set of regulatory recommendations, drawing on a set of Canadian examples and best practices.

Data and methodology are discussed in the Appendix, and all the code used to generate the analysis in the report is available online at <https://github.com/UPGo-McGill/ontario-report-2024>.

2. Short-term rentals in Ontario: Market overview



In December 2023, there were 74,000 short-term rental listings operated out of housing units in the province of Ontario displayed on Airbnb, 51.4% of which (38,000) we estimate were active on given day. At the summer peak, in July 2023, these hosts collectively earned \$255 million in monthly revenue—an average of \$6,700 per listing, which is nearly five times the \$1,408 average monthly rent in Ontario recorded in the 2021 census. Ontario's STR market has fully recovered from the pandemic; growth is strong across the province (20% year-over-year in 2023), and listings hit an all-time high in 2023. The province's STR market is dominated by commercial operators—the top 10% of hosts earned 43.8% of all revenue, while the top 1% of hosts—just 2,260 operators—earned 15.3% of revenue. Multilistings—listings operated by hosts with other listings—account for 43.1% of Airbnb listings. Over the course of 2021 and 2022, a majority of Airbnb listings in Toronto and Ottawa were shifted to 28-day minimums to avoid municipal regulations.

ACTIVE LISTINGS AND HOST REVENUE

In December 2023, there were 74,000 short-term rental listings operated out of housing units in the province of Ontario displayed on Airbnb. (There were a further 3,100 STR listings which were hotels, B&Bs, and other non-housing operations; we exclude them from the remainder of the analysis.) Not all of these listings were active, however. We estimate that 38,000 (51.4%) of these listings were active on a given day in December 2023, which is to say they were either reserved or available for reservations.¹

Figure 1 shows the distribution of active STRs in three large municipal STR markets in the province—Toronto, Ottawa, and Kingston—and in three municipalities with highest proportion of total housing operating as STRs—The Blue Mountains, Prince Edward County, and Niagara Falls. The figure demonstrates that, in the province’s STR vocational area hotspots, upwards of 6% of all housing has been converted to STRs. In the large cities this proportion is much lower—in part because each of Toronto, Ottawa and Kingston

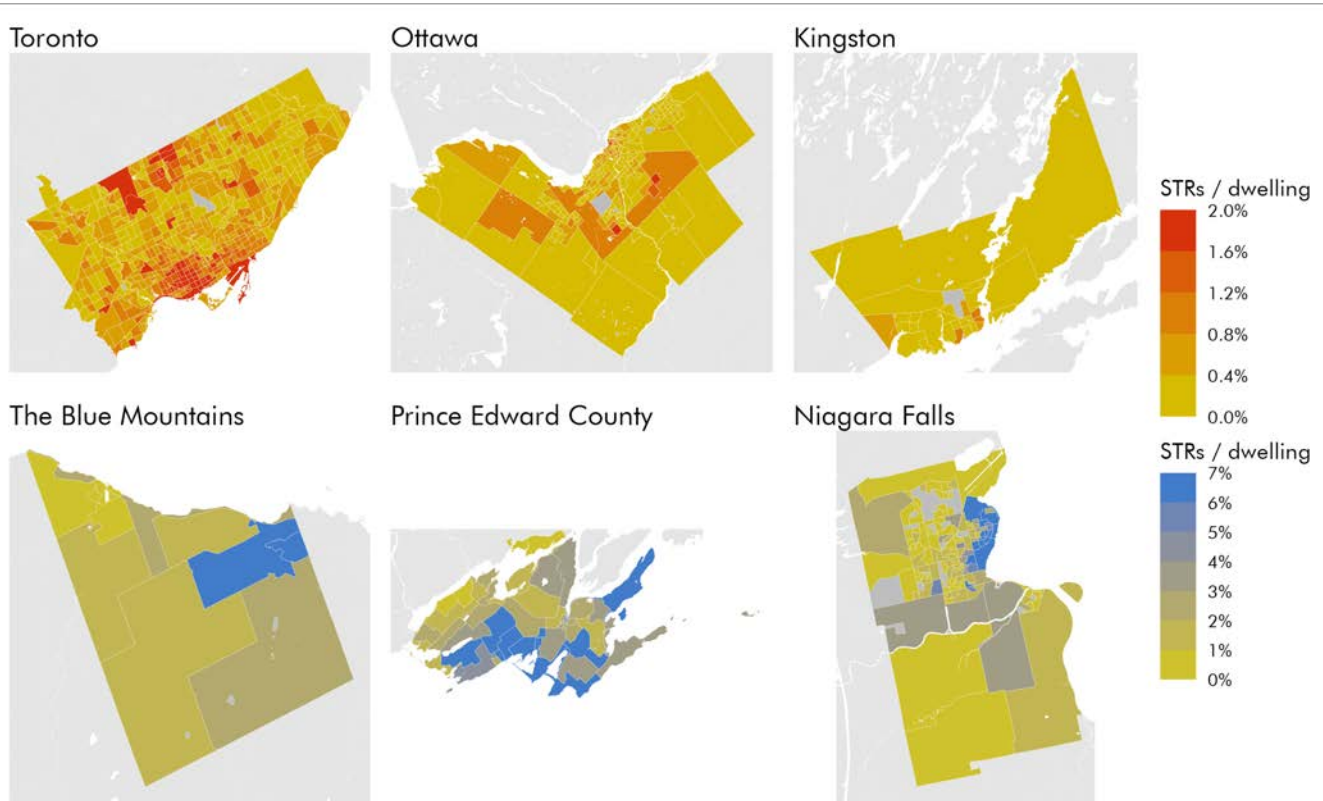


Figure 1. Average active daily STR listings as a proportion of all housing (December 2023)

¹ Active listings arguably offer the most intuitive means of assessing the size of an STR market, since listings which are displayed but are never actually available for rent are not meaningfully contributing to the market. However, STR activity cannot be unambiguously measured, since Airbnb and other STR platforms only indicate when a listing is available or not available, and, when a listing is not available, it could be reserved or it could be blocked from receiving reservations. The figures about active listings in this report are inferred based on listing availability, and should be taken as directional estimates rather than exact values.

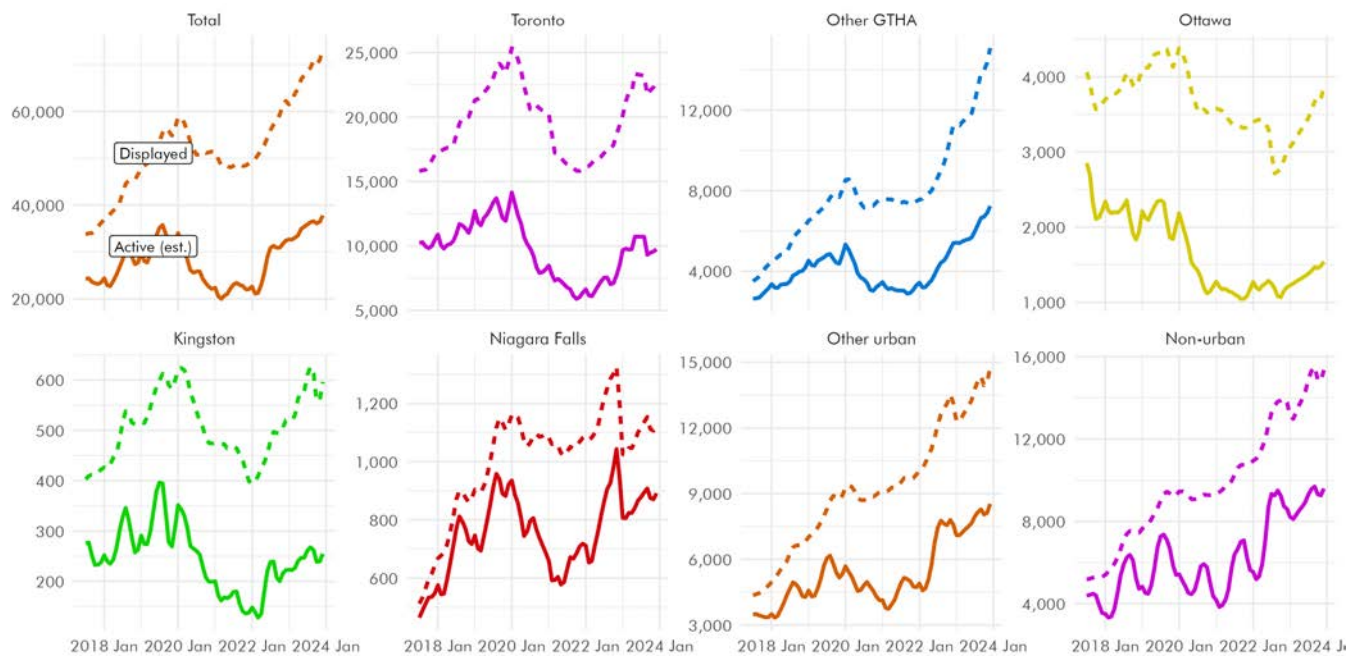


Figure 2. Displayed and daily active STR listings in Ontario (monthly average)

has local STR regulations which restrict STRs to a host’s principal residence.

The 38,000 STR listings active on average each day in December 2023 were operated by 25,600 hosts. (There were 41,900 hosts in total who had any listings displayed on Airbnb in December 2023, active or not.) At the summer peak, in July 2023, these hosts collectively earned \$255 million in monthly revenue—an average of \$6,700 per listing, which is nearly five times the \$1,408 average monthly rent in Ontario recorded in the 2021 census.

Ontario's STR market grew rapidly in 2023. Compared to December 2022, daily active listings grew 20%—from 31,700 to 38,000. Revenue during the summer peak grew 26% year over year—from \$203 million in July 2022 to \$255 million in July 2023. In fact, despite the Covid-19 pandemic and the bans on commercial STRs in Toronto and Ottawa, Ontario’s STR market is now at an all-time high. Compared to December 2019—prior to the onset of the Covid-19 pandemic—Ontario STR market in 2023 featured significantly more active

listings earning more money. (In December 2019, there were 33,900 daily active listings operated out of houses in Ontario—10.8% lower than in 2023.)

Figure 2 displays the growth in displayed and active listings per day across seven areas of the province: the City of Toronto, the remainder of the GTHA, the City of Ottawa, the City of Kingston, the City of Niagara Falls, the other urban areas in the province (census metropolitan areas or census agglomerations), and the remaining (non-urban) areas. It demonstrates that STR activity in Toronto, Ottawa and Kingston has been relatively stagnant since those cities implemented restrictions on commercial STRs—albeit once again growing briskly from a low base in Ottawa—and by contrast STR activity is surging elsewhere in the province. Outside Toronto and Ottawa, both displayed and active listing counts were at all-time highs as of the end of 2023. Table 1 summarizes key STR market activity across the largest cities in the province.

Until early 2020, the number of active STR listings in Ontario was steadily increasing. Figure 3 shows the change in active listings relative to one year

City	Daily active listings (estimated, Dec. 2023)	Listing growth (Dec. 2022-2023)	Active listings as % of dwellings (Dec. 2023)	Host revenue (June 2023)
Ontario	38,000	17.2%	0.6%	\$255 million
Toronto	9,890	10.4%	0.8%	\$53.3 million
Mississauga	1,540	44.2%	0.6%	\$5.3 million
Ottawa	1,530	25.3%	0.4%	\$5.3 million
Brampton	1,010	53.1%	0.5%	\$3.2 million
Hamilton	950	1.9%	0.4%	\$3.9 million
Niagara Falls	880	6.6%	2.2%	\$5.5 million
Prince Edward County	640	0.4%	4.7%	\$7.7 million
Richmond Hill	600	38.1%	0.8%	\$2.2 million
London	570	-6.1%	0.3%	\$3.8 million
The Blue Mountains	550	5.7%	7.4%	\$6.1 million
Kitchener	550	33.4%	0.5%	\$3.2 million
Markham	440	37.0%	0.4%	\$1.6 million
Kawartha Lakes	430	7.5%	1.1%	\$3.3 million
Muskoka Lakes	390	15.7%	4.2%	\$4.7 million
Windsor	360	30.2%	0.4%	\$2.0 million
Vaughan	350	28.3%	0.3%	\$1.3 million
Oakville	340	35.6%	0.5%	\$1.2 million
Barrie	320	45.1%	0.6%	\$1.9 million
Waterloo	300	21.3%	0.6%	\$2.0 million
Innisfil	290	12.1%	1.7%	\$1.9 million
Huntsville	250	10.3%	2.3%	\$2.8 million
Kingston	250	11.1%	0.4%	\$1.4 million

Table 1. STR activity by municipality

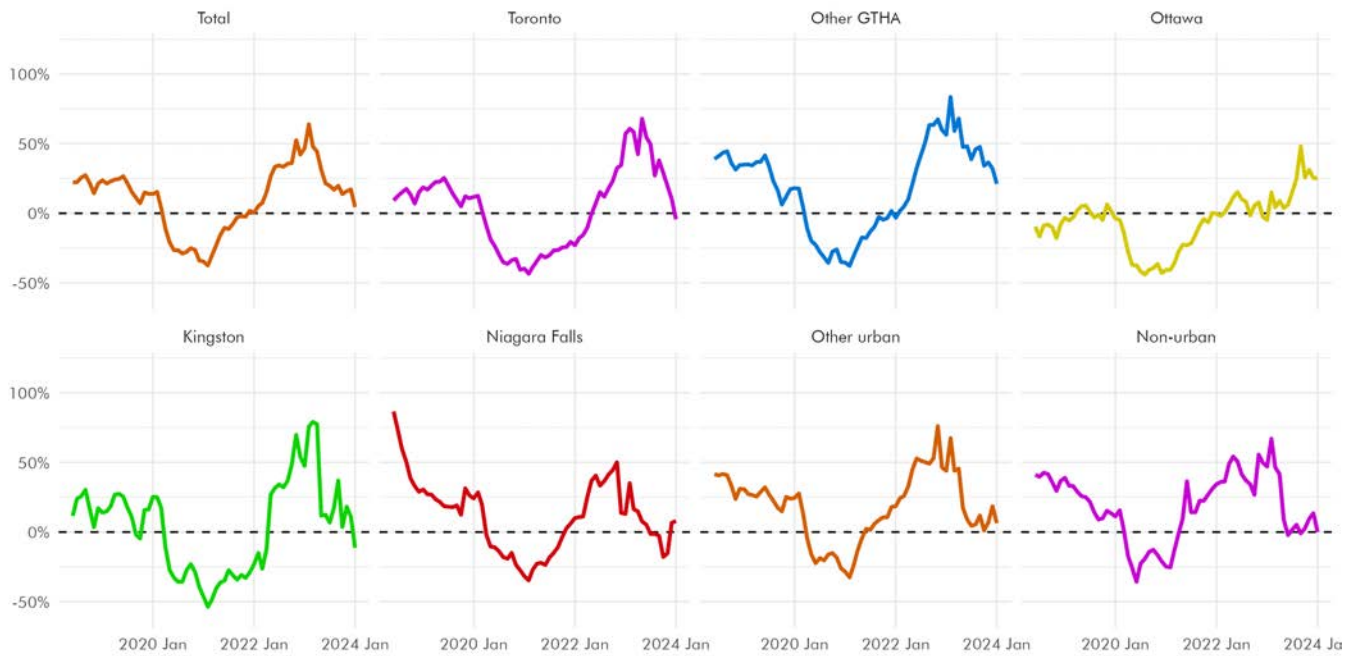


Figure 3. Change in active daily listings compared to one year earlier (monthly average)

earlier, which is a convenient way to remove seasonal variation to identify underlying growth trends. The figure indicates that, from 2018 through the beginning of the pandemic, active listings were growing in all different community types. The pandemic halted Ontario’s STR market growth, with active listings collapsing in March

2020. But, while listing growth again turned positive outside the larger cities in 2021, active listings continued to shrink until the end of 2021 in the Toronto region and the City of Ottawa. By 2022, all regions were seeing robust growth, and it is clear that the pandemic’s impacts on Ontario’s STR market have now receded.

HOME SHARERS AND COMMERCIAL OPERATORS

An important distinction in STR markets is between “home sharing” and “commercial operations”. Home sharing occurs when the principal resident of a housing unit rents out part or all of that housing unit on a temporary basis. A family with a spare bedroom that they rent on Airbnb as a private-room listing is an example of home sharing, as is a condo unit whose occupant travels frequently for business and rents out the entire unit when she is out of town. A commercial operation, by contrast, is an STR listing which is not located in the host’s principal residence, and is operated in a more or less full-time fashion. Unlike home sharing arrangements, commercial STRs remove housing units from the long-term market, since

each housing unit which is being operated as a full-time STR could instead be housing a long-term resident.

One way to distinguish between commercial operators and home sharers is to look at what type of listings are operated on STR platforms. STRs can be entire-home or private-room, and the former is more likely to be a home sharing arrangement than the latter. (Listings can also be shared-room, but these are very rare.) The overwhelming majority of Ontario Airbnb listings in December 2023 were entire homes (75.5%), and this proportion increased noticeably during the pandemic (from 66.2% in December 2019),

presumably in part because non-commercial STR operators became less willing to share their homes with strangers.

Another way to distinguish between home sharers and commercial operators is to examine the distribution of revenue among hosts. If revenue is evenly distributed among a large number of hosts earning modest amounts of money, that suggests that home sharing is common. If, by contrast, revenue is concentrated among a small number of high earners, that suggests that most STR activity is conducted by commercial operators, regardless of how many hosts are active on the platform. Across Ontario, host revenue is in fact highly concentrated. In September 2022, the top 10% of hosts earned 43.8% of all revenue, while the top 1% of hosts—just 2,260 operators—earned 15.3% of revenue. By contrast, the median host earned \$6,800 in September 2022. This pattern suggests that Ontario has a large number of hosts who are casual home sharers, but that the STR market is dominated by a much smaller number of commercial operators. Figure 4 shows the distribution of host revenue for each of the

province’s tourism regions. Revenue was more highly concentrated in the City of Ottawa and the City of Toronto (implying the continuing presence of commercial operations early in the period during which these two cities began restricting commercial STRs), while in non-urban areas revenue was somewhat more equitably distributed (implying more genuine home sharing).

Finally, one simple method of identifying commercial STR operators is to identify listings operated by hosts who have multiple listings in operation simultaneously. These “multilistings” by definition cannot be home sharing arrangements, since the host cannot have multiple principal residences. We consider entire-homes to be “multilistings” if they are operated by hosts who are simultaneously operating other entire-home listings. We define private-room multilistings as cases where a host has three or more private-room listings operating on the same day. Since nearly all entire-home listings have three or fewer bedrooms, there will be extremely few cases where a host operating three private-room STR listings in a dwelling unit has not converted the entire unit

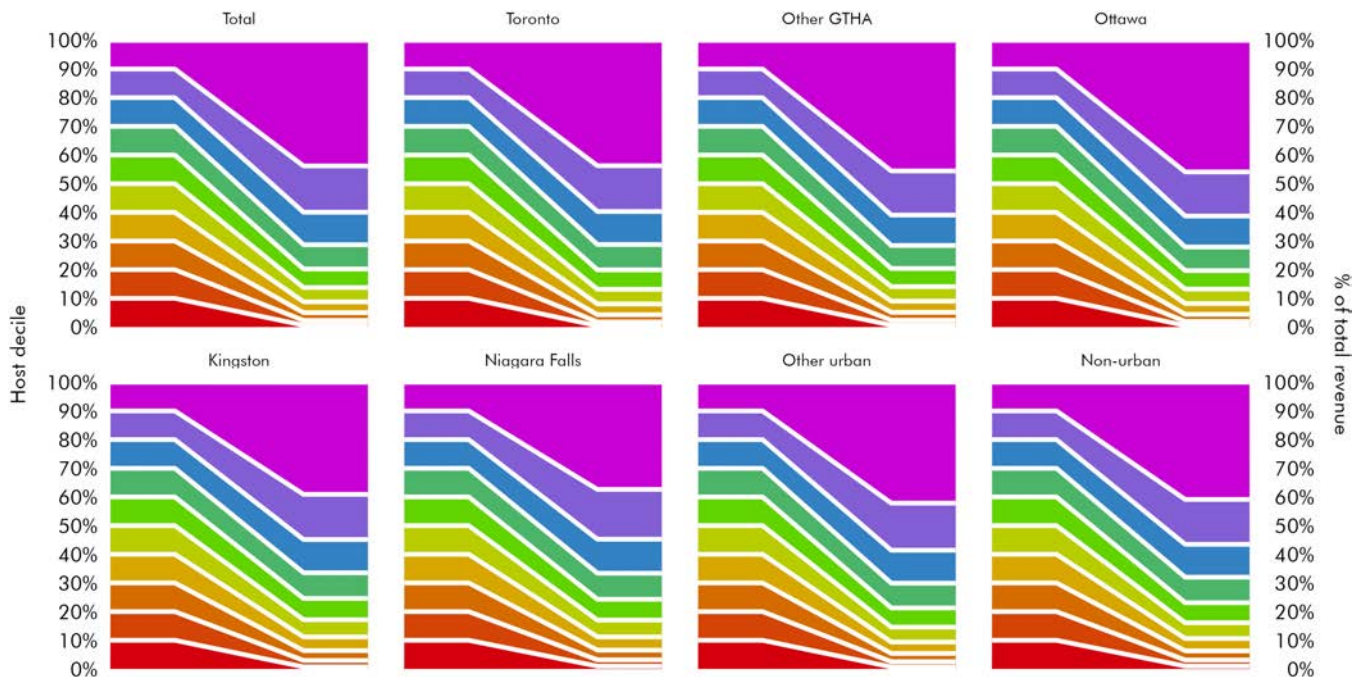


Figure 4. STR host revenue distribution in Ontario (September 2022)

into a dedicated STR. In December 2023, 43.1% of displayed Airbnb listings in Ontario were multilistings, a number that rises to 56.1% in Niagara Falls (Table 2).

SHORT-TERM AND MEDIUM-TERM RENTALS

As we have demonstrated elsewhere (Wachsmuth and Buglioni 2024), when the City of Toronto’s STR regulations came into force in 2021, Airbnb responded by shifting most listings on its platform to 28-day minimums to avoid the need to remove them for non-compliance. The result is that a majority of the Airbnb listings in Toronto are “medium-term rentals” rather than “short-term rentals” proper.

Figure 5 shows the percentage of total displayed Airbnb listings each month which have a minimum stay of 28 days or more. (Because of data limitations, we can only present this trend from September 2021 onward.) It shows that Toronto and Ottawa have dramatically higher rates of medium-term rentals than the rest of the province, and moreover that—with the exception of Ottawa—these rates have been stable. The spike in medium-term

Region	Multilisting % (Dec. 2023)
Ontario	43.1%
Toronto	40.9%
Other GTHA	47.0%
Ottawa	44.9%
Kingston	49.6%
Niagara Falls	56.1%
Other urban	43.7%
Non-urban	40.7%

Table 2. Multilisting rates by region

rentals in Ottawa in mid-2022 (when the City’s STR regulations came online) strongly suggests that Airbnb shifted non-compliant Ottawa listings to 28 day minimums like it previously did in Toronto.

Although Airbnb listings with minimum stays above or below 28 days are regulated differently in some Ontario cities, they arguably do not represent different land uses, nor is it likely that their impact on long-term rental housing markets will be different. So in what follows we include all Airbnb listings in our analysis, regardless of length of stay.

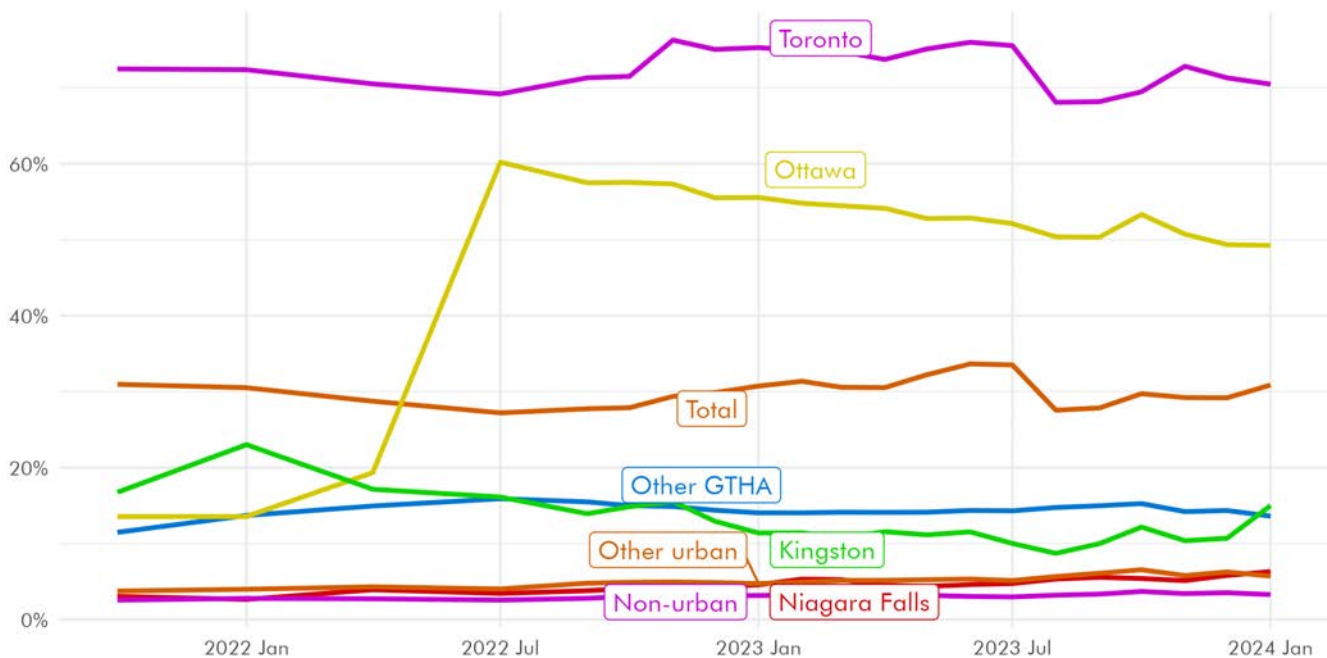


Figure 5. The percentage of total displayed Airbnb listings which have a minimum stay of 28 days or more

3. The impact of STRs on housing availability and affordability in Ontario



In December 2023, STRs were taking 12,860 housing units off of Ontario's long-term market. This was a 11.2% increase compared to December 2022, driven by rapid growth in the non-Toronto portion of the GTHA and other urban areas without strong STR regulations. Province-wide, dedicated STRs have not yet caught up to their pre-pandemic growth trend, which implies more growth should be expected in the absence of regulatory change. A new study by Wachsmuth and St-Hilaire (2024) measures the total causal effect of STR activity on rent change in Canada. Applying its results to Ontario suggests that Ontario renter households have paid \$2.6 billion dollars in additional rent since 2017 because of the presence of STRs in Ontario communities. In the cities which have implemented principal-residence restrictions on STRs, rent impacts are modest. Only 1.9% of Ottawa's rent growth in 2022 was caused by STR activity, according to the model's estimates. In high-tourism communities without regulations, by contrast, STR activity is a major driver of rent growth. In Niagara Falls, an estimated 17.3% of 2022 rent growth was caused by STR activity.

INTRODUCTION

In 2023, rental market conditions across Canada saw both record low vacancy rates (1.5% nationally) and record high rent increases (8.0% nationally), and both of these indicators were at or near record levels in communities across Ontario. These are symptoms of a market where the supply of housing is insufficient to meet demand.

One possible explanation for some of both the insufficient supply and elevated demand for housing in Ontario is the growth in short-term rentals. For the last 15 years, tourists have been able to compete with residents for housing—adding demand to the local housing market—while landlords are now able to shift their properties out of the conventional housing market to become dedicated STRs—reducing the supply of conventional housing. Research has found that renting a housing unit on the STR market frequently offers landlords greater potential revenue than conventional leases (Wachsmuth & Weisler 2018), especially in transit-accessible neighborhoods (Deboosere et al. 2019). Multiple peer reviewed studies have also found that Airbnb and other STR platforms increase housing costs (Barron et al. 2021; Horn & Merante 2017; Garcia-Lopez et al. 2019). The most highly cited of these (Barron et al. 2021) found, for example, that the growth of short-term rentals explained nearly one fifth of all the increases in residential

rents in the United States between 2012 and 2016.

Until recently, there has not been any academic research systematically examining the relationship between housing costs and short-term rentals in Canada. However, a new study which is currently undergoing peer review uses seven years (2016-2022) of CMHC rent data for every medium and large city in Canada in comparison with short-term rental activity to examine this relationship (Wachsmuth and St-Hilaire 2024). The paper finds strong, independent causal impacts of three different measures of STR activity on the year-over-year changes in rents in a neighbourhood: supply effects (commercial STRs taking long-term housing off the market), demand effects (home sharing STRs leading residents to demand more housing), and price-stickiness effects (high STR prices making landlords more willing to demand high rent increases in the long-term rental market).

In this chapter we present empirical evidence about the quantity of commercial STRs taking housing off the market in Ontario, and then we apply the countrywide results of Wachsmuth and St-Hilaire (2024) to generate Ontario-specific estimates of the impact of commercial STRs on residential rents in the province.



STR-INDUCED HOUSING LOSS

STRs can remove long-term housing from the market either directly, when tenants of a unit are evicted or not replaced at the end of a lease and the unit is converted to a STR, or indirectly by absorbing new construction or investment properties which otherwise would have gone onto the long-term market. To obtain the exact number of units that have been occupied as STRs, landlords or units would need to be individually surveyed, which is infeasible because STR hosts are mostly anonymous on major STR platforms such as Airbnb and Vrbo. Instead, we use the estimated activity of listings, alongside structural characteristics such as listing type and location, to identify listings which appear to be operating as dedicated STRs and are therefore not available as conventional long-term housing.

Frequently Rented Entire-Home (FREH) listings: The number of frequently-rented units is one way to estimate STR-induced housing loss. If a STR is

available for reservations the majority of the year and receives many bookings, it is reasonable to assume that it is not serving as an individual's principal residence at the same time. Along these lines, we define frequently rented entire-home (FREH) listings as entire-home listings which were available on Airbnb the majority of the year (at least 183 nights) and were booked a minimum of 90 nights.

Ghost hostels: In addition to FREH listings, it is possible that entire housing units have been subdivided into multiple private-room listings, each of which appearing to be a spare bedroom or the like, while actually collectively representing an apartment removed from the long-term housing market. We call these clusters of private-room listings "ghost hostels", building on the advocacy group Fairbnb.ca's term "ghost hotels"—multiple FREH listings located in a single building, collectively serving as de facto hotels instead of long-term housing (Wieditz 2017). We detect ghost

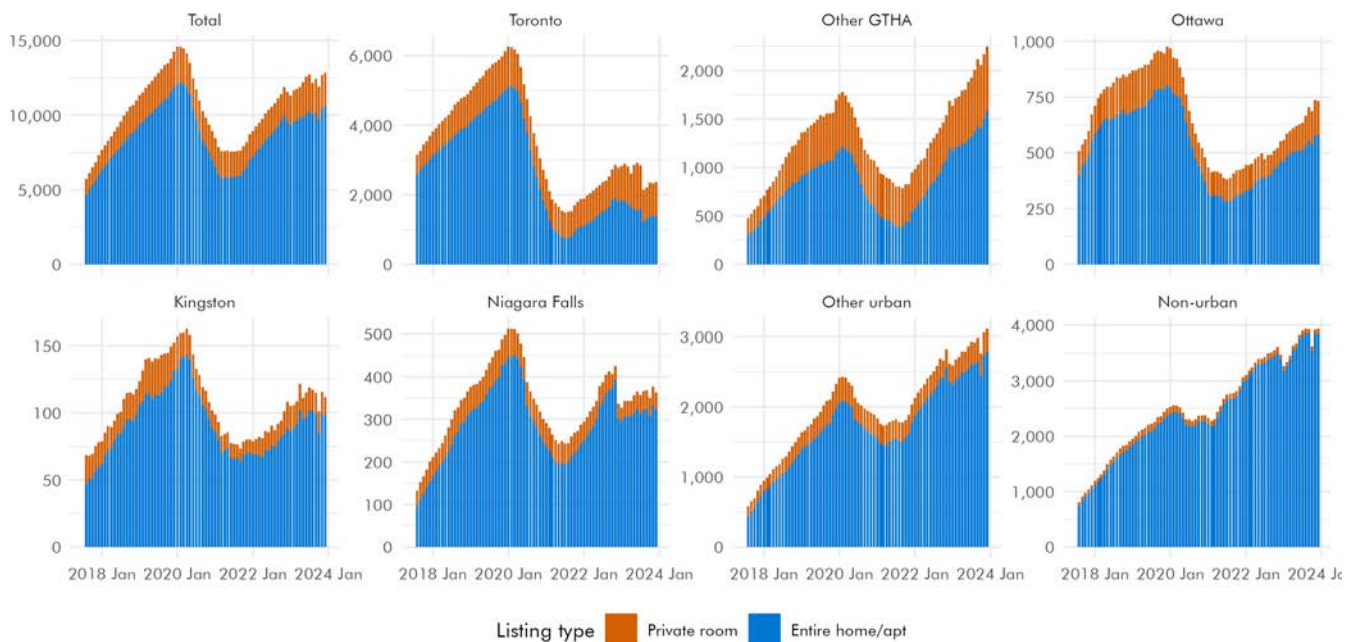


Figure 6. Housing units converted to dedicated STRs in Ontario (seasonally adjusted monthly average)

Region	Housing units converted to dedicated STRs (Dec. 2023)	Housing units converted to dedicated STRs (Dec. 2022)	% change in housing units converted to dedicated STRs (Dec. 2022-2023)	% of all housing units converted to dedicated STRs (Dec. 2023)
<i>Total</i>	12,860	11,570	11.2%	0.2%
Toronto	2,360	2,790	-15.2%	0.2%
Other GTHA	2,250	1,690	33.2%	0.1%
Ottawa	730	550	32.6%	0.2%
Kingston	110	110	3.4%	0.2%
Niagara Falls	360	340	7.8%	0.9%
Other urban	3,110	2,620	18.8%	0.2%
Non-urban	3,930	3,480	13.1%	0.6%

Table 3. Dedicated STRs in Ontario by region, December 2022 to December 2023

hostels by finding clusters of three or more private-room listings operated by a single host, whose reported locations are close enough to each other that they are likely to have originated in the same actual housing unit. (Airbnb obfuscates listing locations by shifting them randomly up to 200 m.)

In December 2023, we estimate that there were 10,610 FREH listings in Ontario, and 2,250 more housing units which were operating as ghost hostels. (We refer to these listings collectively as “dedicated STRs”.) In total, therefore, short-term rentals were taking 12,860 housing units off of Ontario’s long-term market at the end of the year. In the absence of commercial STRs, in other words, there would have been 12,860 more homes available for Ontario residents to live in.

Figure 6 and Table 3 show STR-induced housing loss by region. They demonstrate that, province-wide, dedicated STRs are on the verge of passing their all-time high before the pandemic. This is particularly striking because, in Toronto and Ottawa, STR regulations have successfully kept commercial STR quantities well below their pre-pandemic levels (although they appear to be rising quickly in Ottawa again).¹ Outside of the two largest cities, there are now more dedicated STRs operating in Ontario than at any previous point.

The contrast between the City of Toronto and the rest of the Toronto region is revealing. While commercial Airbnb operations are at less than half of their pre-pandemic peak in Toronto—thanks to the City’s aggressive STR regulations—in the remainder of the region commercial STR

¹ It is important to note that many of the Airbnb listings we identify here as commercial operations have 28-day minimum stays, and thus are not included in Toronto and Ottawa’s definition of short-term rentals. As we previously argued, there is no meaningful distinction between a 27-day rental and a 28-day rental from a housing market perspective, so we include both “short-term” and “medium-term” Airbnb listings in this analysis. But much of the recent growth in commercial STR numbers in Toronto and Ottawa which we document here is not activity which violates municipal regulations in either of those cities, since it concerns minimum-28-day rentals.

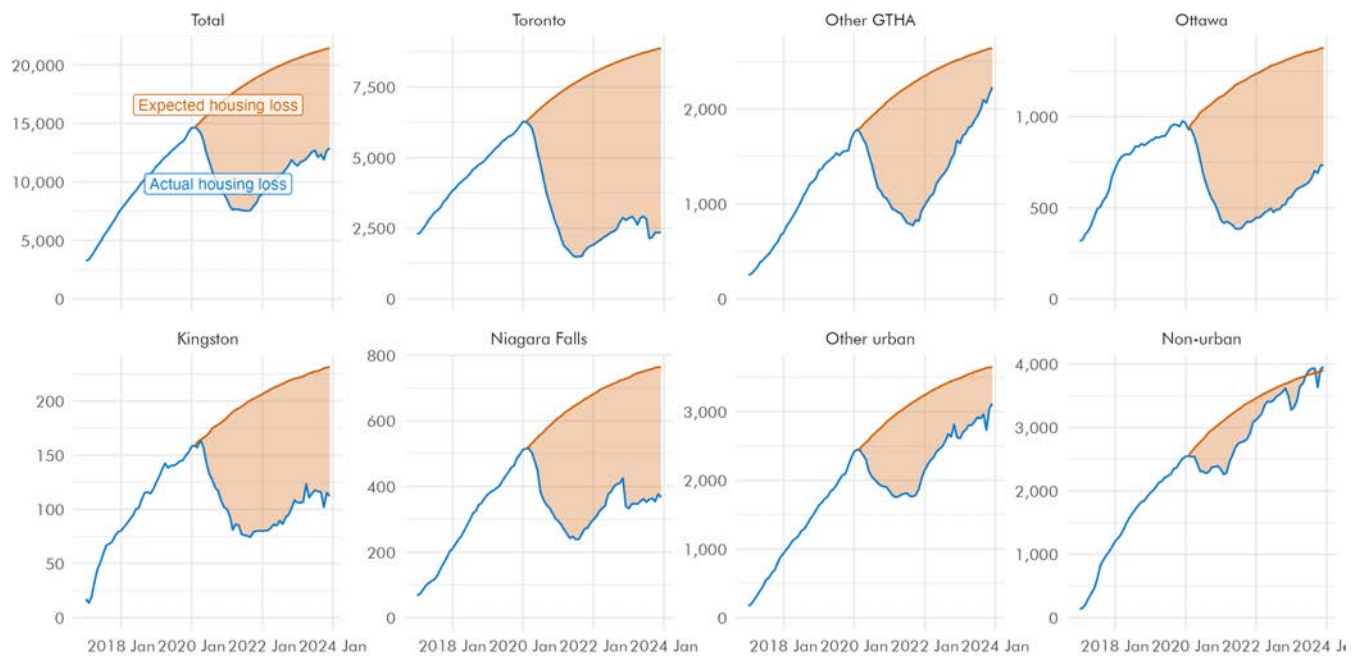


Figure 7. Actual and expected STR-induced housing loss during the Covid-19 pandemic (monthly average)

operations have increased 26.3% from 1,780 in February 2020 to 2,250 in December 2023. This contrast points to the importance of regulations limiting STRs to a host’s principal residence for jurisdictions that wish to mitigate the impact of STRs on housing availability for residents.

To be clear, our calculations of STR-induced housing loss should only be taken as broad estimates. They combine several datasets, they attempt to proxy an unobservable question (the actual use of housing units) with observable data points (STR activity), and the key FREH metric is a “slow-moving” indicator, since listings need to have been active for at least six months to be counted as FREH. Given this uncertainty, however, our belief is that our housing loss estimates are likely to be highly conservative, since the FREH indicator operates on a one-year moving window which responds relatively slowly to growth.

Trend analysis: housing loss

Using trend analysis, it is possible to estimate how much STR-induced housing loss would have been

expected to have occurred in the absence of the pandemic—this counterfactual scenario establishes an important baseline for a post-pandemic housing landscape, in which short-term rentals return to their previous growth trend.

Figure 7 displays the shortfall between actual STR housing loss and what would have been expected in the absence of the pandemic. (We conservatively assume that the growth rate would have decayed by 1.5% each month after March 2020, to account for the likelihood that the STR market would eventually reach saturation.)

In Toronto, Ottawa, and Kingston, there are far fewer dedicated STRs than what pre-pandemic growth trends would have predicted. The confounding factor here, as we discuss in the next chapter, is that two of these municipalities established STR regulations which ban commercial STRs. The result is that, while the pre-pandemic trends would have predicted 10,480 dedicated STRs across these three cities by the end of 2023, our estimate is that there were only 3,200—just 30.5% percent of the predicted amount.



By contrast, across the rest of the GTHA and in other urban areas in the province, dedicated STR counts are close to catching the pre-pandemic trend. And in non-urban areas dedicated STR counts are now completely caught up to the pre-pandemic trend, thanks to a combination of tourist accommodation demand which held up strongly through the pandemic and a relative lack of regulation restricting the development of commercial STRs.

Overall, the pre-pandemic trend would have predicted 21,440 housing units converted to dedicated STRs in Ontario by the end of 2023—66.6% higher than the actual estimated figure of 12,870. The implication is that, despite the rapid growth in dedicated STRs in the last year, the market has not reached saturation, and so this growth will likely continue into the future in the absence of any regulatory changes.

A CANADA-WIDE MODEL OF THE CAUSAL IMPACT OF STR ACTIVITY ON RESIDENTIAL RENTS

Until recently, no empirical research existed in a Canadian context to evaluate the impact of STRs on housing prices or rents. Barron et al. (2020) answered these questions through an examination of every US Airbnb listing between 2012 and 2016. This study found that a 1% growth in Airbnb listings in a location predicts a 0.018% increase in monthly rents and a 0.026% increase in house prices. While these numbers might appear small, they occurred in the context of STR growth rates which were quite high; the authors find that the growth of Airbnb was responsible for one fifth of all rent growth and one seventh of all housing-price growth in the United

States during the study period. Subsequent research has substantiated Barron et al.'s (2020) findings, albeit at smaller scales and usually with somewhat smaller estimated effects of STRs on rents (e.g. Lee & Kim 2023; Liang et al. 2022; Garcia-López et al. 2020).

In the last several years, there have been several policy reports which have produced estimates of the impact of STRs on rents in Canada, but these have been limited to particular geographies, have not been conducted with transparent data and academic methodologies, or have presented purely

correlational analyses which don't rigorously establish causal relationships. Now for the first time, a forthcoming academic study has examined the relationship between STR activity and rents across all Canadian cities over a seven-year period. "Supply, demand, or stickiness? A causal analysis of the effects of short-term rental activity on residential rents" by David Wachsmuth and Cloé St-Hilaire is currently undergoing peer review at an academic journal, and is freely available online as a public preview here: https://upgo.lab.mcgill.ca/publication/canada_str_rent/wachsmuth_st_hilaire_public_preview.pdf.

Wachsmuth and St-Hilaire (2024) use causal inference techniques to establish the true causal impact of STR activity on rents. They distinguish between supply effects (commercial STRs taking long-term housing off the market), demand effects (home sharing STRs leading residents to demand more housing), and price-stickiness effects (high STR prices making landlords more willing to demand high rent increases in the long-term rental market). The study uses cutting-edge techniques for addressing temporal and spatial autocorrelation, which means that the results are not biased by, for example, the fact that last year's rent in a neighbourhood is the best predictor of next year's rent in that same neighbourhood, or that neighbourhoods next to each other are likely to have similar rental markets.

Table 3 presents the results of Wachsmuth and St-Hilaire's (2024) regression model. It uses *rent_change* as an outcome variable: the year-over-year change in average rent in a neighbourhood. The "treatment" variables are *FREH_change*, *non_FREH_change* and *price_change*—the year-over-year change in FREH listings, non-FREH listings, and STR nightly prices. The model uses random-effects eigenvector spatial filtering (RE-ESF) to control for spatial autocorrelation, a temporally autoregressive term *rent_lag_log* to control for temporal autocorrelation, and group-wise random effects at

	Dependent variable: <i>rent_change</i>
<i>(Intercept)</i>	0.000 (0.024)
<i>FREH_change</i>	0.039** (0.012)
<i>non_FREH_change</i>	0.032** (0.012)
<i>price_change</i>	0.043*** (0.012)
<i>rent_lag_log</i>	0.123*** (0.023)
<i>vacancy_lag_log</i>	-0.030* (0.014)
<i>apart_log</i>	0.053*** (0.016)
<i>income_log</i>	0.066*** (0.016)
<hr/>	
<i>Spatial effects (residuals): SD</i>	0.430
<i>Spatial effects (residuals): scaled Moran's I</i>	0.550
<i>Random group effects (neighbourhood): SD</i>	0.000
<i>Random group effects (region-by-year): SD</i>	0.380
<hr/>	
<i>Number of observations</i>	5,400
<i>Adjusted R² (conditional)</i>	0.359
<i>Restricted log likelihood</i>	-6,917
<i>AIC</i>	13,860
<i>BIC</i>	13,946

Note: *p<0.05; **p<0.01; ***p<0.001

Table 4. Random-effects eigenvector spatial filtering regression model measuring the total causal impact of STR activity on rent change in Canadian cities (Wachsmuth and St-Hilaire 2024)

the neighbourhood and region-by-year level to control for other spatiotemporal confounders.

The model was designed to measure the total causal impact of each of these treatment variables on the change in rent, and the results in Table 4 demonstrate that they all have a positive and statistically significant causal relationship with rent change. In other words, an increase in any of these measures of STR activity in a neighbourhood causes rents to increase more quickly in the neighbourhood, and this effect holds true independent of the other variables, and also independent of both spatial and temporal autocorrelation (i.e. the fact that rents tend to be similar between nearby neighbourhoods and

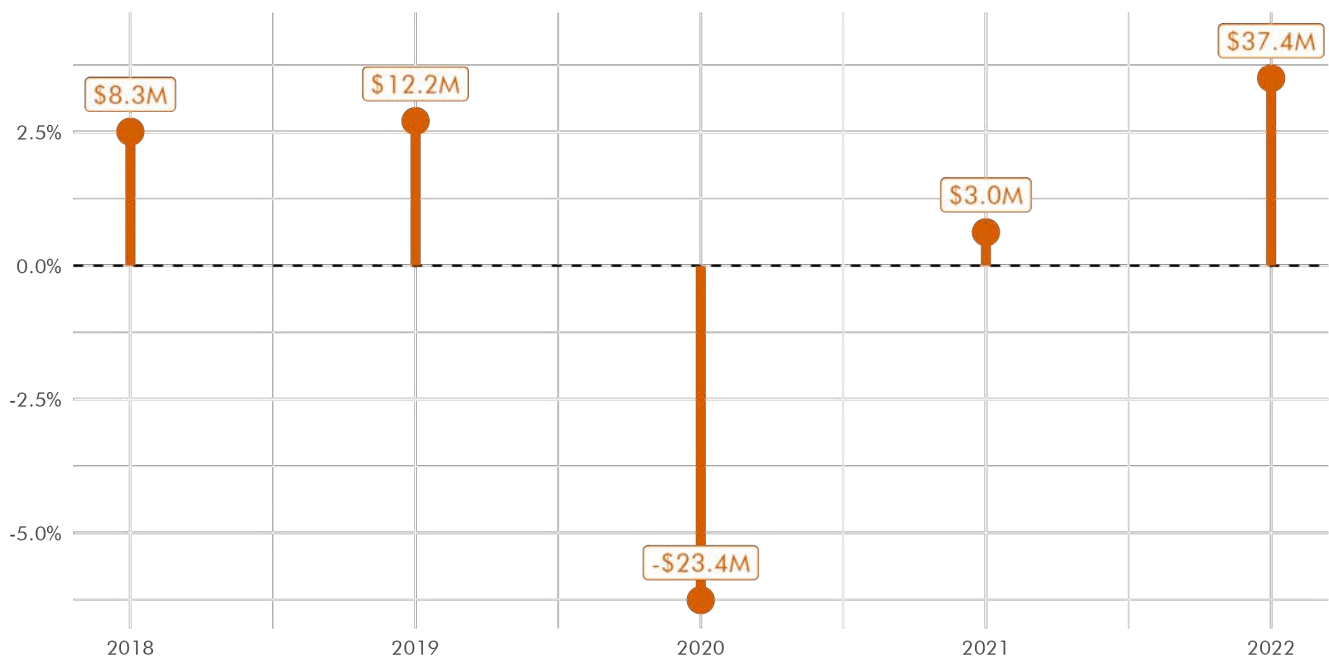


Figure 8. Year-to-year estimated causal effects of STRs on change in total rent paid in Canadian urban areas. Y-axis position is the percentage of total rent change caused by STR variation in Wachsmuth and St-Hilaire (2024) and the label is the amount of monthly rent change caused by STR variation in the model.

within the same neighbourhood between different points in time).

Figure 8 shows the year-to-year change in rent paid in October each year which is accounted for by year-to-year variation in STR activity in Wachsmuth and St-Hilaire’s model. (The figures are calculated by creating a counterfactual scenario for each year where FREH change, non-FREH change and nightly price change were all zero for each neighbourhood.) The figure demonstrates that STR activity caused total monthly rent to increase across Canadian cities by \$35.9 million in 2022.

The figure also tells a clear story about the Covid pandemic. In the years prior to the pandemic, an average of 2.6% of the annual increase in total rent paid is caused for by neighbourhood-level variation in STR activity. In 2020, by contrast, this number dropped to -6.3%. In other words, the model suggests that, in a counterfactual scenario where STR activity did not change in those years,

rents would have increased by 6.3% more than they actually did.

To contextualize these results, in October 2022 tenants in Canadian urban areas paid approximately \$8.3 billion in monthly rent (in 2023 dollars). The previous month, hosts on Airbnb in those same urban areas earned approximately \$205 million. Airbnb host revenue was 2.5% the size of total long-term rental revenue, in other words. (And this figure is an underestimate of total short-term rental revenue, since all non-Airbnb STR platforms and their associated revenue are excluded from our dataset.) However, as an order-of-magnitude estimate, the notion that a residential land use responsible for approximately 2.5% of total residential rental revenue would have a meaningful impact on rents in the remaining 97.5% of the market is plausible on its face, to say nothing of the supply effects of tens of thousands of rental units being withdrawn from the long-term market.

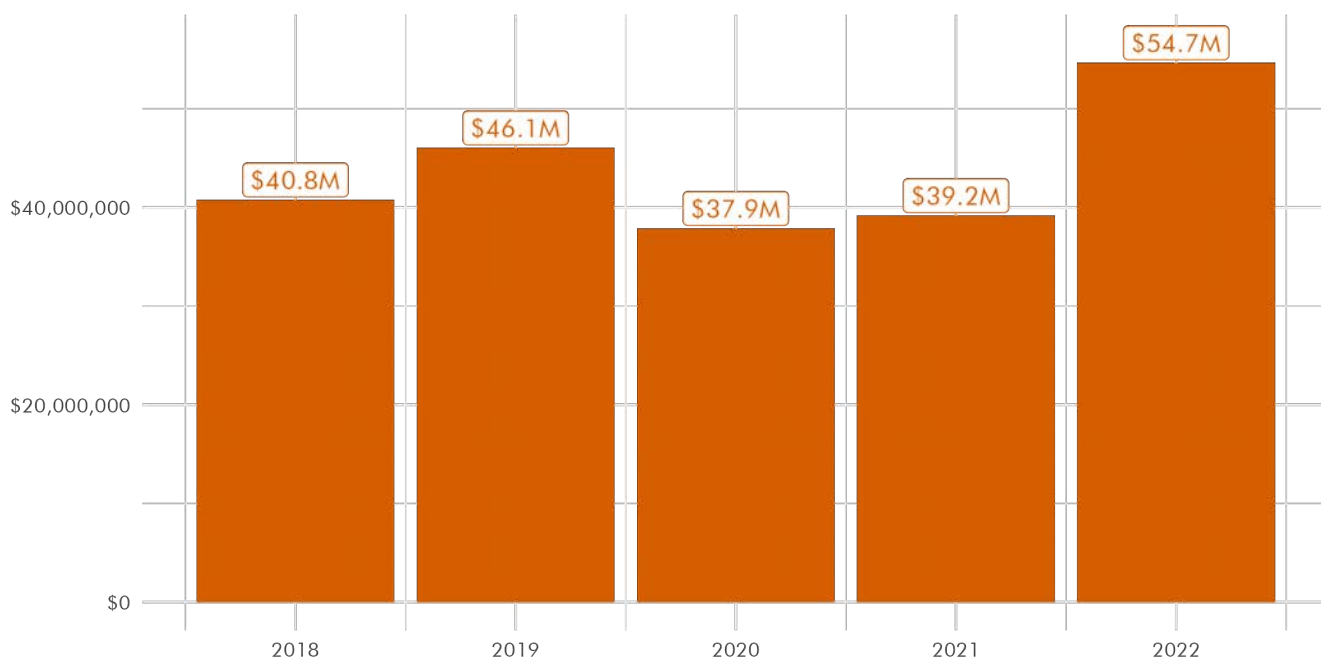


Figure 9. Estimates of expected decrease in total monthly rent in Ontario each year if STR activity were to drop to zero, from Wachsmuth and St-Hilaire (2024)

THE IMPACT OF STR ACTIVITY ON RESIDENTIAL RENTS IN ONTARIO

Wachsmuth and St-Hilaire’s (2024) model can be used to identify the causal impact of STR activity on rents in Ontario. Figure 9 shows the estimates from Wachsmuth and St-Hilaire’s model of the expected decrease in total monthly rent paid by Ontario renters if STR activity were to drop to zero. This is conceptually similar to the total amount that STRs have caused rents to increase in Ontario over this timeframe, but expressed in a more directly policy-relevant fashion. The pre-pandemic years show the growth in STRs translating directly into higher rents for Ontario households.

In 2020, the collapse of the STR market and the subsequent shift of thousands of STRs back to the long-term rental market (Wachsmuth et al. 2021b) meant that STRs actually contributed to *lowering* rents in Ontario communities as housing supply increased and landlords lost the option to switch to short-term rentals. In 2021, the STR market in Ontario returned to growth, but STRs did not

contribute meaningfully to rent growth in the province. This is because Toronto’s STR regulations came online; as we discuss in the next chapter, despite the ongoing presence of loopholes and enforcement gaps, Toronto’s STR rules have provably led to a substantial decline in rents in the city. While additional Ontario municipalities implemented STR regulations across 2021 and 2022, rapid STR growth in 2022 contributed to a further deterioration of housing affordability in the province. In the absence of the roll-out of STR rules in Ottawa and other municipalities, this deterioration would have been even more pronounced.

In total, the estimates suggest that Ontario renter households have paid \$2.6 billion dollars in additional rent since 2017 because of the presence of STRs in Ontario communities. This conclusion is not simply “correlational” (e.g. communities with more STRs happen to have

higher rents even though the one doesn't cause the other)—the model in Wachsmuth and St-Hilaire estimates the total *causal* impact of STR activity on rents.

Table 5 shows the estimated impact of STR activity on rents across a range of Ontario municipalities in 2022, alongside their STR regulatory status as of July 1, 2022. As we discuss in the next chapter, Ontario communities which have implemented principal-residence requirements for STRs have seen substantial decreases in rents compared to a counterfactual scenario where they did not implement such requirements. The evidence of this conclusion is

already present in the table; Toronto and Ottawa saw STR rent growth at or below the provincial average, while in Oshawa, STR restrictions meant effectively no STR-caused rent increases between 2021 and 2022. Meanwhile, Niagara Falls and Prince Edward County—two major tourist destinations which did not have principal-residence requirements in place by the midpoint of 2022—both saw STRs cause more than 10% of their total increase in monthly rents. In Niagara Falls, for example, the average renter household is paying an extra \$17 per month just because of the growth of STR activity in 2022—to say nothing of the impacts of previous and subsequent years.

City	Total monthly rent increase caused by STR growth (2022)	Percentage of total monthly rent increase caused by STR growth (2022)	Average monthly rent increase caused by STR growth (2022)	Had STR principal-residence restrictions as of July 1, 2022
Ontario	\$13.6M	3.1%	\$5.20	-
Toronto	\$6.6M	3.1%	\$6.30	Yes
Ottawa	\$0.8M	1.9%	\$3.00	Yes
Hamilton	\$0.7M	5.1%	\$6.00	No
Mississauga	\$0.5M	3.8%	\$5.20	Yes
London	\$0.4M	2.0%	\$3.30	No
Niagara Falls	\$0.4M	17.3%	\$17.20	No
Kitchener	\$250K	2.2%	\$3.90	No
Kingston	\$220K	3.0%	\$3.60	No
Brampton	\$160K	1.7%	\$3.60	No
Burlington	\$100K	2.4%	\$4.70	No
Prince Edward County	\$40K	12.3%	\$20.20	No
Oshawa	\$3K	0.1%	\$0.10	Yes

Table 5. Estimated impact of STR activity on rent change across Ontario municipalities in 2022, based on the model in Wachsmuth and St-Hilaire (2024)

4. The effect of principal-residence requirements on rents in Ontario



Municipalities across Ontario have begun implementing principal-residence restrictions on STRs, but there has not been systematic evidence about the effectiveness of this policy in reducing housing costs. Wachsmuth and St-Hilaire’s (2024) new study finds that the policy directly causes rents to decrease: by the end of 2023, Canadian neighbourhoods with principal-residence restrictions in place at the beginning of 2023 had rents which were \$54 less than they would have been without those restrictions—a 3.3% difference. The result is that STR regulations across Ontario are currently saving Ontario renters more than \$1 billion each year in lower rent payments. If the Province of Ontario were to extend principal-residence requirements to all communities that don’t currently have them, this would be expected to save Ontario renters at minimum a further \$566 million per year.

INTRODUCTION

While a wide variety of STR regulations have been implemented in Canadian municipalities, one of the most common is a principal-residence restriction. Generally speaking, this policy requires STR operators to live in the housing unit that they are offering as a STR, which rules out offering dedicated STRs at all. (Although sometimes principal-residence restrictions have an exemption for an accessory dwelling unit or secondary suite.)

Principal-residence requirements intuitively seem likely to help mitigate housing affordability problems, since they make it illegal for STR hosts to remove housing units entirely from the long-term market. But, particularly since the Province of British Columbia unrolled a province-wide principal-residence requirement (albeit one with a number of exceptions), there has been vigorous debate about whether these regulations are

actually effective at achieving housing affordability goals.

One detailed evaluation of Vancouver’s principal-residence rules estimated that, prior to the onset of the Covid pandemic, the policy had returned approximately 800 housing units to the long-term market (Wachsmuth et al. 2021a). A more recent evaluation of Toronto’s 2021 adoption of a principal residence requirement found that it returned approximately 4,000 housing units to the long-term market (Wachsmuth and Buglioni 2023). But the direct impacts of these policies—or of the many other principal residence requirements which Canadian municipalities have adopted—on residential rents have remained difficult to measure.

STR REGULATIONS IN TORONTO

Following a 2017 amendment to the City of Toronto’s zoning bylaw (no. 569-2013), short-term rentals were introduced as a permitted use, with conditions, in Residential and Commercial-Residential Zones. Section 800.50 (763) of the City’s zoning bylaw defines a short-term rental as “all or part of a dwelling unit that: (A) is used to provide sleeping accommodations for any rental period that is less than 28 consecutive days; and (B) is the principal residence of the short-term rental operator.” Whether the STR is located in a strictly Residential Zone, or a Commercial-Residential Zone, the same conditions of the STR bylaw apply. For an STR to be operated legally it must be registered with the city, and any advertisement and records kept of the rental property must display the unique registration number.

As of January 2021, Toronto STRs are only permitted within the operator’s principal residence. Therefore, any residence a rental operator is not ordinarily living in, such as a vacation home, investment property, or accessory

In this chapter we discuss the first systematic Canadian academic research to measure the actual causal impact of principal-residence requirements on rents (Wachsmuth and St-Hilaire 2024). We first describe the City of Toronto’s STR rules as the leading example of a principal-residence requirement in Ontario, and one which has received criticism for insufficient enforcement. We then summarize the findings of Wachsmuth and St-Hilaire’s (2024) Canada-wide causal analysis of the impact of STR rules on residential rents. Third, we measure the detailed impact of these rules on the Ontario municipalities which have already adopted them. And finally, we discuss the likely outcome if the Province of Ontario were to implement a province-wide principal-residence requirement similar to the one which recently came into force in British Columbia.

dwelling unit, is not permitted to be rented on a short-term basis (fewer than 28 consecutive days). These secondary properties can only be rented as medium- or long-term rentals. According to the City, a resident can only have a single principal residence, which means a host is only permitted to operate a single property as an STR in Toronto.

The maximum number of nights per year an entire dwelling can be rented as a short-term rental is 180-nights. However, it is permitted under the bylaw to rent up to three bedrooms within your dwelling on a short-term basis for an unlimited number of nights per year. Homeowners and tenants alike are able to host short-term rentals, as long as the unit is their principal residence, although for renters the ability to operate an STR is further dependent on the lease agreement with the landlord. All dwellings types, including laneway suites and secondary suites, are permitted to be operated as STRs only by the principal residents of the suites. This means that the resident of a



dwelling which has an accessory dwelling unit on its property is not permitted to offer that accessory dwelling unit as an STR.

All STRs in Toronto are required to pay Municipal Accommodation Tax, and if the host earns more than \$30,000 in revenue from the STR they must additionally collect and remit HST.

Failing to adhere to the provisions set by the City's STR rules may lead to fines, the revocation of an operator's license, or the denial of a new license or license renewal. Some examples of offences include: failing to register a STR; advertising, facilitating or brokering an unregistered STR; failing to remove an unregistered STR; renting or advertising property that is not a principal residence; advertising a STR without a registration number; and renting an entire unit for more than 180 days. If an STR operator's registration has been revoked, or they have been denied approval of a STR registration, they must wait a full year before reapplying.

The implementation of Toronto's STR rules faced some well-publicized challenges, specifically related to so-called "medium-term rentals": since

the rules only apply to listings with reservations of fewer than 28 nights, Airbnb responded to the need to remove non-registered listings from its platform by simply switching these listings to 28-day minimums rather than deactivating them. In November 2020, only 6.3% of listings required a minimum stay of more than 28 days. In January 2021, as Toronto's regulations took effect, this percentage rose to 74.3%, after more than 8,400 listings were switched to 28-day minimums (Wachsmuth et al. 2021b). In the years that have followed, most Airbnb listings have remained medium-term rather than short-term rentals (Wachsmuth and Buglioni 2023), while STR hosts have continued to seek out loopholes and outright illegal means of skirting around the City's principal-residence requirement (Kennedy et al. 2024).

The mixed experience Toronto has had with its principal-residence requirement raises the question of whether this policy has been successful in easing housing affordability problems, and whether other cities should be emulating it. We answer this question below, but first we summarize the first systematic research on the impacts of STR regulations on rents in Canada.

THE FIRST CROSS-CANADA ANALYSIS OF STR REGULATIONS

In their forthcoming article, Wachsmuth and St-Hilaire (2024) conduct a causal analysis of the impact of STR principal-residence requirements on average rent levels. This is the first such academic analysis conducted in Canada, and it provides systematic evidence about the effectiveness of principal-residence rules at addressing housing affordability challenges in Canadian communities.

Their analysis uses the “difference-in-differences” framework which is widely deployed by economists and other social scientists to measure the true causal impact of a policy change when a random trial cannot be devised. (Ideally researchers would like to randomly assign jurisdictions to receive or not receive a policy change in order to judge its efficacy, just like a medical trial, but this is rarely feasible.) The difference-in-differences approach uses regression analysis to compare jurisdictions which implemented a policy change with others which did not implement it in order to determine what *would have happened* had the former jurisdictions not implemented the policy change, and thus what the true causal impact of the policy change was.

Wachsmuth and St-Hilaire identified the 38 Canadian cities of 10,000 or more people which implemented an STR principal-residence restriction between 2017 and the beginning of 2023, and built a difference-in-differences model for these cities along with all other cities in their provinces (British Columbia, New Brunswick, Ontario, and Quebec) to serve as the comparison cases.

The model tests whether principal-residence restrictions have an impact on rent levels, and is able to identify true causal (i.e. not just correlational) effects. What they found was that STR regulations have a strongly negative causal impact on rent levels, and that this impact is significant at a $p < 0.000000001$ level—far in excess of the usual $p < 0.05$ threshold for

significance in social science research. This means that there is virtually no chance the results are spurious.

According to Wachsmuth and St-Hilaire’s results, neighbourhoods located in municipalities which implement principal-residence restrictions have logged average rents which are 0.084 standard deviations lower than they would have been if those neighbourhoods did not become subject to such restrictions.

Figure 10 shows the effect over time. Before communities implement STR regulations, there is no difference in rent levels between communities which do implement regulations and those which don’t. (This is an important statistical test demonstrating that the analysis in the article is correct.) But once the regulations are implemented, rents begin declining in the communities which implement them, and they continue to decline year after year. Since rents in Canadian cities have risen so much in recent years, this decline usually looks like a smaller increase than would have otherwise occurred, rather than an actual decrease in the average rent.

Translated into practical terms, in neighbourhoods which implemented principal-residence requirements, the year after the regulations took effect rents were on average \$22 lower each month than they would have been in the absence of the regulations—a 1.7% difference. By the end of 2023, neighbourhoods with principal-residence restrictions in place by the beginning of 2023 had rents which were \$54 less than they would have been without those restrictions in place—a 3.3% difference. In total, renters in these communities were saving \$153.7 million each month in lower rents thanks to their STR principal-residence requirements—nearly \$2 billion per year.

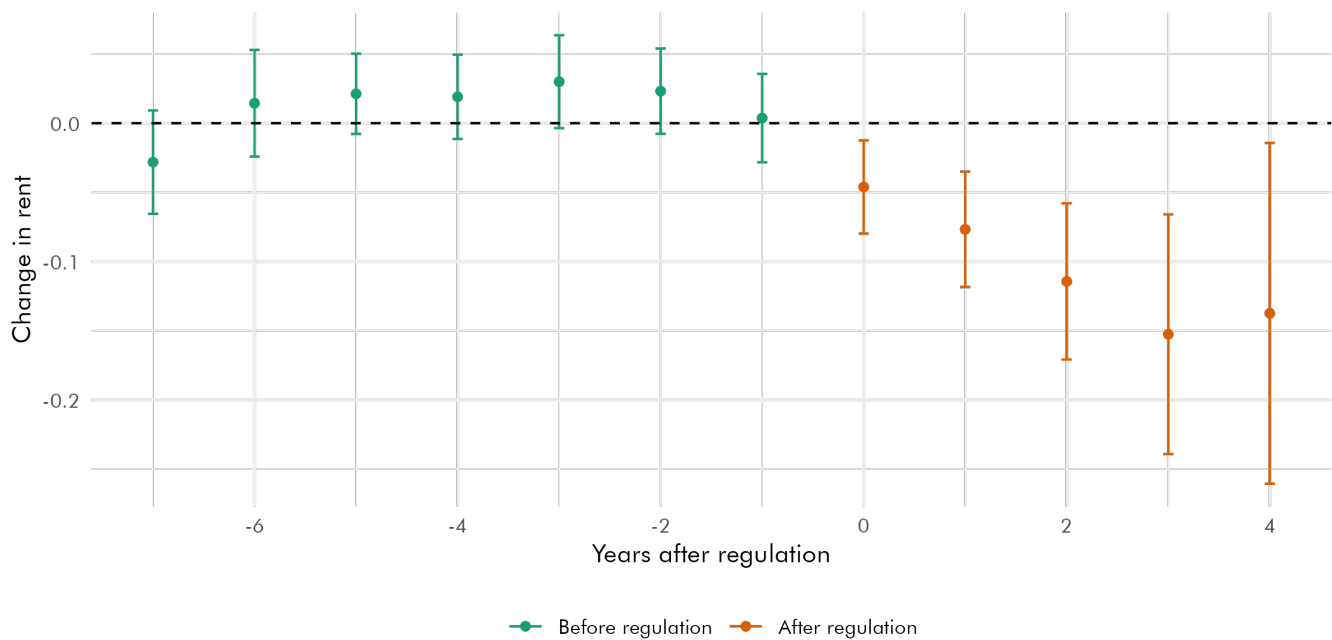


Figure 10. The average change in rent caused by STR principal-residence regulations, by length of time since regulations came into force (point estimates with 95% confidence intervals)

PRINCIPAL-RESIDENCE RESTRICTIONS ARE WORKING IN ONTARIO

The evidence from across Canada is that STR principal-residence requirements lower rents for Canadian renters. The same is true in Ontario. As of January 1, 2023, 202 neighbourhoods across 17 Ontario municipalities had a principal residence restriction in place. In the first year these restrictions were in place, these neighbourhoods saw an average decrease in monthly rents of \$36 thanks to their STR rules.

By the end of 2023, rents were an average of \$49 lower in communities with STR restrictions in place than they would have been if these restrictions were not in place. This is a 2.8% decrease: the average rent was \$1,724 per month, but the model in Wachsmuth and St-Hilaire (2024) suggests it would have been \$1,773 in the absence of STR rules. This means that Ontario renters in these 17 municipalities are collectively saving \$86.2 million each month in rent payments, or more than \$1 billion each year.

Figure 11 shows the monthly rent savings attributable by Wachsmuth and St-Hilaire’s model to STR regulations in Ontario each year; the spike in 2021 is a consequence of Toronto’s principal-residence requirement becoming active in January 2021.

These results apply the model in Wachsmuth and St-Hilaire which uses all municipalities across Canada, but a version which only looks at Ontario municipalities demonstrates even stronger effects. According to an Ontario-specific version of the model (which retains an extremely high level of statistical significance— $p < 0.000001$), principal-residence regulations in the 18 Ontario municipalities which implemented them caused rents to fall an average of \$50 in the first year the regulations were in effect.

In the City of Toronto, where there have been concerns that the City’s STR rules have been not been effective, these rules have in fact caused rents

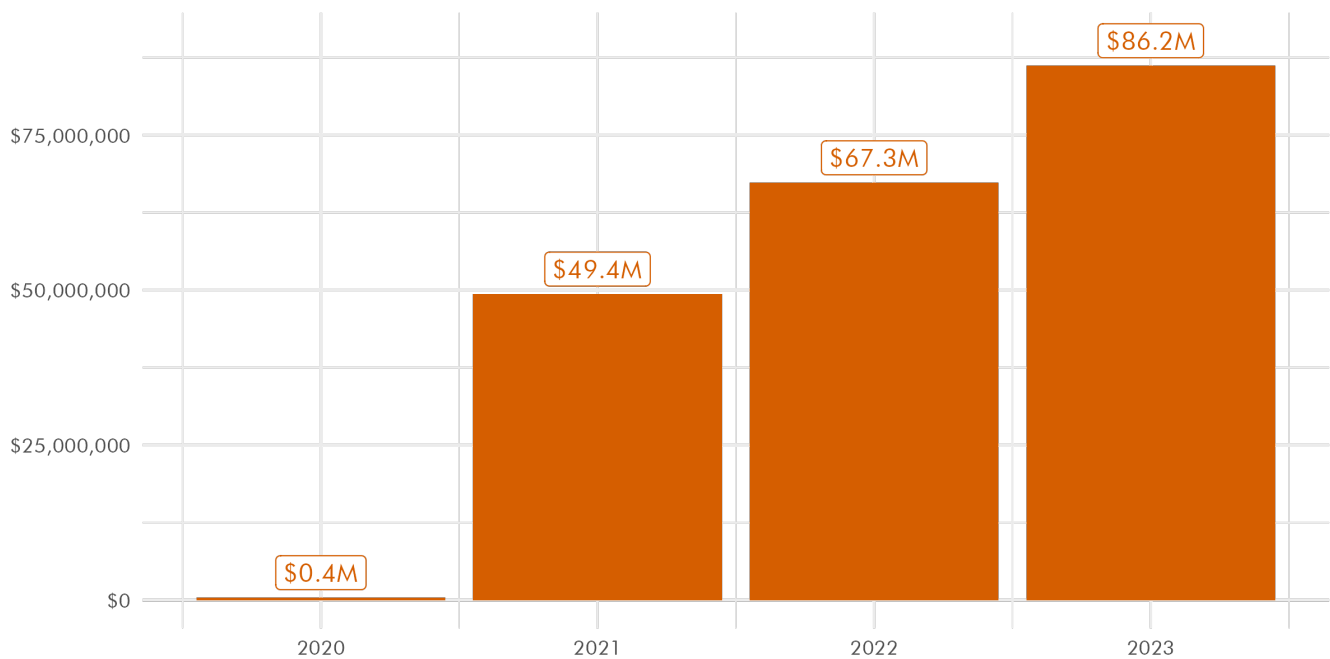


Figure 11. The estimated total monthly rent saved by Ontario renters attributable to STR principal-residence requirements across Ontario, according to Wachsmuth and St-Hilaire (2024)

to decline by 3.3% compared to the level they would now be at had the rules not taken effect. Across the city, renters pay an average of \$64 less each month than they would have if the City had not restricted STRs to a host’s principal residence. This means that, this year, Toronto renters will collectively save more than \$800 million on rent payments thanks to the City’s STR rules.

Figure 12 shows the monthly rent savings which Wachsmuth and St-Hilaire’s (2024) model attributes to STR rules across the GTHA. The

evidence is clear: STR rules work to bring down rents. In some neighbourhoods, average rents are \$80 lower than they would have been without STR regulations. In those neighbourhoods the average renter household is saving \$1,000 per year.

Table 6 summarizes the estimated effect of STR regulations across Ontario municipalities, presenting the range of estimates from the Canada-wide model in Wachsmuth and St-Hilaire (2024) and the Ontario-specific version described here.

WHAT WOULD BE THE LIKELY RESULTS OF A PROVINCE-WIDE PRINCIPAL-RESIDENCE RESTRICTION IN ONTARIO?

On May 1, 2024, the Province of British Columbia’s province-wide STR regulations came into effect. They include a principal-residence requirement for most of the province which now acts as a “policy floor” upon which municipalities are welcome to build with regulations that respond to local conditions and priorities. What

would have happened if the Province of Ontario had done the same, or if it were to do in the future?

As of January 1, 2023, 202 neighbourhoods across 17 Ontario municipalities had implemented principal-residence requirements. However there

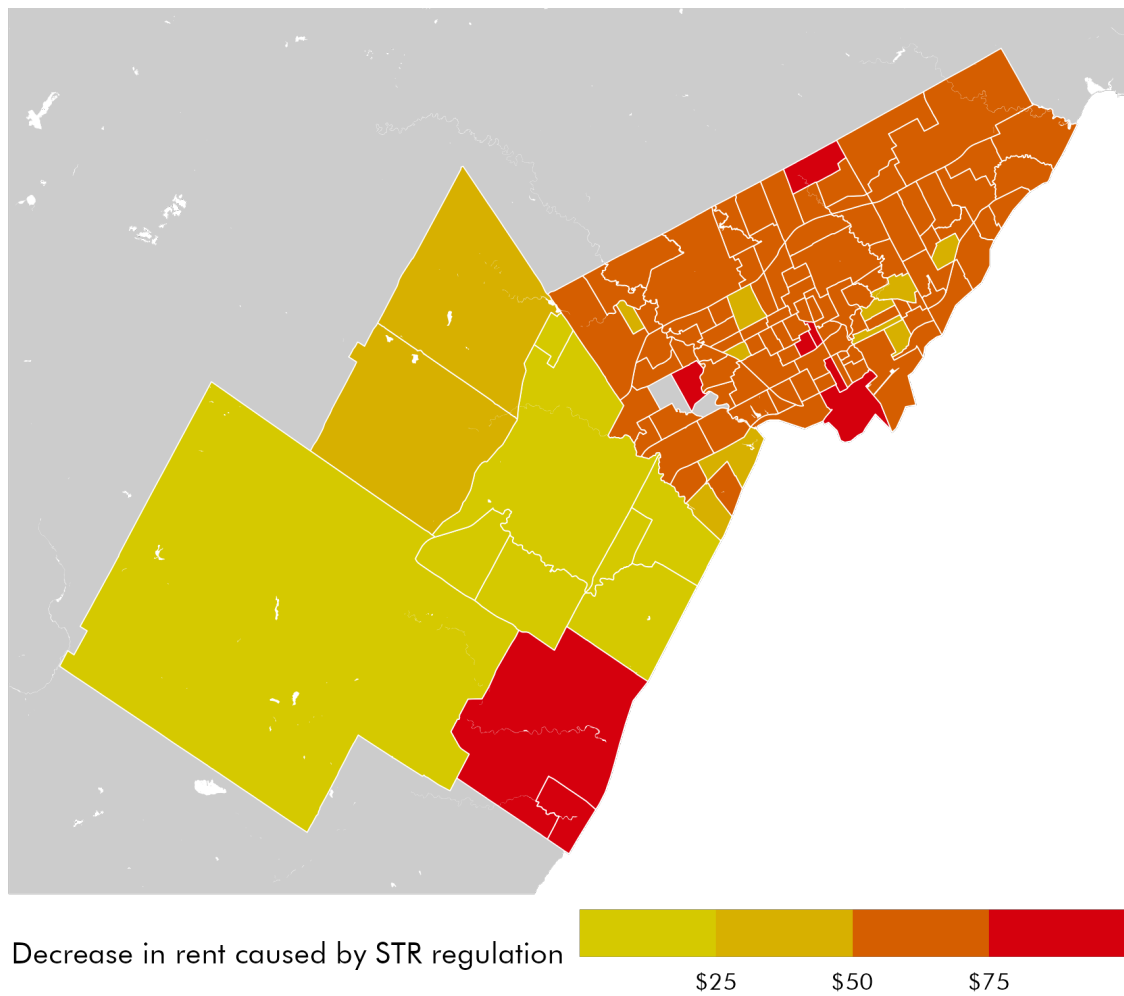


Figure 12. The estimated change in average monthly rent caused by STR principal-residence requirements across the GTA, according to Wachsmuth and St-Hilaire (2024)

City	Estimated average monthly rent saved (2023)	Estimated % of monthly rent saved (2023)	Estimated total monthly rent saved (2023)
Toronto	\$52 - \$64	2.7% - 3.3%	\$54.1M - \$66.8M
Ottawa	\$28 - \$47	1.8% - 2.9%	\$7.2M - \$12.0M
Mississauga	\$4 - \$26	0.2% - 1.4%	\$0.3M - \$2.2M
Prince Edward County	\$20 - \$34	1.8% - 2.9%	\$42,000 - \$69,000
Other municipalities	\$32 - \$43	2.2% - 3.0%	\$11.8M - \$16.2M

Table 6. The estimated monthly rent savings caused by STR principal-residence requirements across Ontario, according to Wachsmuth and St-Hilaire (2024)

City	Avg. potential monthly rent saved (2023)	Avg. potential monthly rent saved (2024)	Avg. potential monthly rent saved (2025)	Total potential monthly rent saved (2023)	Total potential monthly rent saved (2024)	Total potential monthly rent saved (2025)
Burlington	\$28	\$48	\$72	\$0.6M	\$1.0M	\$1.5M
Hamilton	\$23	\$38	\$57	\$2.5M	\$4.2M	\$6.3M
Kingston	\$24	\$40	\$60	\$1.5M	\$2.5M	\$3.7M
Kitchener	\$24	\$39	\$59	\$1.4M	\$2.4M	\$3.6M
Niagara Falls	\$20	\$33	\$50	\$0.4M	\$0.8M	\$1.1M
Waterloo	\$29	\$48	\$73	\$1.0M	\$1.7M	\$2.6M

Table 7. The estimated monthly rent savings expected in different Ontario municipalities if the Province were to have implemented province-wide STR principal-residence requirements last year, according to Wachsmuth and St-Hilaire (2024)

were 187 neighbourhoods in cities of 10,000 people or more that had not implemented such requirements. The results of Wachsmuth and St-Hilaire’s (2024) model suggest that average rents could have been \$22 (1.6%) lower than they actually were if these places had had such restrictions in place, based on the experiences in the first year of implementation of jurisdictions which did implement principal-residence restrictions. This would have amounted to \$18.8 million in monthly rent payments saved in these areas.

Additionally, the rent savings would be expected to increase in subsequent years: to 2.6% in the second year, and 3.9% in the third year, based on the experience of jurisdictions with rules already in place. Even implausibly assuming no baseline rent growth in Ontario in the next few years, this would amount to \$47.2 million dollars saved per month by Ontario renters, or \$566 million per year.

Table 7 provides these figures for several Ontario municipalities which lacked principal-residence restrictions as of January 1, 2023. Importantly,

these projections do not require any implausible assumptions about perfect efficacy in enforcing STR rules. While the previous chapter demonstrated that Canadian renters would see large decreases to their monthly rent payments if a large portion of commercial STRs were returned to the long-term market, the projections here simply say: “what would happen if Ontario communities without principal residence restrictions were to adopt such restrictions, and have exactly the same success in enforcing them as communities which have already adopted these restrictions?”

As a result, these are highly conservative estimates, since they assume that the Province of Ontario would only be as successful in administering short-term rental rules as the average Ontario municipality; in reality, the Province has significantly greater resources at its disposal which would make its rules likely to be better enforced. Likewise, even in cities which already have municipal STR regulations, additional provincial oversight and resources would be likely to improve regulatory outcomes and drive further rent decreases.

5. STR regulatory options for Ontario



The evidence is clear that principal-residence requirements work to bring down housing costs. The Province of Ontario should consider following British Columbia’s lead by implementing province-wide STR regulations that combine mandatory registration, a principal residence requirement, and platform accountability.

THE EVIDENCE IS CLEAR: PRINCIPAL-RESIDENCE RESTRICTIONS WORK

The analysis in the previous chapter establishes clearly that municipalities which restrict short-term rentals to a host’s principal residence see rents fall as a direct result. Ontario municipalities have been at the forefront of tackling housing affordability challenges with STR rules, and have seen impressive results so far.

But enforcing principal-residence requirements is not trivial—it requires significant labour power and administrative record keeping which can

strain the capacity of smaller municipalities. Above all, effective STR regulations require a registration system that allows governments to link anonymous online STR listings with actual legal identities and addresses. Running a registration system and compelling STR platforms to cooperate in enforcement efforts is a job that larger governments are inherently better suited to. Provincial governments are starting to realize this fact, and are establishing province-wide STR rules as a result.

BRITISH COLUMBIA: PROVINCIAL STR REGULATIONS THAT PROVIDE AN EFFECTIVE FLOOR FOR MUNICIPAL RULE MAKING

Since 2020, the Province of Quebec has required all STR operators in the province to register their listings with the provincial government. While a lack of enforcement effort has hampered the effectiveness of this system, the basic contours of Quebec's rules suggest a plausible model for a productive provincial role in STR regulations.

More recently, the Province of British Columbia introduced province-wide STR rules as part of a sweeping approach to solving the housing crisis. BC's rules combine three features: mandatory registration for all STR operators, a principal-residence requirement for STR operators in many parts of the province, and legal mechanisms to compel STR platforms to cooperate with enforcing the law.

BC's principal residence requirement is much less strict than the variants adopted by large Canadian

cities such as Toronto, Ottawa and Vancouver; it allows full-time STRs in accessory dwelling units, and carves out large parts of the province where the rules do not apply. However, it nevertheless acts as a plausible policy floor for municipal rule making. Some communities will no doubt choose to impose stricter rules, while others will decide to opt out of the provincial framework. But for dozens of municipalities that have struggled to develop or enforce effective STR rules, BC's provincial regulations will be an important backstop.

BC's rules came online in May 2024, and while it is too soon to know how they are performing, precedent suggests they will make a meaningful contribution to provincial housing affordability challenges, and could serve as a viable model for a provincial STR regulatory system in Ontario.

REGULATORY PRINCIPLES FOR ONTARIO

Ontario's housing affordability challenges continue to grow, and municipalities increasingly feel bound to help address these challenges by restricting commercial STRs. Now is thus an excellent time for the Province to introduce Ontario-wide STR regulations. The simplest, most effective approach is for the Province to take the lead by establishing a single mandatory STR registration system for all of Ontario, a principal-residence requirement for STR operators that municipalities can choose to opt out of if they wish, and platform accountability holding platform operators responsible for doing their fair share. This set of rules would help steer Ontario STR markets towards home sharing and away from commercial operations, in order to maximize the benefits of STRs to communities while minimizing the harms.

It is helpful to distinguish between three tasks that regulators need to accomplish: 1. They must decide on the appropriate regulations for the jurisdiction; 2. they must gather the information necessary to enforce the rules; and 3. they must enforce the rules.

Municipalities are the best positioned to take the lead on the first task: deciding on the most appropriate rules. Different communities can and should have different priorities for how they choose to balance STRs and housing issues. However, the severity and ubiquity of housing affordability issues in Ontario suggests that the Province could play a leadership role by establishing a default rule according to which STRs are limited to principal residences, and then



allowing municipalities to opt out of this provision if they wish to allow commercial STRs.

By contrast, with respect to the second task, information gathering, there very much is a viable “one size fits all” model, and it is one in which the Province takes the lead. The provincial government should follow the lead of Quebec and British Columbia and establish a single mandatory registration system for all STRs operating in Ontario. The information requirements for a registration system do not vary much between localities, so there are massive economies of scale in having a single system. Large municipalities are probably in a position to follow Toronto and Ottawa’s lead and implement registration systems on their own, but for many Ontario municipalities, this isn’t a viable possibility.

Finally, regulatory enforcement should be a responsibility shared between the Province, the municipalities, and the platforms themselves. The Province can enforce the use and validity of the registration system, while municipalities can use the information in the registration system to

enforce local bylaws. Municipalities can use their local knowledge, gained from inspections and complaints, to report registration problems to the Province, with the result that the overall STR regulatory system could be self-strengthening. But both levels of government will struggle to be effective if the STR platforms are not obligated to cooperate in the enforcement of the rules, most importantly by proactively insuring the validity of licenses that hosts attach to their online listings, refusing to allow listings that do not have a valid license, and resoundingly promptly to provincial and municipal requests for assistance.

Establishing such a system will by no means solve all of Ontario’s housing affordability problems. But the evidence is clear that it will make an important contribution. And, compared with the longer-term solutions which will be needed to ensure that the province’s housing supply is adequate to housing needs, better regulation of short-term rentals is arguably the lowest hanging fruit capable of meaningfully addressing rapidly escalating housing costs in Ontario.

Appendix. Data and methodology



The analysis in this report is based on a combination of private and public data sources. The key sources are the following:

- **Activity data about Airbnb and Vrbo short-term rental listings gathered by the consulting firm AirDNA and the non-profit organization Inside Airbnb.** This data includes canonical information about every short-term rental (STR) listing on the Airbnb and Vrbo (including HomeAway) platforms which was active in Saskatchewan between January 2016 and September 2022 (Airdna) and October 2022 and November 2023 (Inside Airbnb). The data includes “structural” information such as the listing type (entire home, private room, shared room or hotel room), the number of bedrooms, and the approximate location of the listing. AirDNA and Inside Airbnb collect this information through frequent web scrapes of the public Airbnb and Vrbo websites. Airdna’s data also includes estimates of listing activity (was the listing reserved, available, or blocked, and what was the nightly price?), which AirDNA produces by applying a machine-learning

model to the publicly available calendar information of each listing. We use this data for our core analysis of the STR market, including our counts of active listings, our breakdown of different listing types, our estimates of STR-induced housing loss, and our estimates of listings which are commercial operations.

- **Additional data about Airbnb listings collected by UPGo researchers.** This includes information to verify activity, location and registration numbers, and listing photographs which were obtained through web scrapes.
- **Data from Statistics Canada and the Canada Mortgage and Housing Corporation (CMHC).** We use this data to analyze population and dwelling counts.

Data cleaning: We process the raw STR data we receive from AirDNA through an extensive data cleaning pipeline, using our **strr** software package (Wachsmuth, 2021b), the code for which is available at <https://github.com/UPGo-McGill/strr>.

FREH modelling: We define “frequently rented entire-home listings” as entire-home STR listings which are available for a majority of the year (so 183 days or more in a 365-day period), and which are reserved at least 90 days of that year. This is a consistent and conservative way to estimate listings operated sufficiently often that they are unlikely to be their host’s principal residence.

Regression and difference-in-differences models:
Detailed methodology for Wachsmuth and St-

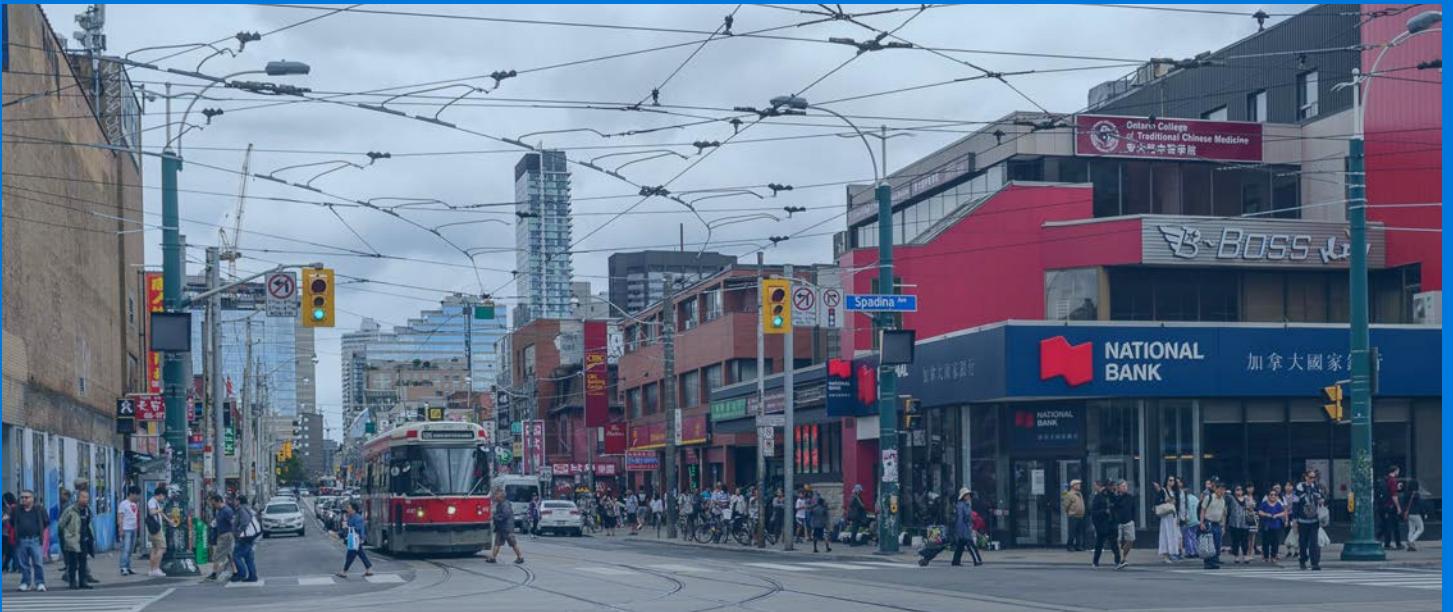
Hilaire’s regression and difference-in-differences models can be found in the original paper: https://upgo.lab.mcgill.ca/publication/canada_str_rent/wachsmuth_st_hilaire_public_preview.pdf.

In order to facilitate public understanding and scrutiny of our work, complete methodological details, along with all the code used to produce this analysis, are freely available under an MIT license on the UPGo GitHub page at <https://github.com/UPGo-McGill/ontario-report-2024>.



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ABOUT UPGO

UPGo, the Urban Politics and Governance research group at McGill University, conducts rigorous, public-interest research into pressing urban governance problems—particularly those that exceed or challenge city boundaries. UPGo has published numerous peer-reviewed journal articles and policy reports on short-term rentals in cities in Canada and around the world, including “Short-term rentals in Canada: Uneven growth, uneven impacts” and “The high cost of short-term rentals in New York City”. UPGo is led by Prof. David Wachsmuth, the Canada Research Chair in Urban Governance at McGill University’s School of Urban Planning, and is online at upgo.lab.mcgill.ca.



