

Short-term Rentals in the City of Vancouver: Regulatory Impact Analysis

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Executive summary

This report analyzes the effect of the City of Vancouver's short-term rental (STR) regulations, with specific reference to their initial 2018 implementation and to the 2020 Covid-19 pandemic. It assesses the impact of the City's STR regulations on the size and character of the STR market, and compares Vancouver's performance with peer cities and with the rest of Metro Vancouver. And it provides an analysis of STR units that have returned to the longer-term rental market during the pandemic, describing their spatial distribution, asking rents, the extent to which they are commercial operations, and whether they are likely to return to the STR market when conditions improve.

SHORT-TERM RENTALS IN VANCOUVER: REGULATORY IMPACTS

- The City of Vancouver's STR licensing system has significantly and durably reduced the size of Vancouver's STR market and the domination of the market by dedicated commercial operators. Vancouver now fares substantially better on these metrics than either its peer cities Montreal and Toronto or the rest of the Metro Vancouver region.
- The 2018 implementation of the City's regulations created a one-time negative shock in the number of listings displayed on STR platforms in Vancouver, which dropped by 2,540, or 30.8% of the total displayed listings. This decline was disproportionately concentrated among listings which were present on STR platforms but not actively being rented; active listings dropped by 810, or 17.8%.
- Over the longer-term, we estimate that the regulations have reduced active STR listings by 1,510, or 35.8% of the total number of listings in the second half of 2019. The plausible range is 600 to 1,670, and comparisons with other jurisdictions uniformly suggest that the real impact is at the higher end of this range.
- We estimate that the City's regulations have returned 810 housing units to the long-term market, compared to the counter-factual scenario where the regulations were not in place. This is 38.9% of the average number of dedicated entire-home STRs taking housing off the Vancouver market in the second half of 2019. The plausible range for housing units returned to the market by the City's regulations is quite large—from 160 to 990—but again, comparison with other jurisdictions suggests that the real impact is at the higher end of this range.
- Before the onset of the Covid-19 pandemic there were still upward of 2,500 housing units operating as dedicated STRs in Vancouver.

COVID-19: STRS RETURNING TO THE LONG-TERM MARKET

- Due to the combination of the City of Vancouver's ongoing STR regulations and the collapse in tourism demand during the COVID-19 pandemic, the number of STRs operating in a fashion consistent with being dedicated, full-time operations in Vancouver is the lowest it has been since at least 2016. Because of the collapse of STR demand during the COVID-19 pandemic, the number of housing units being operated as dedicated STRs in Vancouver dropped from 2,680 in January 2020 to just 940 in August 2020.
- Using image recognition techniques, we identified 1,339 unique Airbnb listings which were posted as long-term rentals (LTRs) on Craigslist or Kijiji between March and September 2020.
- These former STRs have asking rents on average 25.6% higher than other LTR listings, but are correlated with a 13.5% decrease in overall asking rents in Vancouver.
- The evidence suggests that the overwhelming majority of STR listings transferred to LTR platforms are commercial operations.
- We estimate that 30.6% have fully transitioned back to the long-term market, 35.3% have been temporarily blocked on Airbnb and may return to being STRs in the future, and 34.1% failed to be rented on LTR platforms and instead remain active on Airbnb.

Introduction

In October 2020, the Urban Politics and Governance research group (UPGo) at McGill University was commissioned by the City of Vancouver to conduct market research and analysis on the impact of the City's April 2018 regulations on short-term rentals as well as the impact of the COVID-19 pandemic on the short-term rental market in the City of Vancouver. The group also investigated the possibility that short-term rentals are returning to the long-term market because of the pandemic. This report will shed light on the following topics:

- The impact of the City of Vancouver's STR registration system on the operation of short-term rentals in the City.
- Information about STRs returning to the LTR market during the COVID-19 pandemic, including the number of listings that have returned; their spatial distribution, size and asking rents; the extent to which they are commercial operations or casual home sharing operations; and whether they are likely to return to the STR market when conditions improve.

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/vancouver-analysis>.

1 Short-term rentals in Vancouver: Regulatory impacts

The City of Vancouver's STR licensing system has significantly and durably reduced the size of Vancouver's STR market and the domination of the market by dedicated commercial operators. Vancouver now fares substantially better on these metrics than either its peer cities Montreal and Toronto or the rest of the Metro Vancouver region. The 2018 implementation of the City's regulations created a one-time negative shock in the number of listings displayed on STR platforms in Vancouver, which dropped by 2,540, or 30.8% of the total displayed listings. This decline was disproportionately concentrated among listings which were present on STR platforms but not actively being rented; active listings dropped by 810, or 17.8%. Over the longer-term, we estimate that the regulations have reduced active STR listings by 1,510, or 35.8% of the total number of listings in the second half of 2019. We estimate that the City's regulations have returned 810 housing units to the long-term market, compared to the counter-factual scenario where the regulations were not in place. This is 38.9% of the average number of dedicated entire-home STRs taking housing off the Vancouver market in the second half of 2019. Before the onset of the Covid-19 pandemic there were still upward of 2,500 housing units operating as dedicated STRs in Vancouver.

1.1 The City of Vancouver's STR regulations

In April 2018, the City of Vancouver enacted regulations on the operations of short-term rentals in the City, defined as rentals offered for thirty or fewer consecutive days (City of Vancouver, 2020a). Under these regulations, each STR operator is required to obtain a license for their rental unit; these licenses are only issued for STRs operated out of a host's principal residence, and are valid for a single calendar year. Licensed listings can either be the entire principal residence or individual rooms within the residence. Although the regulations apply to STRs listed on any platform, Airbnb is the only STR platform that agreed to require hosts in Vancouver to fill out a license field in their online listing, to engage in data sharing, and to undertake operator education (City of Vancouver, 2020b). In August 2018, shortly before the City's announced start date for enforcement of the registration system, Airbnb removed approximately 2,400 listings which had not received licenses.

In what follows we assemble evidence about the of the City's regulations on the STR market. Given the significant restraints which the regulations impose on the market, their impacts should be highly visible if the regulations have been effective. If, by contrast, few impacts can be discerned, that implies that the regulations have not been effective. We carry out this task by analyzing the trajectory of STR activity in the City of Vancouver over time, and by comparing the City with a set of peer jurisdictions. This analysis collectively demonstrates that the City's STR regulations have been effective at reducing STR activity and growth in Vancouver, and have accomplished that reduction in part by driving incoming visits to other municipalities within Metro Vancouver.

1.2 The trajectory of post-regulation STR activity in Vancouver

The impact of the City's regulations can be directly measured in two ways: changes in the total number of listings on STR platforms in Vancouver, and changes in commercial listings which are highly likely to be non-compliant. Because all Vancouver STR listings are required to be licensed whether or not they are active, in Figure 1 we show the total number of listings displayed each day alongside our standard metric of active daily listings. Displayed listings comprise active listings (i.e. listings which are either reserved or available for reservation) and inactive (blocked) listings which are visible on Airbnb or VRBO. Both indicators show a sharp drop following Airbnb's mass removal of non-licensed listings in August 2018, but the decline is proportionally twice as large for displayed listings, which decreased 2,540 (30.8%) from August 20 to September 7, as it is for active listings, which decreased 810 (17.8%) over the same date range. Furthermore, displayed listings have never come close to regaining their pre-regulation numbers in Vancouver, while active listings had mostly recovered by the summer of 2019, a year after Airbnb's mass removal. Put differently, a

disproportionate share of the large decline in STRs which followed Airbnb’s mass removal was listings which were not actually in use on the platform anymore.

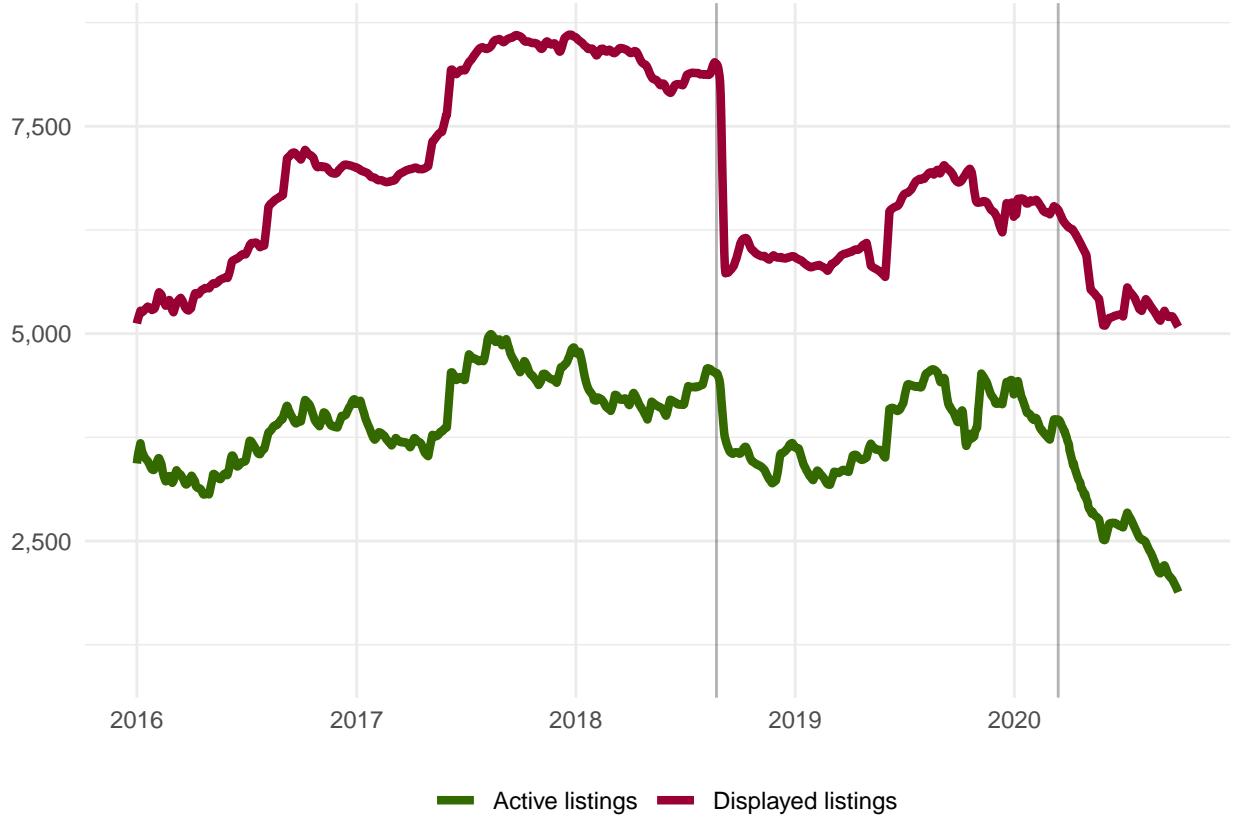


Figure 1: *Displayed and active listings in the City of Vancouver (7-day average)*

Trend analysis allows for a more precise estimate of the impact of regulation on active listings. Figure 2 compares the actual number of active listings with two scenarios for the listings which would have been expected based on pre-August-2018 trends. The red line is a scenario where the growth rate of active listings from the previous two years continued into 2019. This is the most plausible “business as usual” scenario for what “natural” STR listing growth in Vancouver might have looked like in the absence of regulations. The lower, blue line is a scenario where aggregate growth in active listings stops, although seasonal variation continues. This latter scenario represents a lower bound on what the STR market might have looked like in the absence of regulations. The higher, green line is a scenario where Vancouver’s STR market followed the trend of Toronto’s market from mid-2018 onward. This is a quite similar to, although slightly higher than, the continued-growth scenario. (As we discuss below, the no-growth scenario is similar to Montreal’s STR market trajectory.)

What Figure 2 demonstrates is that, under any scenario, the City’s regulations have had two different impacts on the number of active listings in Vancouver. The first is a one-time negative shock corresponding to Airbnb’s mass listing removal, which has proven to be at least partially temporary. As of mid-2019, active listings were closer to their post-shock level than in the early days of the registration system in 2018. (The shaded areas of the graph show the difference between each of the scenarios and the actual number of active listings at any point in time, and the size of the shaded area is largest in late 2018 and early 2019.)

The second impact is a more durable shift downward in the STR listing growth curve. In the second half of 2019, the average difference between actual active listings and the two no-regulation counterfactuals was 1,510 under the continued-growth scenario, 600 under the no-growth scenario, and 1,670 under the

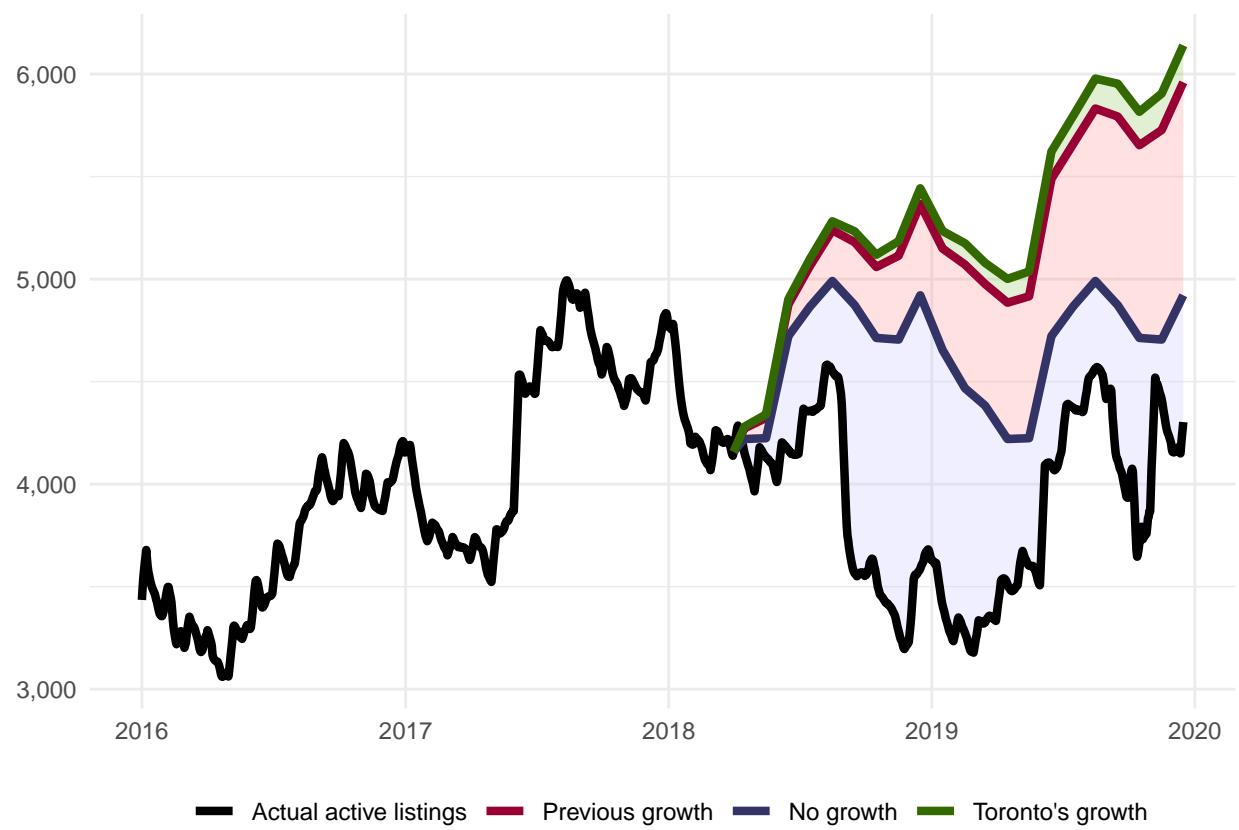


Figure 2: *Actual and expected active listings after implementation of regulations*

Toronto-growth scenario. Based on the interjurisdictional comparisons performed below, we believe that the continued-growth scenario is the most plausible. Our conclusion is therefore that the City’s STR regulations have, in the long-term, likely resulted in 1,510 fewer active listings in Vancouver’s STR market each day. This number represents 35.8% of the total number of active STRs in the city. The plausible lower and upper bounds, meanwhile, are 600 - 1,670, which is 14.2% - 39.5% of the total number of active STRs in the city.

1.3 Commercial STR operations

Since the 2018 regulations do not prohibit short-term rentals but merely limit them to hosts’ principal residences, the fact that active listings in Vancouver have been significantly reduced by the regulations is not on its own decisive evidence of the effectiveness of the regulations. A harder to measure—but arguably more important—metric is the number of commercial STRs operating in Vancouver, given that they are necessarily non-compliant with the City’s regulations.

We measure commercial STRs in two ways. First, we measure the number of frequently-rented STR units, which are the simplest 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 or VRBO the majority of the year (at least 183 nights) and were booked a minimum of 90 nights. We then apply a statistical model (described in the appendix) to the FREH data in order to generate an estimate of FREH activity based on three months of listing activity. This allows us to detect listings which are operating in a full-time manner but have not yet been listed for an entire year, and allows us to account for relatively short-term changes in market conditions.

Secondly, we identify “multilistings”—STR listings operated by hosts which are simultaneously operating other listings. Some hosts operate multiple STR units, which can be an indication of a commercial operator rather than a casual home sharer. To take the simplest case, a host with two or more entire-home listings active on the same day cannot be operating both listings out of their principal residence, regardless of the frequency they are rented throughout the year. This means that these operators are not respecting the by-law, which prevents a person from operating a STR outside their principal residence. 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 93.8% of 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 into a dedicated STR. Intuitively, multilistings that are still operating since the City’s STR regulations were enacted in April 2018 are almost certainly non-compliant.

Figure 3 decomposes the trajectory of active listings shown above (in Figure 1) into commercial and non-commercial listings. The former are all listings which are either frequently rented entire-home (FREH) listings or multilistings. The graph shows that non-commercial listings experienced a noticeable drop when Airbnb carried out its August 2018 mass listing removal, but that the number of these listings was already in decline. The quantity of commercial listings, meanwhile, experienced a much sharper drop in August 2018 (21.6% of all commercial listings were removed by Airbnb) and continued to decline for the rest of 2018. Commercial operations recovered throughout 2019, however, and reached a new all-time high (3,090) by the end of 2019.

Narrowing in on frequently rented entire-home (FREH) listings, Figure 4 offers a closer look at how the actual number of FREH listings compares with three scenarios where the mid-2018 regulations are not enacted: a growth-as-usual scenario where the FREH growth trend from the previous two years continues, a no-growth scenario where FREH growth had stopped by the time that the City’s regulations were enacted, and a Toronto trend where FREH growth post-regulation followed the same growth rate as Toronto. Unlike the trend analysis of all active listings, above, where under all scenarios the regulations are likely to have substantially reduced the number of daily active listings, the effect of the City’s regulations on commercial listings is highly sensitive to the scenario chosen. In the second half of 2019, the average difference between actual commercial listings and the two no-regulation counterfactuals was 810 under the continued-growth

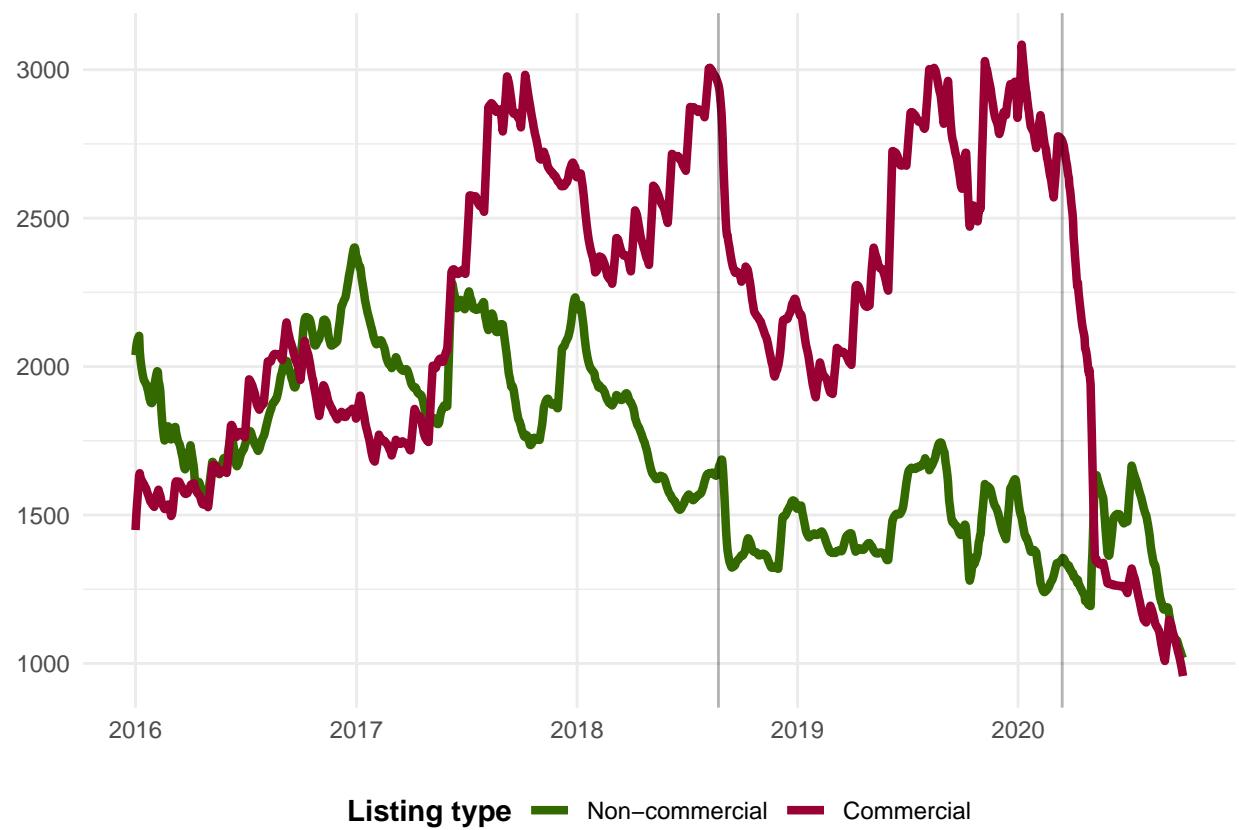


Figure 3: *Non-commercial and commercial active daily listings in Vancouver (7-day average)*

scenario, 160 under the no-growth scenario, and 990 under the Toronto-growth scenario. This is a six-fold difference. As with active listings above, we consider it most likely that FREH listing growth would have continued on its pre-regulation trend, and thus that the City's regulations have returned 810 housing units to the long-term market—a reduction of 38.9%. But the actual number could plausibly be anywhere within the range 160 - 990, or 7.6% - 47.4% of the average number of FREH listings which were active on STR platforms in the second half of 2019.

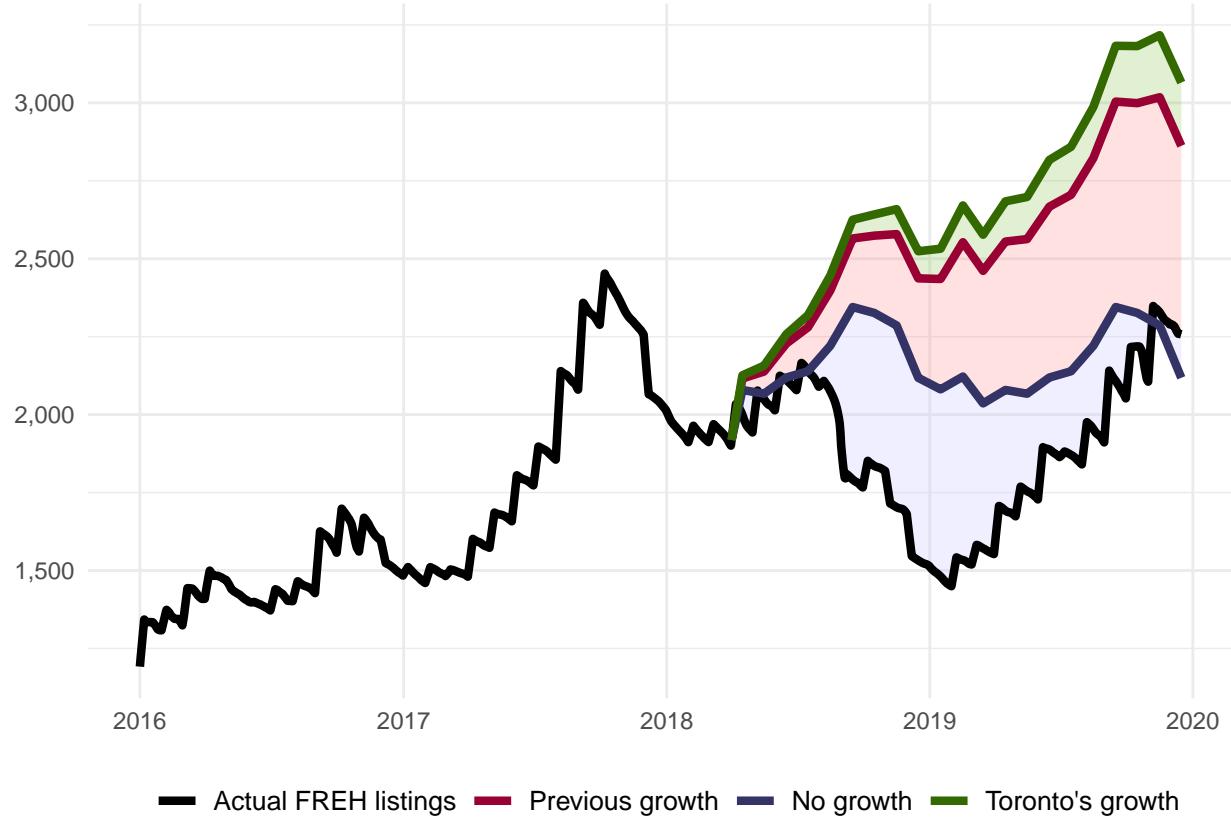


Figure 4: *Actual and expected FREH listings after implementation of regulations*

Applying the same modelling to multilistings, we estimate that the City's regulations have reduced the number of these commercial STR operations by 620, which corresponds to the continued-growth scenario, and is 42.5% of the total amount of multilistings still active in Vancouver in late 2019. Two lower estimates, corresponding to the no-growth and Toronto-growth scenarios respectively, are 110 and 480. To be clear, however, in a scenario where the City's regulations were perfectly enforced, the value for the “actual FREH listings” and “actual multilistings” lines in Figure 4 and Figure 5 would be zero, given that all non-principal-residence STRs are forbidden under the rules. Even allowing for some error in the measurement of commercial operators, at the end of 2019 there were almost certainly 2,500 or more listings operating in violation of the City's principal residence rules.

1.4 The City of Vancouver in comparison with Montreal and Toronto

The preceding analysis varies significantly with the underlying assumptions being made about the growth of Vancouver's STR market prior to the introduction of the City's regulations. If we assume that growth would have continued along its previous trajectory, then the regulations have had a major impact on the number of active listings, and in particular on the number of commercial operations. If growth were already levelling off

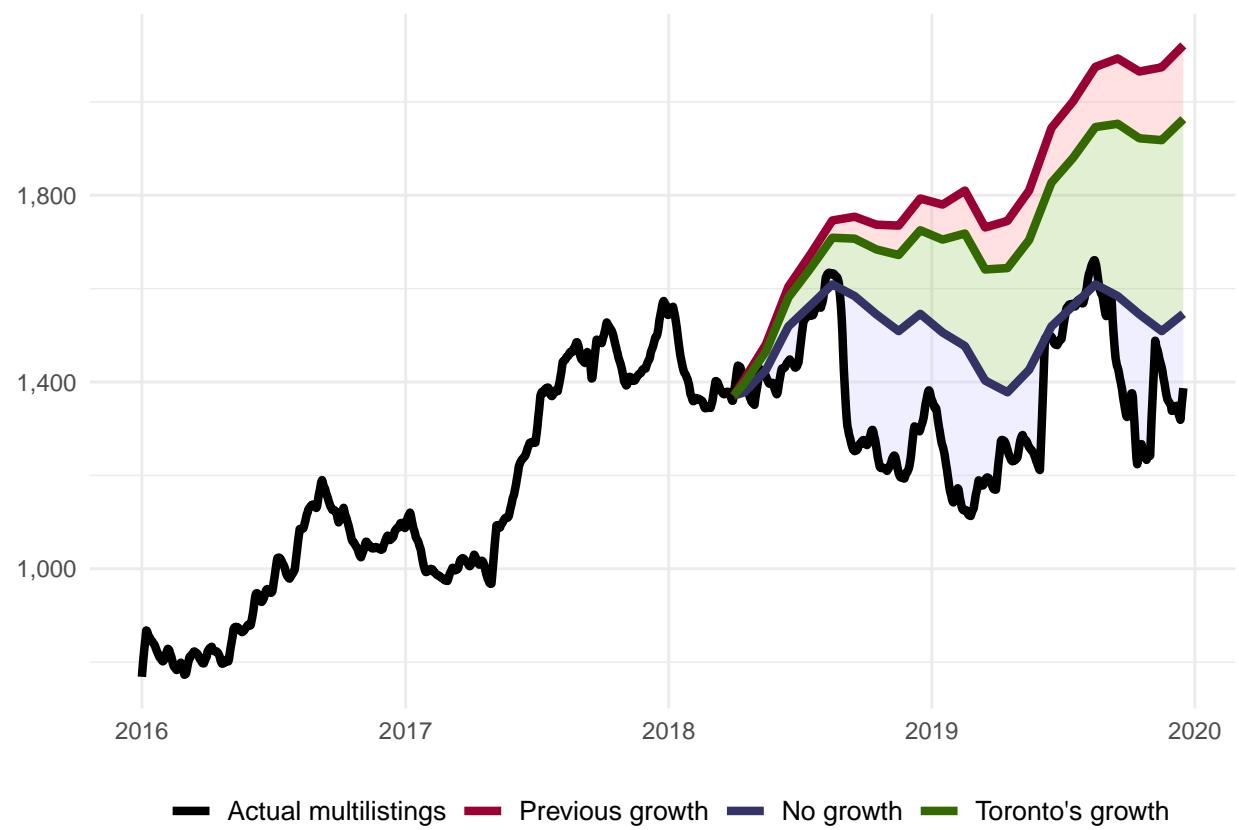


Figure 5: *Actual and expected multilistings after implementation of regulations*

prior to the introduction of the regulations, by contrast, then it is likely that the regulations have somewhat reduced the number of active listings, but have been less effective at targeting the commercial operations which are not permitted under the rules.

There is no way to determine with certainty which of these scenarios would have occurred, but a promising strategy is to compare Vancouver with a set of similar jurisdictions which did not regulate their STR markets in mid-2018. Above we included Toronto’s STR activity as an additional point of comparison for Vancouver, and in what follows we do this more systematically and at multiple spatial scales. We begin with the other two largest STR markets in the country: Toronto and Montreal. The City of Toronto has recently implemented mandatory host registration and a principal-residence requirement which are very similar to Vancouver’s rules, but these were not active during the study period. The City of Montreal has rules which vary across the city, but in the key central-city boroughs commercial short-term rentals are largely forbidden. However, with no registration system in place during the study period, it has been widely understood that Montreal’s enforcement mechanisms have not been sufficiently strong to significantly affect the operation of commercial STRs. Toronto and Montreal thus represent zero- or low-regulation cases with which to compare Vancouver.

Figure 6 compares the active listing (left), FREH listing (middle), and multilisting (right) trajectories in Montreal, Toronto and Vancouver. (Commercial listings are disaggregated into FREH listings and multilistings in order to clarify the key patterns.) The figure lends significant weight to the conclusion that Vancouver’s STR regulations have significantly reduced the commercial portion of the STR market. The left panel demonstrates that the growth trajectory of active listings in Vancouver was on a very similar trajectory to Montreal and Toronto prior to 2018. In 2018 the three cities diverged, with listings in Vancouver plummeting in response to the new registration system, listings in Toronto continuing to grow quickly, and listings in Montreal beginning a long period of stagnation and decline. By the end of 2019 Vancouver’s active listings had caught up to Montreal’s in relative terms (in both cases with total numbers similar to the beginning of 2017), but were far behind Toronto’s, which grew by more than 50% from 2017 through 2019.

Montreal was the first Canadian city to have a large STR market, driven by a combination of strong tourism and cheap housing (which incentivized conversions to STRs), and it has followed a trajectory comparable to other large tourist destinations—early growth then stagnation. Toronto and Vancouver began their periods of growth somewhat later, probably due in part to much higher housing prices reducing the financial incentives to operate STRs. Toronto thus represents the most likely counterfactual for how Vancouver’s STR market would have evolved in the absence of regulations. Over the second half of 2019, Toronto had on average 38.9% more active listings than Vancouver, relative to each city’s market size on January 1, 2017. In 2017, by contrast, the difference was only 1.0%. If the 2017 relationship between the two cities had remained consistent through 2019, Vancouver would have had 5,830 active listings at the end of the year—compared to the 4,230 listings it actually did. This establishes a plausible upper-bound estimate for the impact of the City of Vancouver’s regulations on the number of active STR listings, and lends support to our 35.8% estimate for the impact of Vancouver’s regulations on active STR listings.

The divergence between Vancouver and Montreal and Toronto is even more significant with respect to commercial listings, which were prohibited by Vancouver’s regulations but were either de jure (Toronto) or de facto (Montreal) permitted in the other cases. The center and right panels of Figure 6 show, respectively, the trajectory of FREH listings and multilistings in the three cities. In both cases the three cities were on highly similar growth trajectories through 2017. Montreal’s FREH listings were growing at a 15.2% higher rate than Vancouver, while Toronto’s FREH growth rate was identical to Vancouver’s. Montreal’s multilistings were growing at a 6.9% higher rate than Vancouver, while Toronto’s were growing 2.1% faster. In the second half of 2019, by which point the temporary impacts of Airbnb’s mass listing removal in Vancouver would have subsided, the commercial side of Vancouver’s market looked dramatically different from either Montreal or Toronto. Montreal’s FREH listings had grown 40.6% faster than Vancouver’s, while Toronto’s had grown an incredible 54.6% faster. The numbers are similar for multilistings: Montreal outpaced Vancouver by 18.4%, and Toronto outpaced Vancouver by 40.9%.

These differences are summarized in Table 1. They strongly support the conclusion that the City of Vancouver’s regulations have durably reduced the commercial part of Vancouver’s STR market. Our “growth-as-usual” counterfactual had suggested that the regulations have reduced FREH listings by 38.9% and

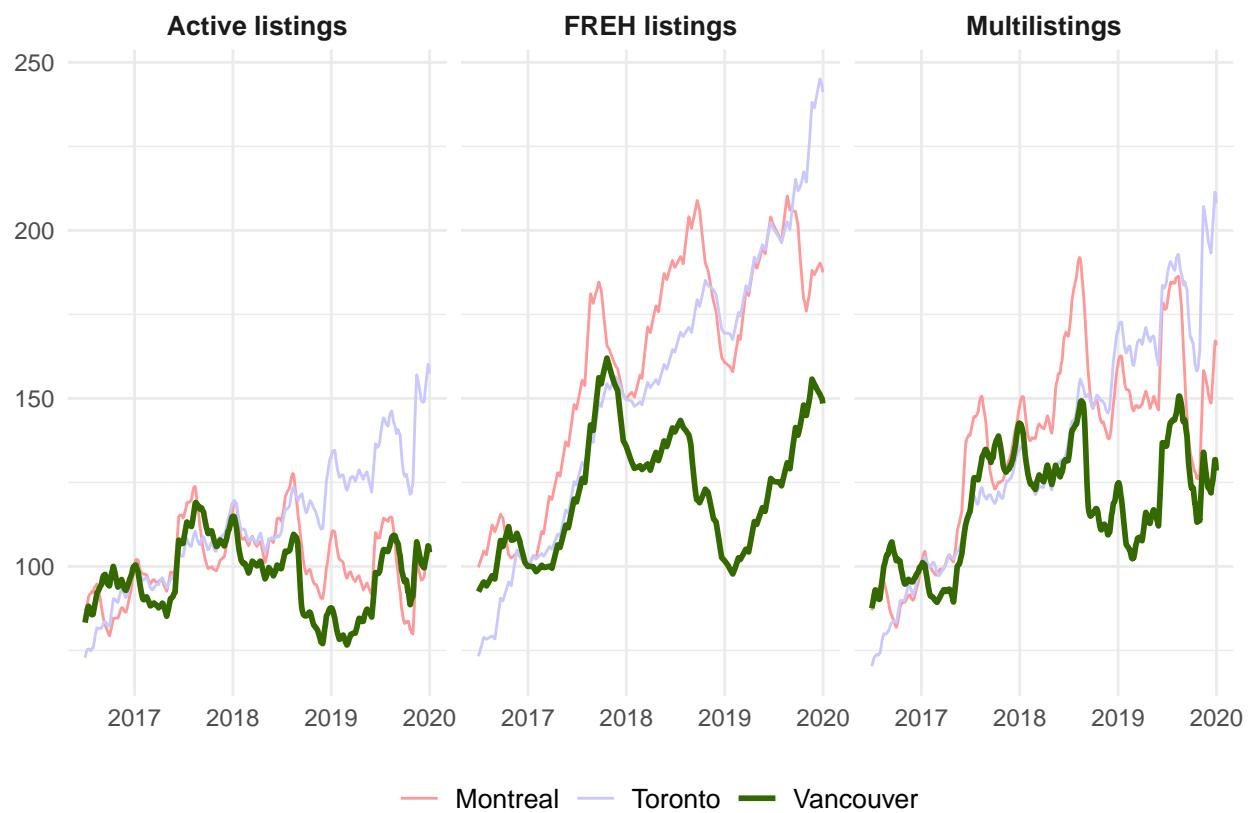


Figure 6: *Active listings (L), FREH listings (C), and multilistings (R) in Montreal, Toronto and Vancouver (2017-01-01 = 100)*

Table 1: Montreal and Toronto listing trajectories in comparison with Vancouver (values are the difference in growth rates relative to Vancouver’s growth rates in the same time period)

City	Time period	Active listings	FREH listings	Multilistings
Montreal	2017	2.3%	15.2%	6.9%
	2019 (2H)	-3.0%	40.6%	18.4%
Toronto	2017	1.0%	0.0%	2.1%
	2019 (2H)	38.9%	54.6%	40.9%

multilistings by 42.5%. Comparison with Montreal and Toronto adds additional evidence suggesting that this estimate is plausible.

1.5 The City of Vancouver in comparison with the rest of the Vancouver region

Another point of comparison for assessing the impact of the City’s STR regulations is the rest of Metro Vancouver. While many visitors to Vancouver will be determined to stay within the City itself regardless of price or availability, others will be more flexible. So if the City’s regulations have reduced the prevalence of commercial STRs, we should expect to see some redistribution of STR activity to neighbouring municipalities. We test this possibility by comparing the City of Vancouver with the remainder of the Vancouver Census Metropolitan Area (CMA), which is roughly coterminous with Metro Vancouver (Figure 7).



Figure 7: *The Vancouver Census Metropolitan Area (CMA)*

STR activity in the outlying municipalities of the Vancouver CMA is mostly concentrated in the cities of

Richmond, Burnaby and Surrey, and there are substantial differences between the STR markets of the City of Vancouver and the these outlying municipalities. For example, the median listing in the City of Vancouver earned \$7,200 in 2019, while the median listing in the rest of the CMA earned \$5,800. However, examining the relative trajectories of listing growth since 2017, as was done above with Toronto and Montreal, provides additional context for the drop in active and commercial listings experienced in the City of Vancouver since mid-2018.

Figure 8 shows the relative trajectories of active listings, FREH listings, and multilistings for the City of Vancouver and the rest of the Vancouver CMA since 2017. It demonstrates dramatic and widening divergences between the two geographies. While throughout 2017 active listings were already growing 7.7% faster in the rest of the CMA than in Vancouver, by the second half of 2019 the difference was 77.2%. FREH listings and multilistings reveal even larger divergences, from 12.6% to 113.2% for FREH listings and from -1.6% to 63.1% for multilistings.

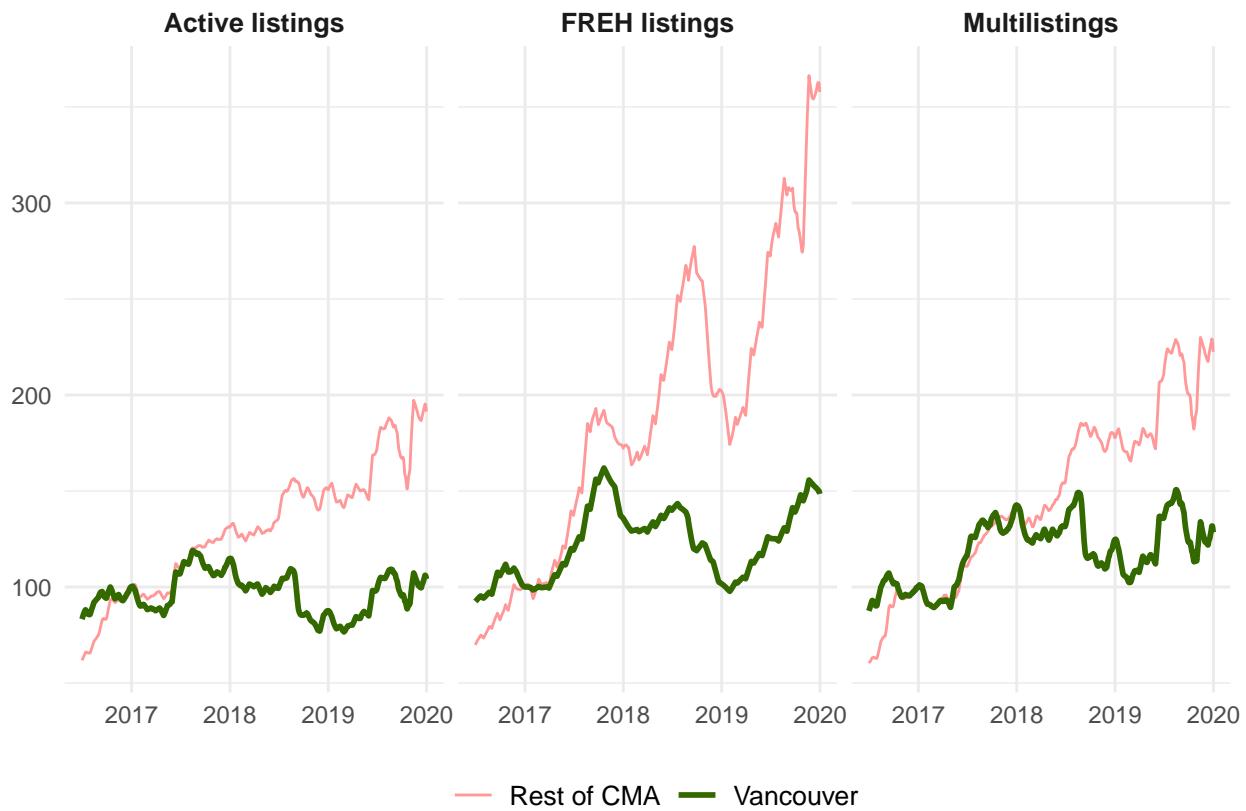


Figure 8: *Active listings (L), FREH listings (C), and multilistings (R) in the City of Vancouver and the rest of the Vancouver CMA (2017-01-01 = 100)*

How much of this divergence can be explained by Vancouver's STR regulations? At least some of the divergence was already underway by the time the City implemented its new rules, and in particular by the time that Airbnb undertook its mass removal of listings in August 2018. However, the divergence between Vancouver and the rest of the region widened significantly after August 2018—from 31.0% to 73.7% for active listings, from 45.5% to 107.0% for FREH listings, and from 11.5% to 52.5% for multilistings (Table 2). This suggests that the regulations were the most important (although not only) force shifting STR activity from the City of Vancouver to outlying municipalities.

Another way to examine the relationship between the City of Vancouver and the rest of the CMA is to compare the proportion of total regional active listings, FREH listings and multilistings located in the central

Table 2: Vancouver CMA listing trajectories in comparison with the City of Vancouver (values are the difference in growth rates relative to the City of Vancouver's growth rates in the same time period)

Time period	Active listings	FREH listings	Multilistings
2017	7.7%	12.6%	-1.6%
2018 before listing takedown	31.0%	45.5%	11.5%
2018 after listing takedown	73.7%	107.0%	52.5%
2019 (2H)	77.2%	113.2%	63.1%

city with the same proportion in the Montreal and Toronto regions. Figure 9 shows this comparison, and makes clear that Vancouver's STR market has long had an atypical relationship with that of its surrounding municipalities. In Montreal and Vancouver, the central city dominates the regional STR market in terms of total active listings, and on top of that has disproportionately high shares of FREH listings and multilistings. While in both cases outlying municipalities are slowly increasing their share of the regional market, as of the end of 2019 the central cities still had between 75% and 90% of the regional share of the various listing types. Vancouver had both a substantially lower share of its regional STR market in 2016 (where the graph begins) and a much sharper decrease in regional share across all listing categories.

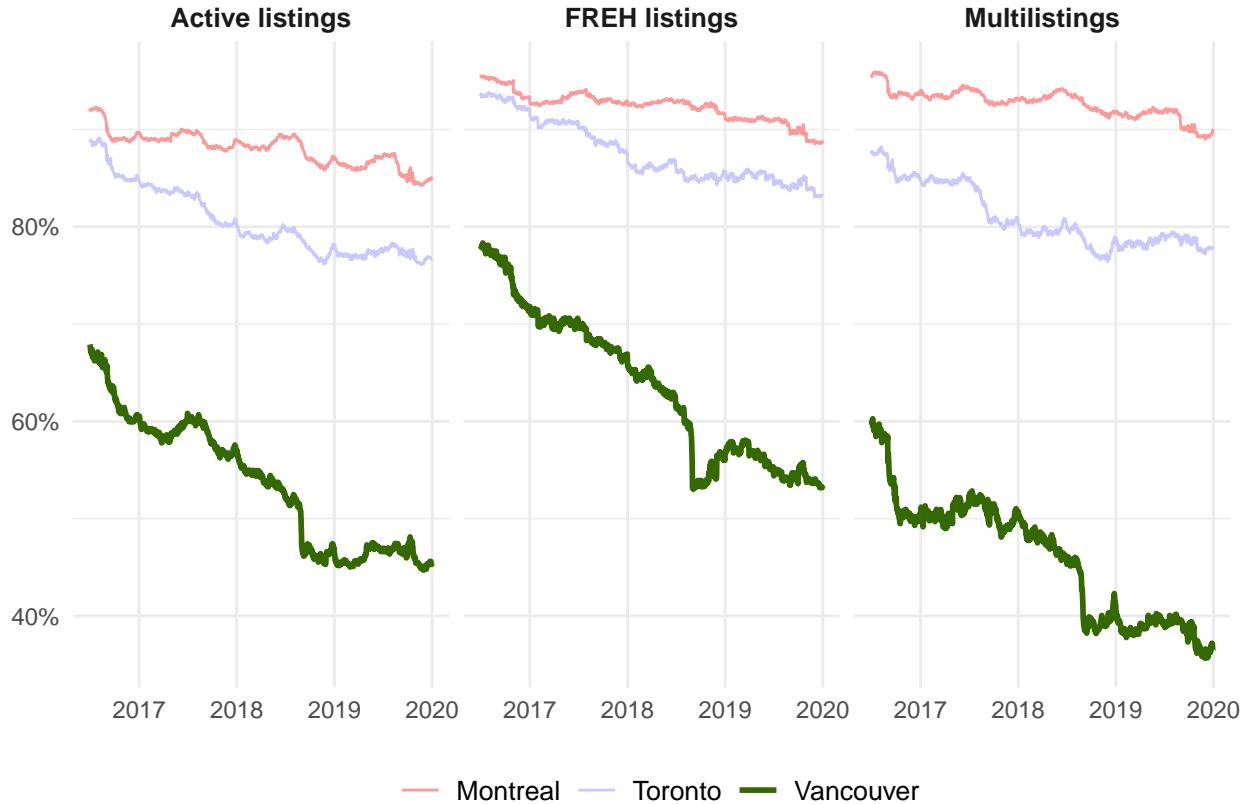


Figure 9: The share of active listings, FREH listings and multilistings in the central city of the Montreal, Toronto and Vancouver CMAs

The fact that more STR activity is located in outer municipalities of the Vancouver region than in Montreal or Toronto is not surprising, given that the City of Vancouver makes up a much smaller part of its CMA than the other two cities. Vancouver's declining share of regional STR activity began well before the City's regulations were put into place. At the same time, the City's share of regional STR activity dropped noticeably in 2018,

and the drop has proven to be durable. These facts suggest that the City’s 2018 regulations accelerated a shift of STR activity from Vancouver to the neighbouring municipalities that was already underway. It is also notable that Vancouver now has a much smaller share of the region’s multilistings than it does of active listings as a whole, but that it has a *larger* share of FREH listings than it does of active listings as a whole. This pattern indicates that Vancouver’s registration system has discouraged hosts from operating multiple listings simultaneously—a *prima facie* violation of the principal residence requirement—but that the system has not proven as effective at deterring full-time operation of a single listing, which is equally prohibited under the rules but arguably harder to detect.

1.6 The eastern edge of the City of Vancouver in comparison with the western edge of the City of Burnaby

We conducted a final comparison at a smaller scale designed to directly assess the impact of the City’s regulations on STR growth trajectories, by examining listings lying within one kilometre of the Vancouver-Burnaby border, in both Vancouver and Burnaby. Listings located in the study zone on either side of the Vancouver-Burnaby will be highly comparable from a visitor’s perspective. The only significant difference between these listings is that some are located in the City of Vancouver, and are subject to its regulations, while some are located in the City of Burnaby, and are not. (We conducted an additional analysis of listings within walking distance of SkyTrain stations on both sides of the Vancouver border to reduce non-regulatory variations between listings even more, but the results were very similar to this analysis, so we have not presented them.) If listings in the study zone on the Vancouver side of the border display growth trajectories similar to their counterparts on the Burnaby side, this implies that the City’s regulations are not meaningfully constraining STR operators in Vancouver. By contrast, if listings in the study zone on the Vancouver side of the border display growth trajectories dissimilar to their counterparts on the Burnaby side but similar to the rest of the City of Vancouver, this implies that the City’s regulations have had a significant impact.

The results of the comparison, shown in Figure 11 are highly illuminating. Listings located in Vancouver but near the border with Burnaby have been on a growth trajectory which resembles nearby listings in Burnaby in some respects, and which resembles the rest of the City of Vancouver in others. First of all, growth trajectories across all listing types have been significantly lower in the Vancouver border listings than the Burnaby border listings since the implementation of the City’s STR regulations in 2018. This provides clear and compelling evidence that the regulations have reduced STR activity. However, there is a substantial difference between the patterns with respect to FREH listings (dedicated STRs which have removed housing from the long-term market) and multilistings (listings operated by a host who is simultaneously operating other listings). Multilistings in the Vancouver border area have grown far less quickly since 2018 than their counterparts in Burnaby, and nearly identically to multilistings elsewhere in Vancouver. But FREH listings in the Vancouver border area have grown extremely rapidly—not as quickly their counterparts in Burnaby, but more than twice as quickly as the rest of Vancouver. Both of these categories of listings will be in violation of the City’s principal residence requirement, but multilistings have evidently been much more significantly restrained by the regulations than FREH listings have been. This is the same pattern that the comparison of the City of Vancouver with the rest of the Vancouver CMA revealed.

1.7 Conclusions

This chapter has presented a variety of comparisons designed to isolate the impact of the City of Vancouver’s 2018 STR regulations on Vancouver’s STR market. Across the different comparisons, the following findings emerged:

- The initial implementation of the City’s licensing system and Airbnb’s subsequent mass removal of non-licensed listings created a one-time negative shock in the number of STR listings in Vancouver in mid-2018. But this shock was disproportionately concentrated among listings which were present on STR platforms but not actively being rented, and active listings grew more quickly in 2019 to partially counteract the effects of this shock.



Figure 10: *Study area for comparison: a 1-km strip on either side of the Vancouver-Burnaby border*

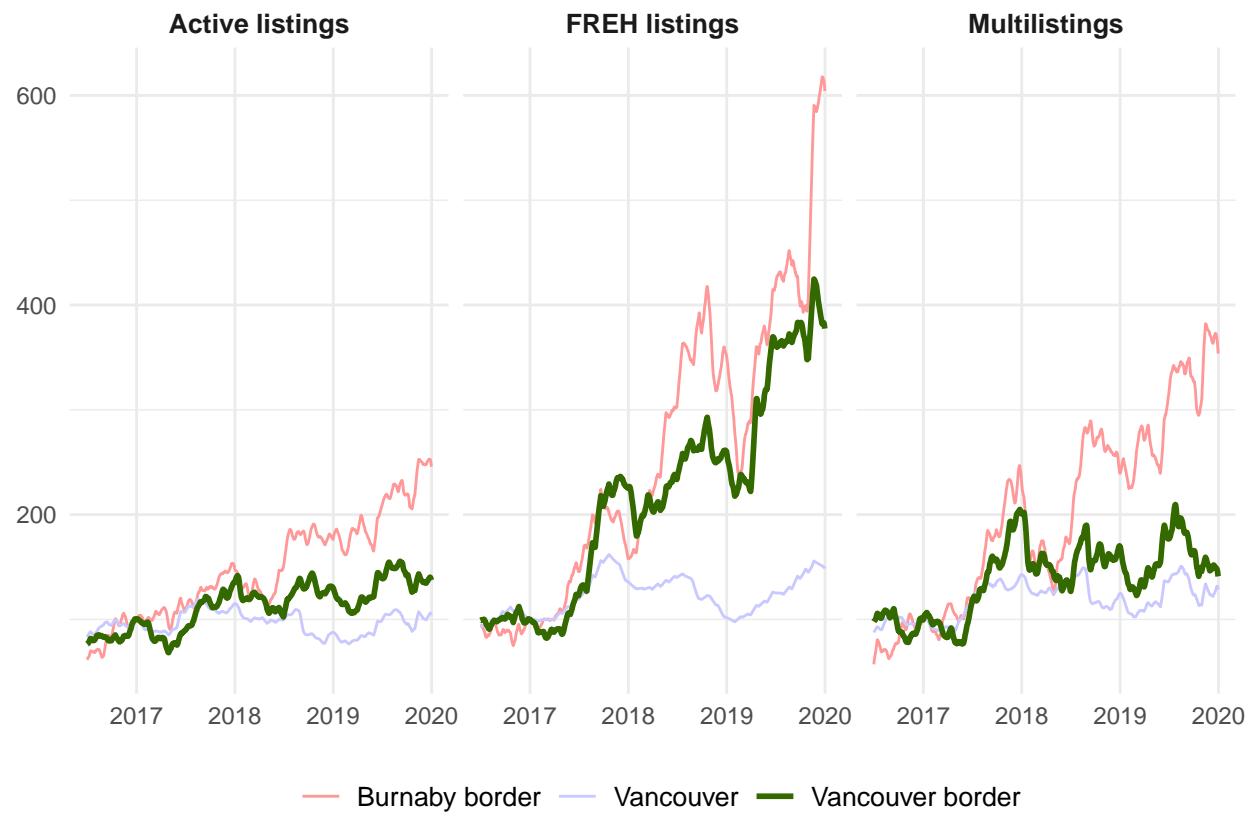


Figure 11: *Active listings (L), FREH listings (C), and multilistings (R) along the Vancouver-Burnaby border (2017-01-01 = 100)*

- Trend analysis suggests that the City's regulations have reduced active STR listings in Vancouver by 1,510, or 35.8% of total active listings, within a plausible range of 600 - 1,670. We estimate that the regulations have returned 810 housing units to the long-term market, within a plausible range of 160 - 990.
- Comparisons with other jurisdictions uniformly suggest that the real impact of the City's STR regulations is at the higher end of the trend analysis scenarios. Since 2018, Vancouver's STR market has developed more slowly and in a less commercialized direction than Montreal or Toronto, while a substantial amount of commercial STR activity has relocated to nearby municipalities in Metro Vancouver.
- Comparisons with nearby municipalities suggest that, among commercial STR operations, multilistings have been particularly constrained by the City's regulations, while dedicated FREH listings have grown less than they otherwise would have, but at something closer to the rate expected in the absence of regulations. This pattern is consistent with a scenario where the City's licensing system has been extremely successful at discouraging hosts from licensing multiple listings, but has been less successful at discouraging hosts from operating single listings in a full-time fashion, despite the fact that both these categories of use are non-compliant with the City's principal residence requirement.

2 Covid-19: STRs returning to the long-term market

Due to the combination of the City of Vancouver’s ongoing STR regulations and the collapse in tourism demand during the COVID-19 pandemic, the number of STRs operating in a fashion consistent with being dedicated, full-time operations in Vancouver is the lowest it has been since at least 2016. Because of the collapse of STR demand during the COVID-19 pandemic, the number of housing units being operated as dedicated STRs in Vancouver dropped from 2,680 in January 2020 to just 940 in August 2020. Using image recognition techniques, we identified 1,339 unique Airbnb listings which were posted as long-term rentals (LTRs) on Craigslist or Kijiji between March and September 2020. These former STRs have asking rents on average 25.6% higher than other LTR listings, but are correlated with a 13.5% decrease in overall asking rents in Vancouver. The evidence suggests that the overwhelming majority of STR listings transferred to LTR platforms are commercial operations. We estimate that 30.6% have fully transitioned back to the long-term market, 35.3% have been temporarily blocked on Airbnb and may return to being STRs in the future, and 34.1% failed to be rented on LTR platforms and instead remain active on Airbnb.

2.1 The dramatic decrease in full-time STRs during the pandemic

As the previous chapter discussed, by the end of 2019 Vancouver’s STR regulations had probably reduced the number of housing units converted to dedicated STRs by 810. The onset of the COVID-19 pandemic has reduced the number of dedicated STRs even further. Figure 12 shows that, as of the summer of 2020 there were fewer STRs operating year-round than at any point since at least 2016. The number of housing units being operated as dedicated STRs in Vancouver dropped from 2,680 in January 2020 to just 940 in August 2020. Some of this decline has come through listings remaining active but operating at dramatically lower capacity because of the collapse in tourism demand, and some is a result of listings permanently exiting the STR market. The COVID-19 pandemic has caused an unprecedented decline in STR activity in Vancouver. Under these circumstances, it would be reasonable to imagine that some STR hosts—particularly commercial operators who had come to expect large income streams from their properties—may have decided to return their listings to the long-term housing market, either temporarily or permanently. In what follows we analyze this possibility.

2.2 How many STR listings have returned to the long-term market?

We collected listing images from all properties posted to Craigslist and Kijiji in Vancouver between March and September 2020, and used image recognition analysis to match STR listings on Airbnb and Vrbo to long-term rental (LTR) listings on Craigslist and Kijiji. These latter two platforms represent only a portion of the LTR market, but provide useful insight into how STR hosts have responded to the collapse in accommodation demand during the COVID-19 pandemic. If the exact same photo of an apartment’s living room was uploaded to Airbnb in August 2019 and then to Craigslist in April 2020, this provides proof that the property in question has moved from the STR market to the LTR market. The image recognition software we developed is able to identify matches between images which are identical, but also images which the host has modified slightly, and thus allows us to reliably identify every match which exists between STR and LTR platforms (Figure 13).

Our image matching algorithm recognized 1,339 unique Airbnb listings which matched with 2,690 different LTR listings (as some units are posted multiple times) in the City of Vancouver. The matching LTR listings were predominantly found on Craigslist (2,495 listings, or 92.8%), with a small portion posted on Kijiji (195 listings, or 7.2%). Out of the 1,339 matching Airbnb listings, 54.6% (731 listings) were created or still active in 2020. We suspect that many or most of the remaining properties were also still active under a different listing ID and with a different photo, since commercial STRs are delisted and relisted quite frequently, and we thus consider the 1,339 Airbnb listings which we matched to Craigslist and Kijiji to be a lower bound for the number of unique housing units that went from the STR market to the LTR market due to the

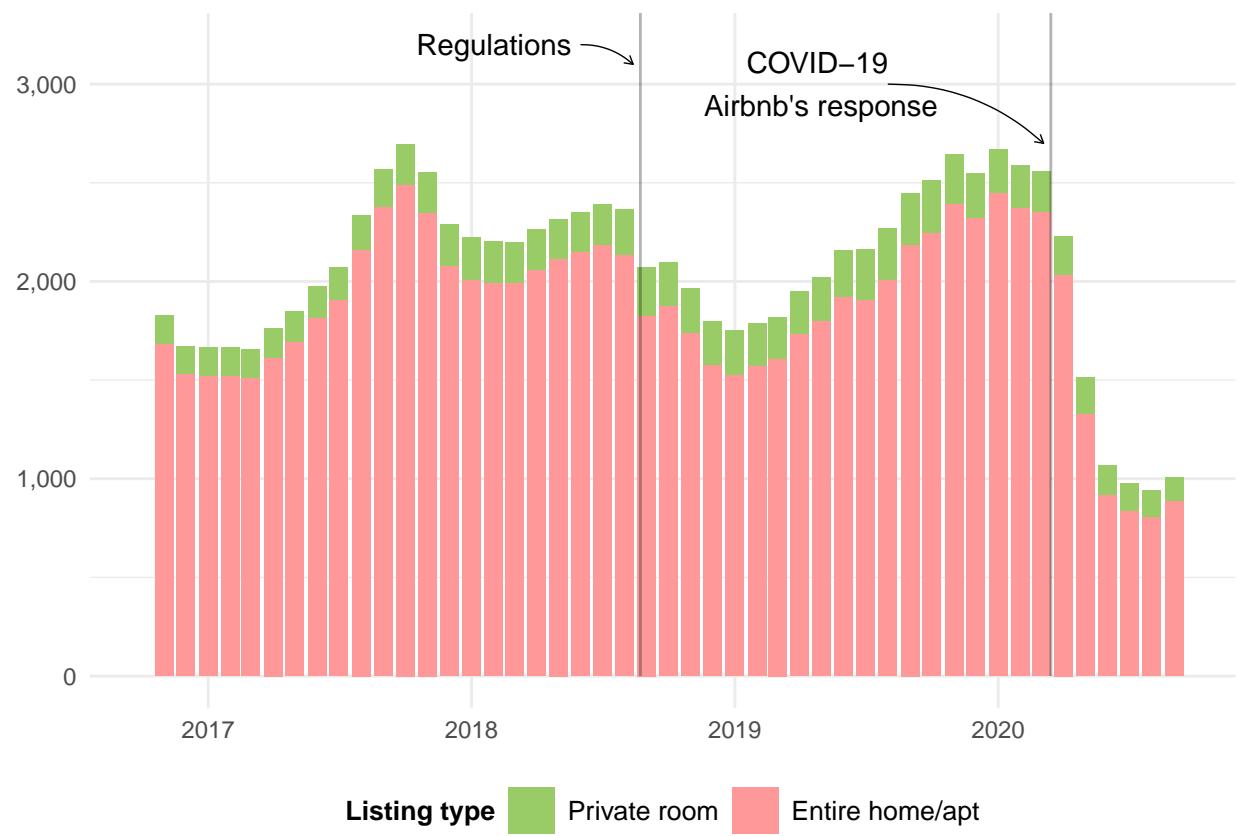


Figure 12: *Housing units converted to dedicated STRs in the City of Vancouver (monthly average)*

A. Airbnb

"Beautiful modern renovated 2 bedroom"

**B. Craigslist**

"Luxury 2 BR Suite Modern Style and Private Patio – apts/t

**C. Airbnb**

"Steps from The Drive"

**D. Craigslist**

"Steps from the Drive – fully furnished, modern studio"



Figure 13: Examples of listings matched between STR and LTR platforms. The first pair of images (A & B) is matched despite the images being tinted differently. The second pair of images (C&D) is matched despite the first image being digitally altered.

COVID-19 pandemic. (Each listing which we matched is guaranteed to have been listed first on Airbnb and then on either Kijiji or Craigslist, but there are certain to be additional listings which we did not match because they did not reuse the same photographs.)

All of the Craigslist listings we matched were long-term rentals. Out of the 107 Airbnb listings which we matched to Kijiji, 67.3% were identified by their hosts as “long-term rentals” and 32.7% were identified as “short-term rentals”. Among matched Kijiji listings, 36% specified lease lengths of one year, 30% specified month-to-month, and 35% did not specify.

2.3 When did STR listings move to the long-term market?

The first COVID-19 case in Vancouver was confirmed on January 28, 2020, but the pandemic did not fully erupt until the second week of March 2020, when public facilities and private businesses began to close, culminating in a Provincial declaration of public emergency on March 12. Consistent with this timeline, what was in early March a trickle of Airbnb listings moving to Craigslist or Kijiji began to accelerate in the middle of the month (Figure 14). By the end of the March, the number of daily transfers reached 27 listings. Daily numbers remained high through April (its peak being 62 listings transferred on April 21), but even from May through September an average of 5.2 new Airbnb listings were transferred to Craigslist or Kijiji each day.

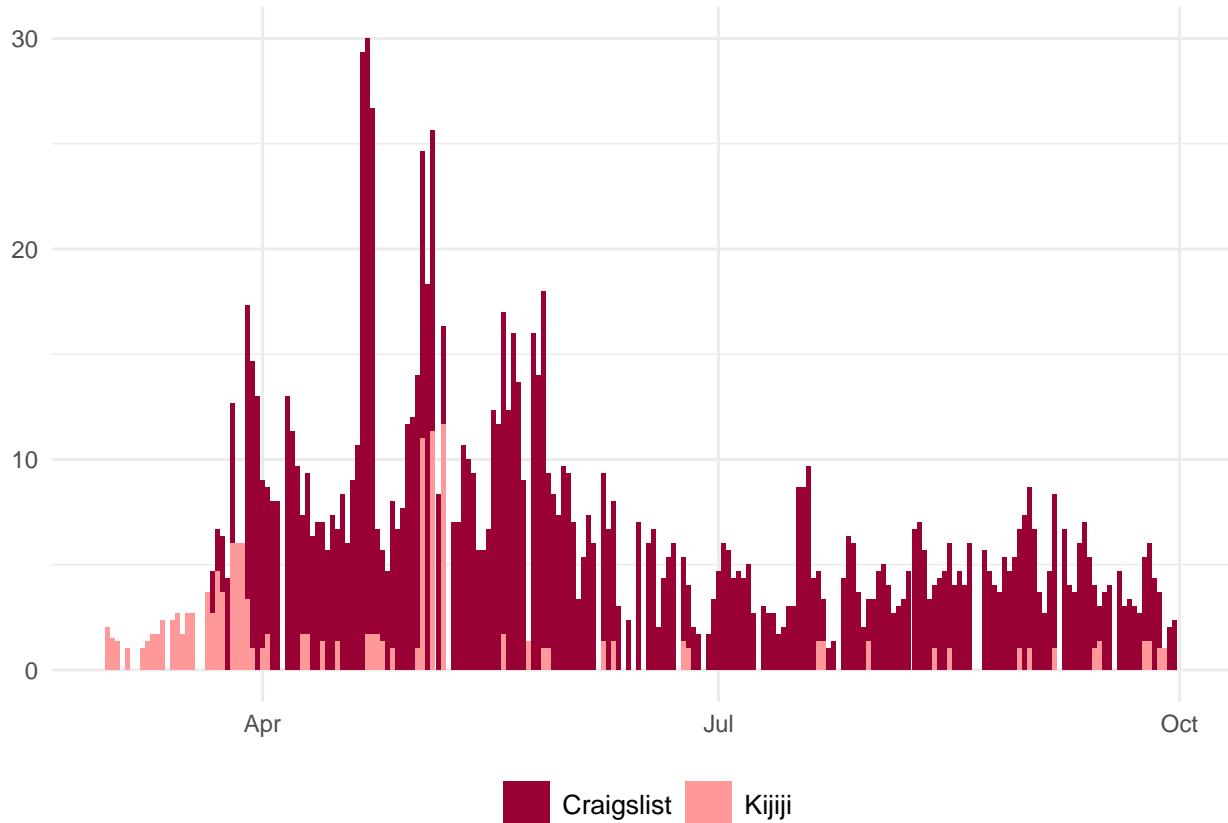


Figure 14: *The date on which matched Airbnb listings were first detected on Craigslist or Kijiji in the City of Vancouver (3-day average)*

2.4 Spatial distribution of matched listings

Out of the 1,339 unique STR listings matched to LTR listings in the City of Vancouver, nearly half (46.8%) were located in the Downtown area, with the remaining matches more evenly split between the other areas. 10.8% of matches were in West End, following by 7.8% in Kitsilano and 4.6% in Mount Pleasant. This distribution is distorted compared to general distribution of STR listings in the city: Downtown is highly over-represented in these matches. When controlling for the density of STR listings, Downtown is still slightly over-represented with respect to the number of STRs being relisted as long-term rentals. However, other areas have a listing density close to Downtown's (Figure 15). The number of STR listings matched to LTR listings in Downtown is equivalent to more than half (54.1%) of all the STR listings active in the area on March 1, 2020, and 29.1% of all the listings active in the borough in 2020.

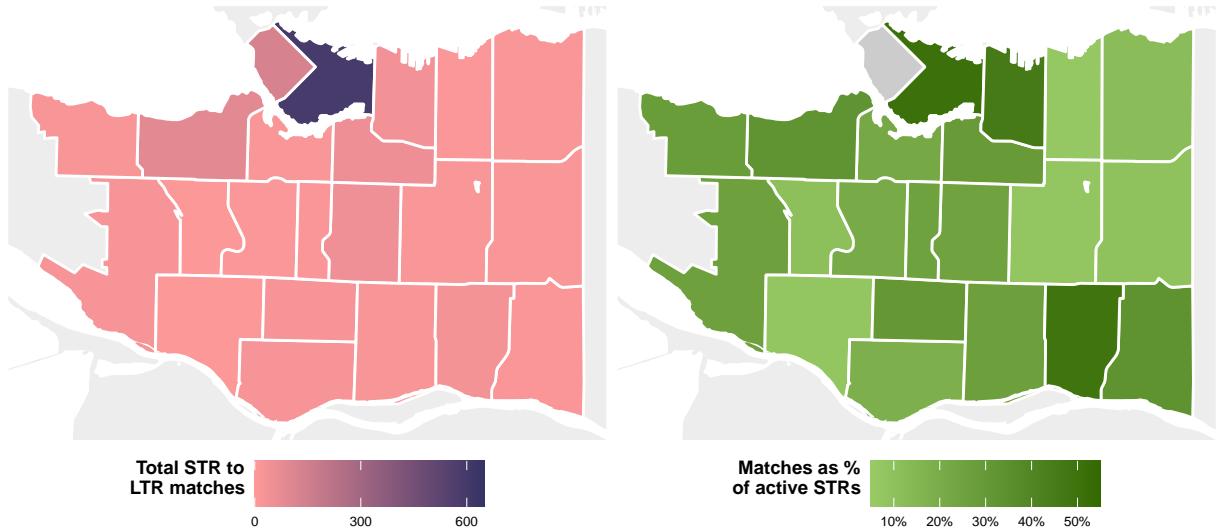


Figure 15: Total number of STR listings matched to LTR listings (L), and matched STR listings as a percentage of daily active listings on 2020-03-01 (R), by local area

2.5 Asking rents

The left panel of Figure 16 shows the average asking rents of listings posted to Craigslist and Kijiji between March and July 2020. (We do not have complete asking rent data for August and September, so those months are excluded.) The asking rents have remained dramatically higher than non-matched LTR listings. On March 13, when the average asking rent on LTR platforms in the City of Vancouver was \$2,438, the average asking rent among listings which we matched to Airbnb was \$3,117—27.8% higher. Over the course of March, average asking rents for LTR listings matched to Airbnb declined sharply, before increasing gradually for the next few months. At the end of July, the average asking rent was \$2,082 for all Craigslist and Kijiji

listings and \$2,634 for the matches. Overall, from April to July, asking rents for properties matched to STR listings were 25.6% higher than the city-wide average.

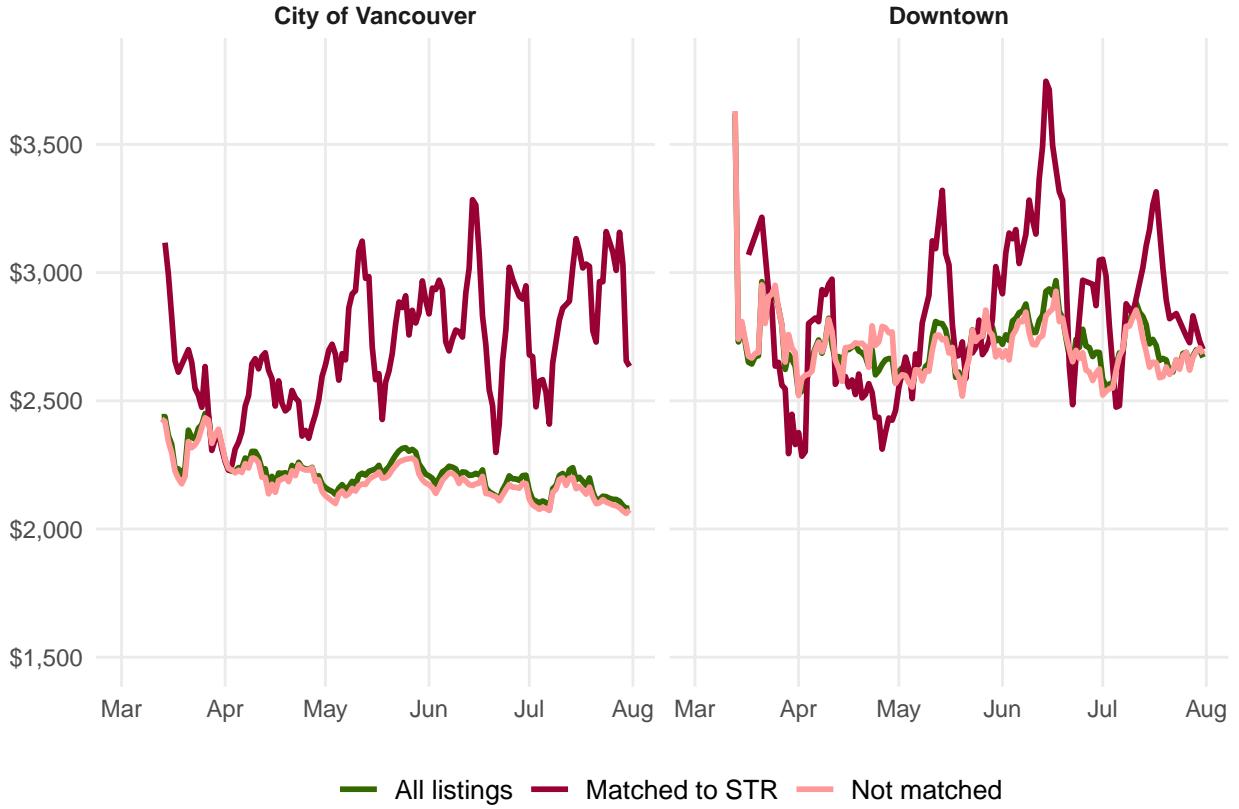


Figure 16: *Average asking rents on Craigslist and Kijiji in the City of Vancouver (L) and Downtown (R) (7-day average)*

The right panel of Figure 16 shows asking rents only in Downtown. A large portion of the divergence in asking rents between LTR listings matched to Airbnb and listings not matched is a compositional effect of the much greater frequency of a Downtown location (which commands higher prices than the rest of the city) among matched listings. Even in Downtown, however, LTR listings matched to Airbnb have been on average 4.2% higher than listings not matched. Overall STRs returning to the long-term market are correlated with a significant decline in asking rents. It is not feasible to disentangle the causal impact of a shrinking STR market on housing prices from the broader housing-market impacts of the COVID-19 pandemic, but the average city-wide asking rent on Craigslist and Kijiji declined a startling 13.5% from \$2,386 in late March 2020 to \$2,102 in late July 2020.

2.6 Are matched listings commercial operations?

Nearly all of the STR listings which we matched to LTR listings on Craigslist or Kijiji are likely to have been dedicated, commercial STRs. This is because it is highly unlikely that a casual home sharer operating a STR out of their principal residence would decide to vacate their home, list it on Craigslist or Kijiji, and reuse the photo they had used to advertise the short-term rental. It is therefore also likely that the STR listings found on LTR platform were non-compliant with the City's STR regulations, since the fact that they were commercial operators makes it extremely difficult to also have the listing be operated out of a principal residence. We can test this intuition by examining the characteristics of the STR listings which we matched

to an LTR platform.

Of the 1,339 unique STR listings that matched with the LTR market, 1,097 (83.5%) are entire-home listings and 206 (15.7%) are private-room listings. Examining the entire-home listings, 53.4% of them were identified as frequently rented entire-home (FREH) listings at some point, which means they were almost certainly operated commercially. Moreover, 40.4% of entire-home STR listings which matched to LTR listings were multilistings at some point, which means they were operated by hosts controlling multiple listings simultaneously. In total, two thirds (66.8%) of matched entire-home listings had one of these two strong indicators of commercial activity.

The 206 private-room listings require some further analysis, because each of these listings matched to a Craigslist or Kijiji listing advertised as an entire housing unit. Some are simply miscategorizations; 7 (3.4%) of the LTR listings that matched to STR private-room listings had titles such as “1 fully furnished bedroom”, which suggests that these listings were rooms located in the host’s principal residence, and that their appearance on LTR platforms does not constitute entire housing units being returned to the market. The second category of private-room Airbnb listings matched to entire-home LTR listings is clusters of private-room listings which may appear as a series of “spare bedrooms” on Airbnb or Vrbo but are in fact one or more housing units converted to a dedicated STR. 113 (54.9%) of the 206 private-room listings which matched to Craigslist or Kijiji belong to these clusters in Vancouver. The remaining 86 private-room Airbnb listings which matched to Craigslist or Kijiji are likely to be clusters of private-room listings which our algorithms failed to identify, or smaller housing units similarly subdivided into private rooms. (Our procedure for identifying entire-unit clusters of private-room listings only considers clusters of three or more private rooms, but two-bedrooms apartments can also be listed as pairs of private rooms.) On balance, the likelihood is that these listings also represent commercial STRs returning to the long-term market.

Focusing on the unambiguous case of the entire-home listings which matched between STR and LTR platforms, 27.1% of the commercial listings active at any point in 2020 have been transferred to Craigslist or Kijiji since March. But, given the rapidity with which individual listings are posted and removed, this significantly understates the scope of listings moving from Airbnb to the long-term market. Expressed as a percentage of the commercial listings active on March 1, 2020, at the onset of the pandemic, the matches represent 47.8% of these listings. In other words, something between a quarter and a half of Vancouver’s commercial short-term rentals may have shifted to the long-term rental market between March and September.

Figure 17 shows the age in years of STR listings which matched a LTR platform (left panel) and which did not match (right panel). The age distribution of matched listings is skewed to the left, which means that a large proportion of matched listings are less than a year old. By contrast, STR listings which did not match tend to be older. This pattern suggests that newer commercial STR listings may have been in a weaker financial position at the onset of the pandemic, prompting their hosts to change strategies more rapidly than established hosts.

2.7 Which STR hosts transferred their listings to Craigslist and Kijiji?

In Vancouver, 743 unique Airbnb and Vrbo host IDs were linked to the 1,339 STR listings which we matched to LTR listings. 160 of these hosts posted more than one of their STR units on Craigslist or Kijiji. Almost two-thirds (62.2%) of the active properties of these 160 hosts were found on either Kijiji, Craigslist, or both. The fact that only a portion of the hosts’ listings were found on LTR platforms suggests that the matches we have identified might be an underestimate of the total quantity of STRs that were posted on LTR platforms since the COVID-19 pandemic began. It would be intuitive to assume that a host who decides to post several of its listings on a LTR platform would post all or most of them. There are several factors which were likely at work here: some listings may have been posted, rented, and removed in between our weekly scrapes so we did not detect them; hosts may have not posted their higher-performing STR listings; and hosts may have used updated photographs for some of their listings, making it impossible to detect matches through our image matching algorithm.

STR hosts that transferred listings to the long-term rental market had substantially higher STR revenue in 2019 than hosts that did not transfer listings. The median listing revenue was \$9,000 in the entire City

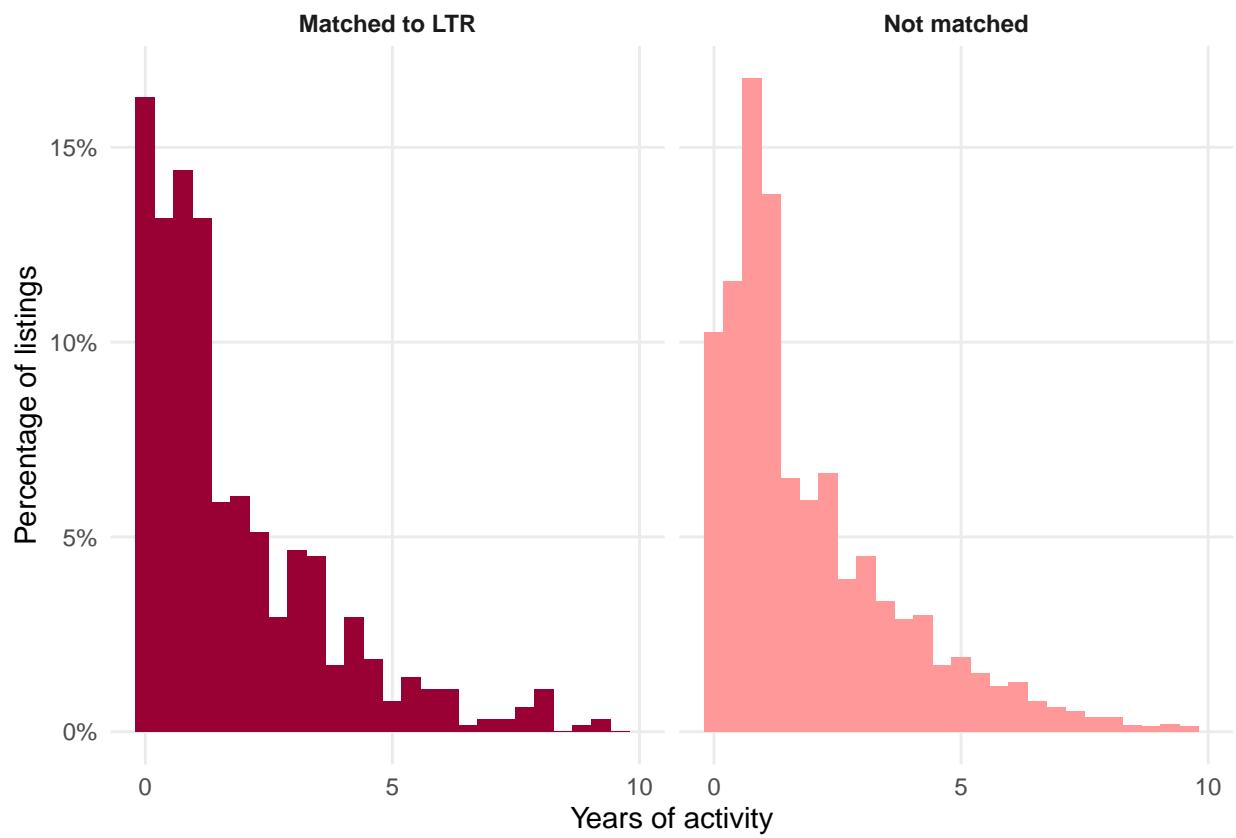


Figure 17: *STR listing age distributions for listings matched to LTR listings (L) and not matched (R)*

of Vancouver in 2019. The annual median revenue of hosts who transferred listings to the LTR market was \$19,600, while the median revenue of hosts who did not transfer listings was somewhat less at \$15,600. Moreover, many of Vancouver's highest earning STR hosts turned to LTR platforms during the COVID-19 pandemic. For example, 14 of the 28 hosts that made more than \$250,000 in the past year listed at least one of their STR units on an LTR platform. On average these top earning hosts listed 11 units on LTR platforms, compared to 1.6 units for all other hosts. Figure 18 compares the 2019 annual revenue distribution of STR hosts that shifted listings to the long-term market and hosts that did not. Hosts whose STR listings matched to LTR listings have a revenue distribution shifted substantially to the right, indicating that they earned more money.

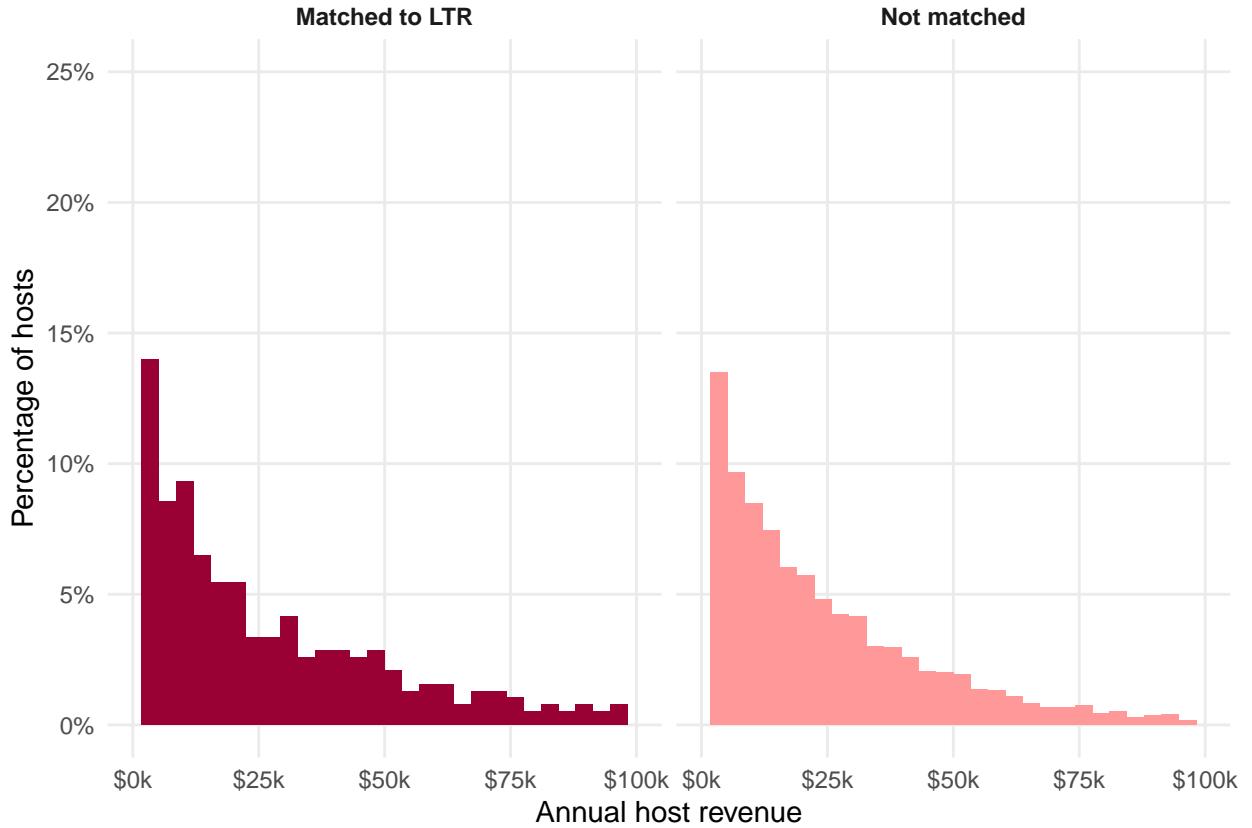


Figure 18: *STR host revenue distributions for hosts whose listings matched to LTR listings (L) and did not match (R)*

2.8 Are matched listings successfully rented, or still active on Airbnb?

The mere presence of current or former Airbnb listings on LTR platforms is no guarantee that the actual housing units have shifted back onto the long-term market. In particular, these listings might have been posted but not successfully rented. It is not possible to determine with certainty whether a given listing was rented and therefore permanently transferred from the short-term to the long-term market, but we can use two indicators to estimate this: the length of time the listing was posted on an LTR platform, and the current activity status of the listing on the STR market.

On average, the STR matches found on LTR platforms stayed longer than the non-matches: 23.1 days for the latter and 17.1 days for the former. Listings coming from the STR market were both significantly more expensive than other listings and much more likely to be furnished, both of which factors may have decreased

their viability in the rental market. (Of the 61,393 LTR listings we analyzed, 25.0% were listed as furnished, while 75.9% of listings which matched with STRs were furnished.) Figure 19 shows the distribution of the length of stay for both matches and non-matches. The figure reveals quantitatively and qualitatively different patterns among matched and non-matched listings. Most non-matched listings were present for less than a week on Craigslist or Kijiji before being removed (and presumably rented), and the number of listings still present declines relatively smoothly as the length of time increases. By contrast, most matched listings were not rented after a week, and in fact the proportion which took a month or more to be taken down is higher than the proportion which were taken down after several weeks. Our conclusion is that STR units listed on LTR platforms have been relatively unsuccessful at transitioning back to long-term rentals.

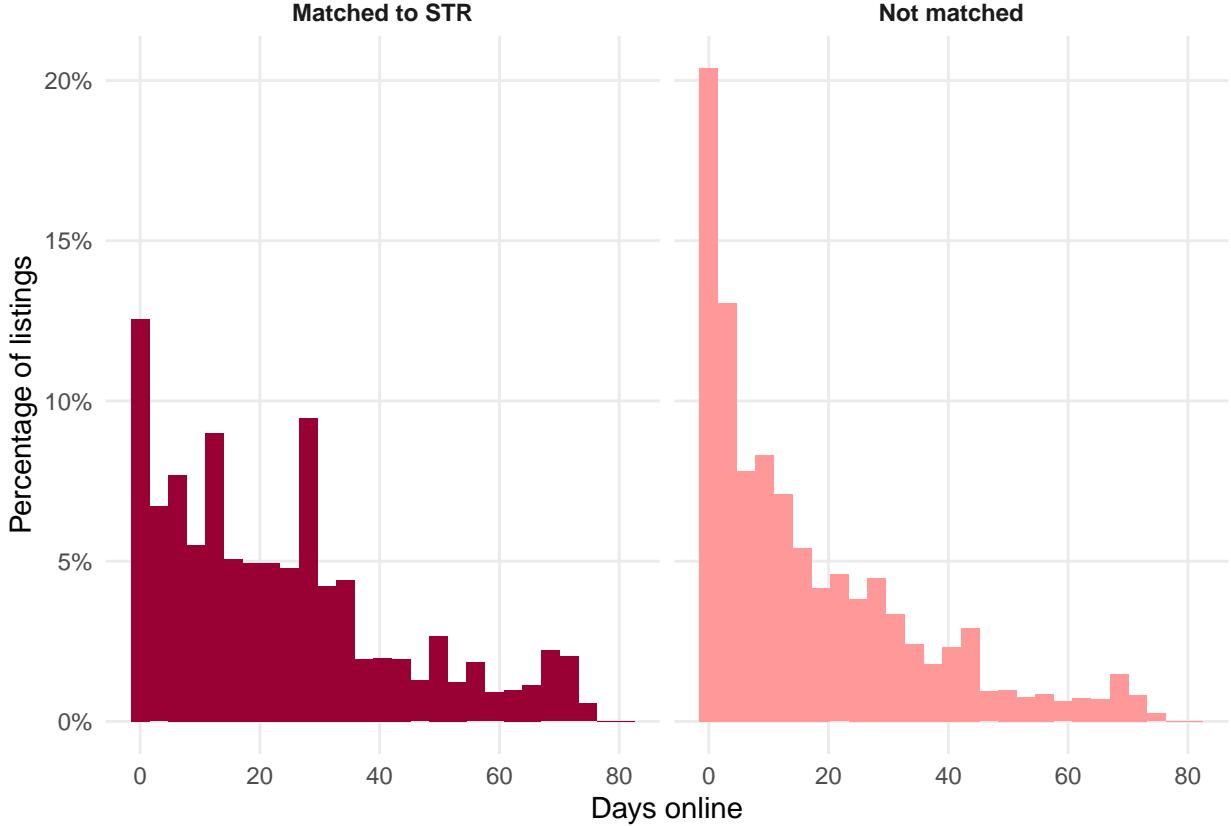


Figure 19: *LTR listing posting length distributions for listings matched to STR listings (L) and not matched (R)*

Further evidence about the extent to which STR hosts are successfully transferring their listings to the long-term market can be found by examining the activity of the STR listings themselves. Are hosts planning on renting on the long-term only temporarily, leaving the STR listing running for future bookings? Or have they deactivated the STR listing? Out of the total 1,339 STR listings which we identified on LTR platforms, 771 (57.6%) were present on Airbnb or Vrbo at the beginning of 2020. Out of this number, 467 (60.6%) were still present on September 30, while the other 304 (39.4%) had been deactivated. Extrapolating this proportion across the entire set of matched listings we identified, we estimate that 527.9584955 matched listings have been deactivated from Airbnb or Vrbo during the pandemic, while 811.0415045 remain on the platforms. Listings removed from STR platforms are likely to have been durably shifted to the long-term market. However, 74.8% of these listings were rented as furnished rentals on Craigslist or Kijiji. These listings should therefore be considered at relatively high risk of returning to the STR market if demand recovers.

Listings which remain on Airbnb and Vrbo can nevertheless be inactive. If a host successfully rents their

listing on Craigslist for several months, they can choose to block their calendar on their STR platform to make sure no new reservations occur, while keeping the listing intact for when the STR market recovers. Of the 467 matched listings present on Airbnb or Vrbo at the beginning of 2020 and still present by the end of Sep, 324 (69.4%) were blocked for the entirety of the month of September. This suggests that these listings are not active on the STR market and therefore have been rented on the LTR market, but the fact that the STR listings have not been taken down suggests that the hosts may plan to reactivate their units once STR demand recovers.

In total, taking into account the matched listings which have continued to see activity on Airbnb or Vrbo, we estimate that, of the total 1,339 STR listings which were advertised on Craigslist or Kijiji, 410 (30.6%) have been deactivated from Airbnb and Vrbo and have likely transitioned back to long-term housing (albeit often as furnished rentals which could be reconverted to STRs), 472 (35.3%) have been temporarily blocked on the STR platforms and have likely been rented in the long-term market but may return to being STRs in the future, and 457 (34.1%) failed to be rented on LTR platforms and instead remain active as STRs.

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:

- Listing and activity data about Airbnb and VRBO short-term rental listings gathered by the consulting firm AirDNA. This data includes canonical information about every short-term rental (STR) listing on the Airbnb and VRBO (including HomeAway) platforms which was active in the City of Vancouver between January 1, 2016 and September 31, 2020. 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 collects this information through frequent web scrapes of the public Airbnb and VRBO websites. The 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 and location, and listing photographs which were obtained through web scrapes.
- Data about long-term rental listings on Kijiji and Craigslist. This data includes the geographic location of listings advertised, the asking rent, the number of bedrooms, the number of bathrooms, the title, and the photographs attached to the posting. This data was collected by UPGo through web scrapes conducted each Monday from March 30 to October 12, 2020. We use this data to analyze the long-term rental market in Vancouver, and to identify STR listings which have been transferred to the long-term market.
- Data from Statistics Canada and the Canada Mortgage and Housing Corporation (CMHC). We use this governmental data to analyze population and dwelling counts, average rents, and rental vacancy rates.
- Short-term rental registration data from the City of Vancouver’s Business Licenses open data set. We use this data to analyze regulatory compliance, in order to determine the impact and effectiveness of Vancouver’s STR by-laws.

This report analyzes the City of Vancouver, and, unless otherwise specified, “Vancouver” refers to the city. When other cities are compared to Vancouver, we are likewise referring to the municipalities (e.g. “Montreal” refers to the City of Montreal).

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>. With the Craigslist and Kijiji data we scraped, we cleaned the dataset using techniques such as string distance, duplicate removal, and outlier filtering, following similar approaches used with comparable datasets, such as Boeing and Waddell (2017) and RCLALQ (2020).

Image matching: We used our own image recognition algorithm to match listings posted both to Airbnb and to either Craigslist or Kijiji. The algorithm converts the sequence of pixels in an image into a string of numbers representing the average brightness of regions of the image, which serves as a distinctive “signature” of the image, similar to a fingerprint. We compare these signatures to each other using the Pearson correlation coefficient. When the correlation is sufficiently high, we repeat the procedure using separate signatures for the images’ red, blue and green colour channels. All potential matches are then individually verified by human observation. The software package we developed to conduct this image matching is called `matchr` (Wachsmuth 2021a) and is available at <https://github.com/UPGo-McGill/matchr>.

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. But this indicator is slow to adapt to sudden shocks in STR activity, since it incorporates the past 12 months of a listing's activity. Given that both the introduction of the City's regulations and the onset of the COVID-19 pandemic caused STR activity to drop substantially, we wanted to capture the associated changes at shorter timescales than the one year which our FREH concept allows us to. So we developed a linear regression model which predicts FREH status based on three months of listing activity instead of a full year, and which is calibrated both to routine seasonal variation and to a given market's specific dynamics. All of the FREH results reported here are the results of this model rather than the raw FREH calculations themselves.

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/vancouver-analysis>.

Glossary

Active daily listings: listings which were displayed on the Airbnb.ca or VRBO.ca website on a given day, and were either reserved or available for a reservation. It is the clearest means of determining the overall size of the short-term rental market in a location, particularly with respect to change over time.

FREH (frequently rented entire-home listings): Entire-home listings which were available on Airbnb or VRBO a majority of the year (at least 183 nights) and were booked a minimum of 90 nights. Alongside ghost hostels, used as a proxy for long-term housing loss. For buildings that contain multiple FREH listings, see ghost hotel. For clusters of private rooms, see ghost hostel.

Listing type: One of “entire home or apartment”, “private room”, “shared room”, or “hotel room”, which an STR host chooses on Airbnb or VRBO to characterize their listing. Entire-home listings are the most common listing type in Vancouver, and they include any STR unit that is available entirely to the guests, which could be a single-family home, a townhouse, a condominium unit, or a secondary suite.

LTR (long-term rental): In this report, a long-term rental is a housing unit available for rent for extended periods of time (generally a year), in contrast to a short-term rental. It can include monthly or yearly rental arrangements. In this report, data from the online classified ad sites Kijiji and Craigslist were used to analyze the LTR market.

Multilisting: A listing operated by a host who is simultaneously operating other listings in such a manner that the listings cannot all be located at the host’s principal residence. If one host has two or more entire-home listings or three or more private-room listings active on the same day, those are multilistings.

STR (short-term rental): A housing unit available for rent for 31 days or fewer, typical of vacation rental platforms. In this report, we use STR to refer to a rental advertised on Airbnb or VRBO.

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