



## Short-term Rentals, Housing Markets and COVID-19: Theoretical Considerations and Empirical Evidence from Four Austrian Cities

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**Abstract:** *Prior to the onset of the pandemic, evidence on the conversion of regular rental housing into permanent holiday homes has fuelled concerns that Airbnb and other short-term rentals contribute to the shortage of affordable homes and to the displacement of regular residents in cities with high housing demand. When the pandemic set in, the media was quick to speculate that holiday homes would be returned to the regular rental market. This paper provides some theoretical reflections on the factors that are driving and impeding such a development and presents preliminary results from an ongoing research project that empirically traces the impacts of COVID-19 on the rental housing market based on an analysis of real estate listings in four large Austrian cities. We argue that a current shift to the regular rental market is likely, but that the medium- and long-term development is uncertain. Empirically, we demonstrate that such a shift has occurred in all four cities considered. We do not find evidence, however, that the increased rental housing supply has dampened rent levels.*

**Keywords:** short-term rentals; COVID-19; real estate listings; rental market.



Recent years have seen growing debate among housing researchers, practitioners, and activists about the impact of short-term rentals on housing markets (Clancy 2020; Cocola-Gant and Gago 2019; Yrigoy 2019). While companies like Airbnb argue that they provide a platform for occasional ‘home-sharing’ by residents, research has shown that, to a significant degree, the platform is used to permanently rent out entire apartments to tourists, without anyone else residing in the unit (Kadi et al. 2019; Crommelin et al. 2018; Wachsmuth and Weisler 2018). This has fuelled concerns that these units are withdrawn from the regular rental market, contributing to the shortage of affordable homes and the displacement of regular residents, particularly in urban centres with high housing demand.

The COVID-19 pandemic has altered the coordinates of this debate. In the context of travel restrictions and measures to curb the spread of the virus, international tourism has slowed down significantly in recent months and, in many cases, has come to a complete halt. The demand for tourism accommodations has thus dropped sharply. In some countries, the provision of tourism accommodations has even, at least for a time, been officially prohibited.<sup>1</sup>

The media was quick to speculate that COVID-19 would thus ease the housing shortage and relieve stress from housing markets. Former short-term rentals, which can no longer be rented out on the collapsed tourism market, would be returned to the regular rental market, increasing constrained supply (see e.g. Lindeman 2020 on Montreal; Wörz 2020 on Stuttgart; Quilan 2020 on Dublin; Aranda and Catà Figuls 2020 on Barcelona).

But will this be the case? In this short paper we, first, provide some theoretical reflections on the matter and, second, present some preliminary results from a research project that empirically traces the effects of COVID-19 on the rental housing market based on an analysis of real estate listings in four large Austrian cities.

## Theoretical considerations

In order to understand whether the pandemic will disrupt the business model of short-term rentals, it is necessary to consider what drove it in the first place, i.e. what made landlords convert regular rental units into permanent holiday homes. Three factors are crucial:

First, in many cities, short-term rentals provide significantly higher rents than regular rentals. In a recent analysis of Vienna, for example, we found that the gap between short-term rentals and regular rentals ranges from 136% to 177% of rent revenues on the level of city districts (Seidl, Plank and Kadi 2017). Comparable evidence is available for Canadian, North-American, and Mediterranean cities (Wachsmuth and Weisler 2018; Yrigoy 2018; Cocola-Gant and Gago 2019). Higher rent revenues are related to the greater purchasing power of tourists compared to local populations. This, however, can only be tapped through the available platform technology that allows landlords to easily find, and contract with, short-term tenants who usually reside in remote housing markets (Yrigoy 2018). Meanwhile, there is the additional financial advantage for landlords that little investment is necessary to convert a unit from a regular rental unit into a permanent holiday home (ibid.).

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<sup>1</sup> Austria is a case in point.



Second, short-term rentals offer much greater flexibility. While significant differences exist between countries depending on the specificities of rent regulation (Kettunen and Ruonavaara 2020), regular rentals usually have a minimum contract duration and some form of tenure security. Landlords, thus, do not have the unit at their disposal once they rent it out on the regular rental market (Cocola-Gant and Gago 2019). Conversely, with short-term renters, landlords can regularly decide whether using the unit as a holiday home is still the most rewarding option, or whether returning it to the regular rental market is more attractive. Meanwhile, the unit can also be sold tenant-free and thus at a much higher price. Furthermore, landlords can adapt more easily to changing market conditions with a short-term rental unit – for example, when the demand for tourist accommodations goes up. With longer-term contracts in regular units, this is more difficult.

Third, short-term rentals are subject to advantageous regulatory treatment in several contexts. Operating between the tourism sector on one hand and the housing sector on the other, platforms like Airbnb have enjoyed fairly lax regulation for considerable time, although this has begun to change more recently (Aguilera et al. 2019). For landlords, there often thus existed few regulations they had to adhere to, or that would hinder them in converting their unit. The most obvious advantage to regular rentals exists in places with rent regulation. The latter limits the rent landlords can ask from regular tenants, while for short-term rentals such a regulation does not usually exist.

How are these factors affected by the pandemic? The first factor, higher rents, is obviously affected significantly, as travel restrictions and the slowdown of international travelling leads to a sharp drop in the demand for tourism accommodations and therefore also a drop in revenues. The open question is how long this will last and whether the pandemic will structurally change international tourism patterns so that short-term rental demand remains at a lower level, or whether this will just be a short-term dip. If structural change happens, we may see a longer-term shift. If not, the units will most likely return to the short-term rental market soon. The second factor, higher flexibility, remains largely unaffected by the pandemic. Renting out on the regular rental market is still less flexible. This may, thus, serve as a barrier to properties being shifted back to the regular rental market. The third factor, advantageous regulatory treatment, has in some cases been altered or even reversed, when the letting of tourism accommodations was restricted or forbidden to halt the spread of the virus. This is likely to be a short-term measure, however, and these restrictions are likely to be lifted again once the pandemic slows down. A more lasting impact may come from the stricter regulations that some cities, for example in Europe, have recently announced independent of the pandemic to make short-term letting less attractive. This includes limits on the number of days that a unit can be rented out to tourists, as Paris (120 days; Paris.fr 2019), Berlin (90 days; Berlin.de 2020), and Amsterdam (30 days; Amsterdam Tourist Information 2020) have introduced. It may also relate to spatially differentiated rules that limit the number of short-term units in particular areas – for example, through a licensing system, as enacted in Barcelona (Ajuntament de Barcelona 2020; Aguilera et al. 2019).

Taken together, we may expect a certain shift from the holiday home sector to the regular rental market in the current context. Whether this will last in the medium or long term will depend, not least, on the development of the pandemic and related international tourism patterns, as well as on the regulatory environment for short-term rentals. At this point, we cannot yet empirically assess medium- to long-term developments. In the remainder of the paper we will, however, look at the current developments in four Austrian cities.



## Methods

Empirically tracing whether the pandemic has led to the return of short-term rentals to the regular rental market is methodologically challenging. The optimal data for such an exercise would include individual units and their letting status (touristic and residential) over time. As we did not have access to such data, we focused on real estate listing data. We observed changes in the supply of housing on the regular rental market. One obvious indicator is the number of available rental unit listings. The problem with such an indicator is that former holiday homes may not be the only source of additional listings, as available rental units may also come, *inter alia*, from new construction or from formerly vacant housing. While this may indeed be the case, it is also unlikely that many building projects are being finished and large amounts of vacant housing are being mobilised during the pandemic. To more definitely ascertain a link to the short-term rental market, however, we added an additional indicator and tracked the number of furnished unit listings. As permanent holiday homes are equipped with basic furniture, an increase in furnished listings would more clearly indicate a conversion from the holiday home market.

In addition to these indicators tracking the rental housing supply, we also conducted a preliminary analysis of the impacts of supply shifts on rent levels. If we follow the argument that a conversion of regular rental housing into short-term rentals has contributed to rising rents due to constrained supply in the past, we may expect that the reversal of this trend will also have dampening effects on rental prices. Whether there will be a longer-term impact on rents in this respect will, again, depend on the factors influencing the medium- and longer-term development of the short-term rental market discussed above. However, we tracked the most recent developments through the average gross rental price per square metre.

We focused on the Austrian context, a country with high numbers of tourism by international comparison. Airbnb activities significantly slowed down since the pandemic arrived in Austria. The average weekly number of new bookings went from some 17,800 in March 2020 to 10,460 in April.<sup>2</sup> In May, it was at around 14,600 bookings (AirDNA 2020). Moreover, as of 3 April, the Austrian government has banned the provision of tourism accommodations.<sup>3</sup> Our focus was on four large Austrian cities: Vienna, Graz, Innsbruck, and Salzburg. All four typically attract substantial numbers of tourists and Airbnb guests. The cities differ considerably in terms of size: Vienna is the largest city with about 1.8 million inhabitants, followed by Graz with about 440,000 inhabitants, Innsbruck with 310,000 inhabitants, and Salzburg with 150,000 inhabitants. Accordingly, the size of the housing market also differs.

We collected rental housing listing data through two of the largest online platforms for the Austrian market.<sup>4</sup> We included two to cross-check the results. While both platforms are

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<sup>2</sup> A booking, here, means the booking of an accommodation regardless of the duration of the stay and the time for which it is booked. Given that Airbnb letting was prohibited as of 3 April, most of these bookings were probably for the end of 2020 or even later.

<sup>3</sup> Tourism accommodations could still, as the law formulated it, be provided to guests already present on 3 April, if the accommodation was used for the purpose of care or assistance to others, for professional reasons, or to satisfy urgent housing needs.

<sup>4</sup> Hereafter *Platform 1* and *Platform 2*.



common for private and commercial real estate listings, *Platform 1* is more low-profile and more common among landlords that do not use professional letting agencies. Also, it typically lists more furnished ads. This is reflected in our sample: for the four cities, we collected, on average, 13,555 real estate listings per day on *Platform 1* and 12,301 listings on *Platform 2*. *Platform 1* had, on average, 2,400 furnished listings and *Platform 2* had 1,102 listings. Owing to data availability, our analysis of rent levels only included data from *Platform 1*. We collected data for 45 days, starting on 31 March 2020.<sup>5</sup> Our analysis period thus started several days before the date on which strict measures to curb tourism in Austria set in. The restriction to provide tourism accommodations was lifted on 29 May, three days before the end of our data collection. We have thus a quasi-experimental context in which to examine rental market data during strict tourism restrictions.

## Results

### Total number of rental housing listings

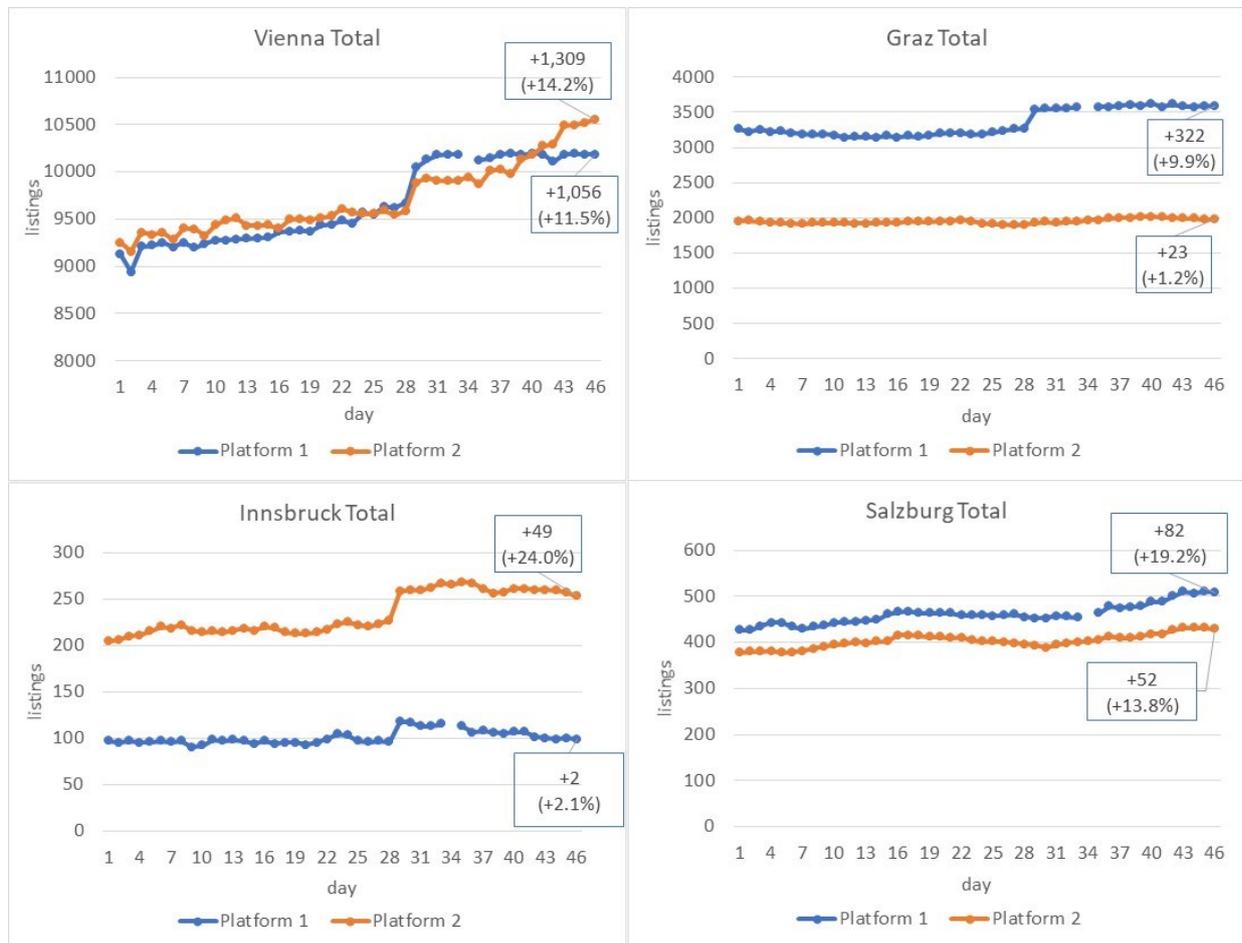
Overall, our data show similar trends on both platforms (see Figure 1), with somewhat greater differences in Graz and Innsbruck. The general trend is clearly towards more available rental housing listings, although the strength and stability of this trend differs in the four cities. In Vienna, it is pronounced and fairly stable. At the end of the 45 days, *Platform 1* showed around 12% or 1,000 listings more than on the first day. While there were fewer than 9,200 listings at the beginning, there were almost 10,200 at the end. *Platform 2* even had 14% or around 1,300 listings more, from some 9,200 to almost 10,600. In Salzburg, a comparable upward trend is observable, although, given the much smaller housing market, it is on a smaller absolute scale. Listings increased by some 20% or around 80 listings on *Platform 1* and by 14% or around 50 listings on *Platform 2*. In Graz and Innsbruck, a certain upward trend can be seen but is less clear. In Graz, listings increased by some 10% or 320 listings on *Platform 1*. On *Platform 2*, meanwhile, the listings remained fairly stable. The pattern is similar in Innsbruck, but applies in reverse to the two platforms.

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<sup>5</sup> Our data continue to 31 May 2020. For the first two weeks of May, no data collection was possible for technical reasons. This period is skipped in the figures below and explains the rapid increase in some of the figures around day 28.



**Figure 1: Total number of rental housing listings during the COVID-19 pandemic in 4 Austrian cities**



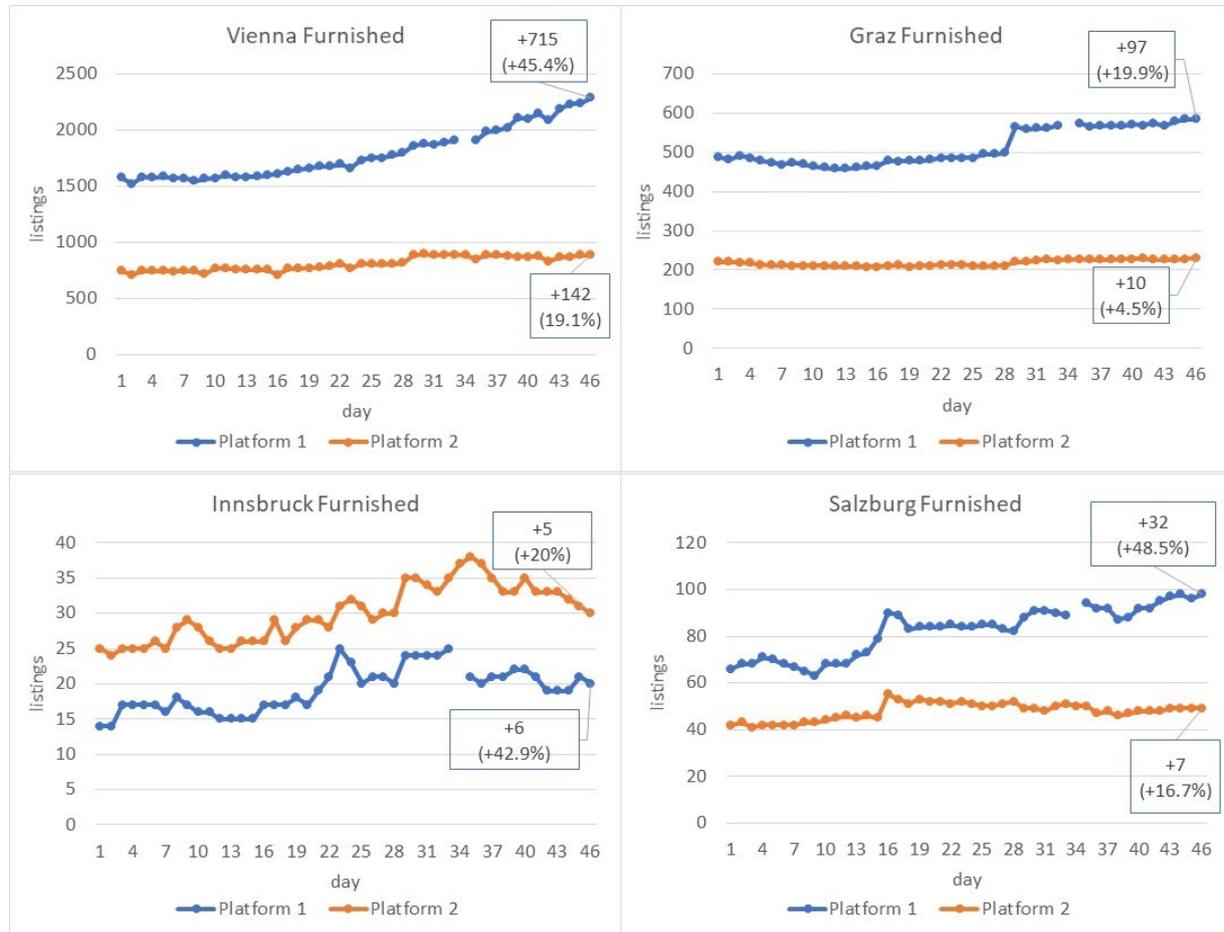
Source: Authors.

### Number of furnished rental housing listings

Like the total number of rental housing listings, the number of furnished rental housing listings also shows comparable developments on both platforms (See Figure 2). The strength of the development differs, though, with *Platform 1* showing a much stronger relative trend and a higher absolute increase in listings. This may relate to the above-mentioned fact that *Platform 1* is typically used more often for furnished listings. It should be noted also that the trends in Graz differ to some extent between the platforms.



**Figure 2: Number of furnished rental housing listings during the COVID-19 pandemic in four Austrian cities**



Source: Authors.

The general trend is clearly towards a significant increase in furnished rental housing listings. In Vienna, the development is particularly strong, with the addition of some 45% or 710 listings on *Platform 1*. The trend on *Platform 2* is similar, though less pronounced. In Salzburg, the relative increase is even more pronounced, although it starts from a much smaller absolute basis. Given the small absolute numbers, however, this should not be overinterpreted. In Innsbruck, a stark relative increase can be observed, but again it starts from a low absolute number of listings. In Graz, we can see an increase particularly on *Platform 1* of around 20%, from some 500 to almost 600 listings. On *Platform 2* this is less pronounced. Again, the difference may relate to the higher relevance of *Platform 1* for furnished listings.

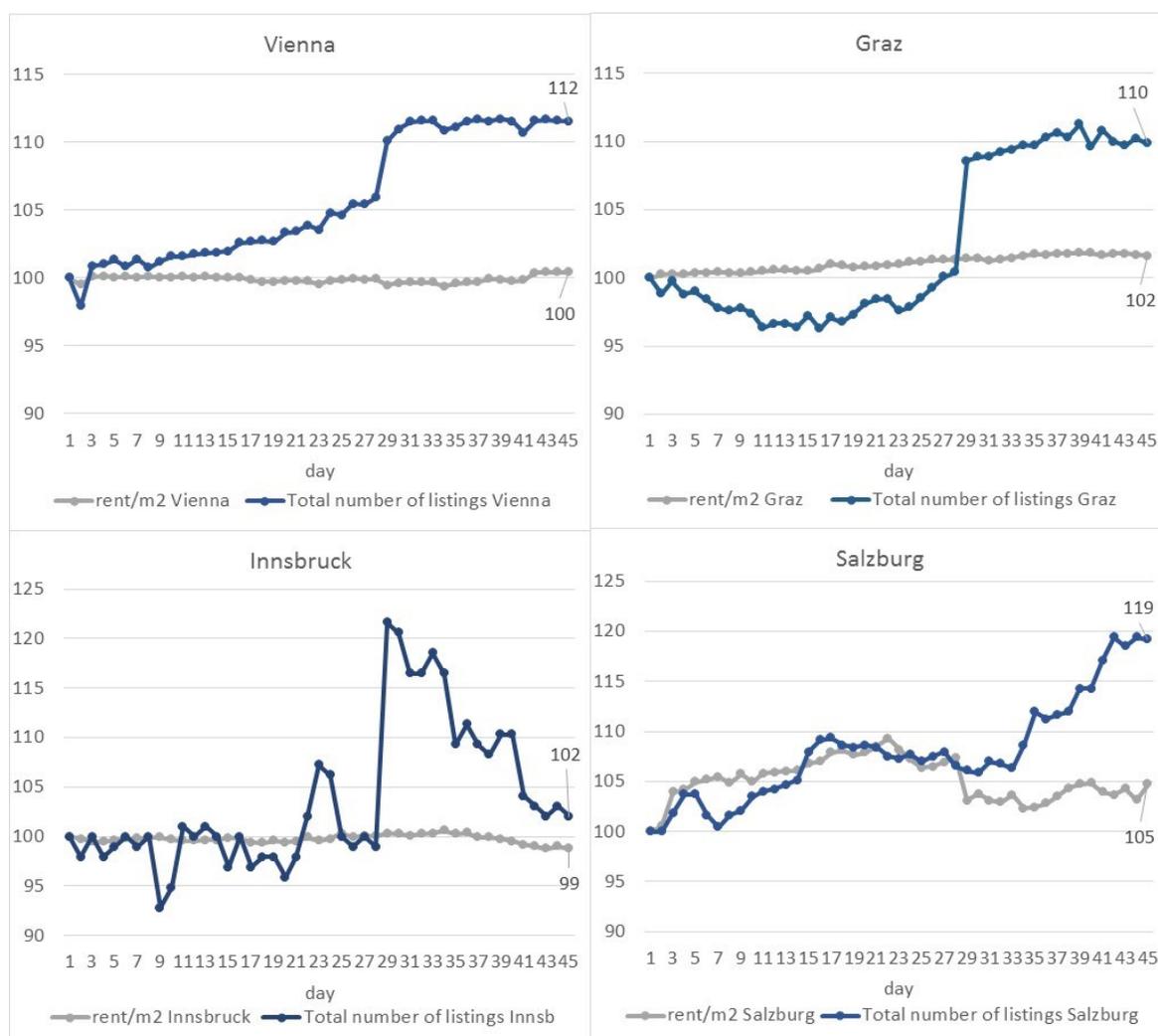
While an increase in rental housing listings could theoretically relate to new housing construction or the mobilisation of formerly vacant housing, this is rather unlikely to happen during a pandemic on a significant scale. There are thus good reasons to interpret the observed patterns as, indeed, related to the conversion of holiday homes to regular rental housing. The argument is particularly strong for furnished dwellings, as the furnished status clearly points to a dwelling’s former use as a holiday home.



### Impacts of supply shifts on rent levels

Remarkably, the observed supply shifts did not lead to lower rents. By contrast, in three out of four cities rents remained stable (Vienna) or increased slightly (Graz, Salzburg), despite growing supply. Only in Innsbruck there was a decline, though a relatively minor one, but this was the city with the lowest (!) increase in listings. The tested relationship is thus not there. One explanation might be that we do not control for housing quality and location and our sample might thus have changed over time towards listings with higher quality and a better location and thus higher prices. This is rather unlikely to occur across the four cities, though. Another explanation might be that there is a time lag and rents have not yet decreased. A third possible explanation is that the increase in listings is limited in relation to the overall market, while housing demand has remained high. Landlords may have thus decided not to lower rents, despite a certain expansion in supply.

**Figure 3: Number of total rental housing listings and average gross rents per m2 during the COVID-19 pandemic in four Austrian cities, index (day 1 = 100)**



Source: Authors.



## Discussion and conclusion

Our analysis shows an increase in rental housing listings and furnished rental housing listings that is fairly consistent across the two observed platforms in the four cities considered. While the relative and absolute scale of the development differs between the cities and partially also between the platforms, in Vienna and Salzburg in particular we see a fairly clear upward trend for both indicators. This suggests that in recent weeks a number of property owners have reconsidered their decision to use their units for touristic purposes and converted them back to the regular rental market. Our data show, however, that this has not led to a decrease in rent levels, with rents in three out of four cities remaining stable or even increasing. We have discussed the different reasons as to why this may be the case.

The sharp drop in tourism demand and related potentials to earn any returns with a holiday home on one hand and the pandemic-related regulations to restrict the letting of tourism accommodations on the other hand have suddenly made holiday homes much less advantageous for property owners than before the pandemic. Consequently, a shift to the rental market would be expected. We have argued that the medium- to long-term outlook is not clear, however, and will depend *inter alia* on how long the pandemic will last, whether it will structurally disrupt international travel patterns, and whether cities will implement stricter regulations for short-term rentals. As the pandemic progresses further, we will be able to empirically assess what will happen. Given the impact that short-term rentals can have on the affordability and accessibility of housing in large cities, this should be a key concern for housing research in the months to come.



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