# "Short-term rentals with a **well-equipped kitchen** and **small** capacity are better positioned to face the change in COVID-19 guest behavior."

# COVID-19, social distancing and guests' preferences: impact on peer-to-peer accommodation pricing

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### 1 Intro

- The COVID-19 outbreak has stopped the exponential growth of short-term rentals in recent years.
- The fear of contagion may impact the guests booking decision across the different types of accommodations
- The availability of kitchen amenities, the greater privacy and independence and the absence of common areas shared with other customers may create a safe environment in short-term rental accommodations due to the possibility of preserving better the social distancing.

# 2 Objectives

- To check whether the implicit prices of a selection of social distancing attributes, i.e., the size, the kitchen amenities and the accommodation type (shared or entire apartment) changed during the COVID-19 crisis.
- To detect potential non-linear effects of the continuous short-term rentals price determinants, whether they are geographic coordinates or attributes of short-term rental units in a hedonic regression framework.

### 3 Results

- Social distancing attributes matters: Smaller and well-equipped kitchen listings are better positioned to host COVID-19 travellers.
- Strong non-linearieties in Airbnb price determinants: Relaxing the linear assumption allows to correct for spatial dependencies in the urban sprawl and reveal turning points in the Airbnb characteristics. As such, the largest operators in the market in terms of number of listings offer lower rental price than the smaller hosts.
- Hotel vs P2P accommodation: In the short-run, home-sharing platforms can cope better with the change in COVID-19 guest behavior than traditional accommodations. Yet, the lack of standardization in peer-to-peer host practices may negatively impact the guests' safety perception, especially when the sanitation practices are a firstorder issue.

## Methodology

### **Empirical strategy**

- Hedonic model: the rental price can be decomposed as the sum of implicit prices for its individual attributes, i.e., the number of rooms, the location, hosts' characteristics...etc.
- $\begin{tabular}{ll} \bf Non-linearities: & Relaxing the linearity assumption, i.e., if $x$ increase one unit, $y$ would change by $\beta$ regardless the initial level of $x$. by using splines. They are special functions defined piecewise by polynomials that are joined together at some specific locations also known as knots. \\ \end{tabular}$

### Data

- Unit of analysis: Airbnb listings for the city of Madrid
- Source: Web scraped data from Inside Airbnb
- Time period: August 2019 and August 2020
- Sample: Whole (all listings appeared either in Aug 2019 and Aug 2020) and restricted (listings present in the platform for Aug 2019 - Aug 2020).
- Key Variables:
  - Airbnb price rate
  - $\begin{tabular}{ll} 2. & The room type (entire apartment vs shared/private room) \end{tabular}$
  - 3. Availability of a well-equipped kitchen (oven, dishwasher and refrigerator)
  - 4. Size of the accommodation
- Control Variables: Number of reviews, review score ratintg, age of the listing, number of listings manged by the same host and listings coordinates
- Tabla I: Sample descriptive statistics for active Airbnb listings, city of Madrid, August 2019 and August 2020.

|                           | Whole sample Restricted sample |           |
|---------------------------|--------------------------------|-----------|
| Variable                  | N = 14,420                     | N = 3,190 |
| Average price, 2019       | 76.45                          | 77.92     |
| Average price, 2020       | 57.75                          | 56.77     |
| Aggregate price variation | 24                             | 27        |
| Supply, August 2019       | 11,423                         | 1,595     |
| Supply, August 2020       | 2,997                          | 1,595     |
| Supply variation          | 0.73                           | -         |



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