

Temporary Space Analysis of the Professionalization of tourist rental platforms after Covid19 through Markov Chains. Madrid Case Study

Sustained growth of tourism in Spain, holiday rental platforms were emerged under the protection of this positive development of the sector and as a new business niche. The collaborative consumption and the platform economy that were linked to urban tourism had played an important role in the reorganization of daily economic and social life in tourist cities.

In this context, Airbnb has been one of the most studied examples of vacation rental platforms, the success of short-term rentals is explained not only because owners can earn more income by renting to visitors than to permanent residents, but also, due to a series of advantages inherent to the flexibility of this market, which is having control over the home.

However, some research indicates that the Airbnb model is far from being the model it claims to be. The touristification model is the one that best adapts to the platform's business plan since in reality hosting on Airbnb is carried out professionally and continuously over time. In most of the properties offered on the platform, the accommodations are not offered in the main residence of the hosts, but in homes whose function is to be rented on Airbnb or on other tourist platforms. This model dynamizes and expands the touristification processes that already existed in cities outside of Airbnb.

Some cities in Europe, in order to reverse the effects of the professionalization of tourist rental platforms, have begun to follow sustainable urban tourism policies based on land use planning, protected housing, commercial regulation, rental zoning tourism, and mobility strategies. In Spain, specifically in Madrid during 2019, a Special Plan for Residential Uses is established that divides the city into four zones through the implementation of three concentric rings. These rings start from the Puerta del Sol, an emblematic place in the city and that for politicians is the epicenter of tourism in Madrid. The objective of this plan was to control the proliferation of tourist apartments in the areas with the greatest presence of these.

However, as a result of the global pandemic of Covid-19, the World Tourism Organization has estimated falls in tourism activity of more than 20% in 2020, said decrease has had direct consequences throughout the chain of tourism services, including rental platforms.

Before the Covid-19, Madrid was the second city in Spain with the largest number of Airbnb tourist accommodation, whose main effects were reflected in a decrease in the stock of housing available in some neighborhoods of the city, as well as the increase in the price of housing and rent. However, with the decrease in the arrival of visitors and a fall in tourist rental apartments during the first quarter of 2020, short-term rentals were expected to disappear, moving from being temporary housing to becoming long-term rental housing, and somehow balance the housing market that had seen thousands of homes lost on the fault of Airbnb.

Thus, the objective of this research is to analyze the professionalization of Airbnb in the city of Madrid before and after Covid-19 in the four areas established by the Special Plan for the Use of Accommodation in the city of Madrid and to determine if the Covid -19 influenced the behavior of the professionalization of tourist rental platforms in a similar way throughout the city. While there are studies looking at the impacts of pandemics on tourism, these tend to be based solely on service providers. Focusing on the implications of tourism in the residential market from the changes in tourist apartments, the main contribution of this research is to contribute to the literature on the

behavior of tourist rentals after the episode of restrictions on national and international mobility derived from Covid-19.

In order to determine whether Covid-19 modified the professionalization of Airbnb's offer and reconfigured the tourist rental market with implications for the residential rental market, data were obtained from the INSIDE Airbnb data repository of the city of Madrid for the years 2015- 2021, geographically processed with the help of GIS software to quantify the total number of Airbnb accommodations in each neighborhood of the city (128 neighborhoods in total) since the complete houses used on Airbnb have greater implications in the rental market, we take as a study variable, the weight of complete accommodation versus total residential housing (ratio of complete Airbnb houses over total residential housing).

We use spatial Markov Chains to model changes in the professionalization of Airbnb accommodations, this technique has been used before in models of population growth and wealth distribution, but has not been used before to model the nexus between the pandemic and the tourism (related to the growth of tourist rentals). The Markov Spatial Chains Methodology proposed by Vallone and Chasco (2020) was used, which consists of 6 steps; the first is based on the construction of density functions for each of the years of the period and the exploratory spatial analysis. In the second and third steps, the growth process of professionalization is modeled through a first-order stationary Markov chain where the effects of spatial and global autocorrelation on the transition probabilities are evaluated. The fourth, fifth and sixth steps carry out an in-depth analysis to detect the existence and interaction of spatial regimes in the direction of movements and classification in the mobility of distribution of the professionalization of Airbnb, the above could be developed thanks to the software package R.

The results suggest that during 2020, the professionalization of Airbnb tourist apartments did experience changes and had different behaviors for each zone of the Special Accommodation Use Plan. The results show that zones 1 and 2 (areas with the greatest presence of Airbnb and that correspond to the city center) were the ones that showed the least changes in the professionalization of the offer of Airbnb, however, zones 3 and 4, which are those where Airbnb's offer is more dispersed, were the areas where Covid-19 hit short-term residential accommodation the hardest.

The conclusions show that the areas where Covid-19 did not have significant effects is due to the fact that a large part of Airbnb's offer is in the hands of professional operators who view the short-term rental market as a real estate investment opportunity, while the areas that are further away from the downtown area of the city and suffered the effects of covid-19 in terms of a decrease in accommodation can be explained by the fact that the homes are owned by private hosts, who saw in the long-term rental market a way to monetize their properties.

However, in general conclusions, the short-term rental market probably increases the possibility of speculating with housing. Landlords no longer need tenants to earn rental income, unless they agree to short-term contracts. Digital platforms and the use of technologies for real estate management allow owners to speculate on homes for a few months while waiting for the market to resurface, as was the case in the summer of 2020 when domestic tourism was allowed in Spain, as well as in the rest of the countries of the European Union. The current pandemic is accelerating the movement of apartments that were supposed to be long-term rentals.

Despite the pandemic, in the areas with the highest Airbnb load, it is possible to understand that housing has directly lost its social function to become a means of speculation.

Key words

Spatial Markov Chains, Airbnb, Professionalization, Covid-19

JEL Classification

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