## EXTENDED ABSTRACT

## HABITABILITY AND AIRBNB: HOUSING RENTALS IN MADRID'S CENTRO DISTRICT

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Since the outbreak of the world crisis in 2008, the Spanish economy's touristification has intensified. In this context, the city of Madrid has also gained in importance as a tourist destination, with the phenomenon of tourist rentals of housing playing a key role in growing urban tourism within the cities of the Global North.

This paper attempts to analyse tensions between rentals of housing to tourists and longterm housing rentals in Madrid's old quarter, which corresponds to the administrative unit known as Centro district. This study uses statistical techniques, such as multivariate factor analysis, Pearson's correlation using IBM SPSS Statistics, and spatial analysis with Arc-GIS. These quantitative and spatial analyses allow us to visualize and quantify variables related to short-term tourist rentals (Airbnb) and long-term rental accommodation in the said area. The rent gap is calculated following the method deployed by Wachsmuth and Weisler (2018). The data used for this study was obtained by web scraping different sites.

From a housing value perspective, short-term tourist rentals offer far higher returns, generating a boom in this type of accommodation to the detriment of the other. This kind of dynamics also leads to an escalation in tensions between visitors and local residents over the right to the neighbourhoods.

One of the main features of this kind of tourism exploitation is the growing incentive to convert all dwellings into tourist accommodation, thus pushing up the volume of tourists and touristifying certain neighbourhoods to hitherto unseen levels. Although tourist rentals can be found throughout the whole city of Madrid, following an oil spill spatial pattern, it is in the old quarter where over half the total Airbnb tourist rentals is concentrated.

Starting out from the hypothesis that the boom in tourist rentals is detrimental to longterm housing rentals, we sought to answer the following research questions: 1) What is the socioeconomic level of the local population and intensity of Airbnb tourism in the neighbourhood Centro district, and how does it affect local residents' resilience to the Airbnb phenomenon?; 2) What is the spatial distribution of tourist rentals and how does it overlap with long-term rentals in the Centro district?; 3) What is the rent gap between tourist and long-term housing rentals?; 4) Can tourist rentals influence real estate prices? Outlined below are the results of our study in response to the above questions.

Firstly, a multivariate factor analysis was conducted for the socioeconomic characterization of the six different areas that make up the old quarter, based on nine quantitative variables. From this, two different factors were extracted: the socioeconomic level and intensity of Airbnb. In the first case, the Embajadores area displays the lowest socioeconomic level and highest poverty in Madrid's old quarter, followed by the Palacio, Universidad and Sol areas in the middle, and the Cortes and Justicia areas with the highest levels. As for the intensity of Airbnb rentals, Sol and Embajadores are the neighbourhoods with the highest pressure by Airbnb, while Palacio, Cortes and Justicia have a low intensity of Airbnb rentals. The influence of tourist rentals on these areas is confirmed, particularly in the ones with lower socioeconomic levels, like Sol, and above all in Embajadores, because these socioeconomic conditions make them more vulnerable to the pressure exerted by Airbnb.

Secondly, an analysis was made of the spatial distribution of housing by types of use, in addition to the consequences of Airbnb on the old quarter's real estate market. In this case, we calculated the ratio of tourist rentals to long-term housing rentals at the census section level. Based on the numbers of rentals advertised on Airbnb in the month of June 2018 and the stock of rental residential dwellings collected in the 2011 Census records, the percentage of accommodation advertised on Airbnb was found to be as follows: 12.15% of all housing in Universidad; 12.97% in Embajadores; 13.46% in Justicia; 13.78% in Palacio; 18.20% in Cortes and 37.34% in Sol. Although the Airbnb values are quite high in all these areas, the amount of housing now dedicated to tourist accommodation in Sol is incredibly high.

Thirdly, the rent gap generated by tourist rentals in the Centro district was calculated, using two indicators: the average rent of long-term rental properties and the average income earned by the owners of whole homes advertised on Airbnb. When the rent gap is closed to zero it means that there is no rent gap, whereas when this is closed to 1 there is a high potential for home owners to put housing in its best use in terms of profits. The rent gaps of the different areas are very wide, because they are very close to 1. The results were as follows: 0.70 for Universidad; 0.70 for Sol; 0.69 for Embajadores; 0.69 for Palacio; 0.68 for Cortes and 0.63 for Justicia. This wide rent gap makes the revenue from tourist rentals greater than the revenue from long-term rental properties. Consequently, there will not be a natural decrease in tourist rentals in the old quarter, because the profits are much higher than those of long-term housing rentals.

Fourthly, the drop in available long-term rental properties is pushing up these rental prices, and, at the same time, Airbnb tourism rental prices are also thought to be influencing the price charged for long-term rents. In order to verify whether tourism rental prices have a statistically significant influence on the real estate housing market in Madrid, we conducted a Pearson's r correlation study. The obtained results show that there is a positive high correlation among the price of long-term housing rentals, the price of second-hand

housing and the price of tourist rentals. An r of 0.819 was obtained for the correlation between the price of tourist rentals in 2018 and the price of long-term housing rentals for the same year, proving that the rise in tourist rentals raises the price of long-term rents. Moreover, an r of 0.902 was achieved for the correlation between the price of second-hand housing and the price of Airbnb rentals in 2018, confirming the hypothesis that Airbnb affects real estate prices.

Given the results of the study, it is not hard to see that the final step in the expansion of tourist rentals will be the expulsion of local residents from rented accommodation in the city, with the first to be affected by this process of gentrification being those with a lower purchasing power. Likewise, tourism also boosts gentrification through a process of accumulation by dispossession, because the monopolization of housing and revenue from these rentals leads to the displacement of the local population.

In addition, in the management of the economic crisis, housing financialization mechanisms have been strengthened, reflected in Madrid's case through Blackstone investment fund's penetration of the housing market, and it is now the biggest owner of housing following the privatization of public housing. Hence, two complementary capital-driven dynamics can be said to have affected the popular classes and deprived them of housing: investment funds in the southern districts of Madrid and Airbnb in the old quarter.

Tourist rentals marketed on platforms like Airbnb have led to the over-exploitation of housing, with tourism taking over cities in the Global North. Madrid's old quarter is an example of this, with its Centro district turning into a tourist area and concentrating the highest number of Airbnb rental properties. The places where there is the biggest clash between long-term housing rentals and tourist rentals are the areas in the Centro district, in particular Sol and Embajadores.

Airbnb's geographical distribution throughout the city of Madrid shows the strong hold it has gained over the city, because Airbnb rentals have had full freedom to expand wherever and however they have wanted. This has brought about a rise in housing prices, a spectacular increase in the rent gap, tourism gentrification and the expulsion of local residents.

Failure on the part of the public authorities to reduce real estate speculation has had highly damaging consequences for both the city –by making it less habitable– and for local residents, who have been expelled from local neighbourhoods. Although today's catastrophic situation is the outcome of a complex set of heterogeneous factors, it is possible to identify the main underlying variables. We therefore believe that the public authorities must cease to prioritize tourist rentals in order to ensure the entire population's access to housing.