Airbnb distribution may depend on who lives there, not just distance to city center

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Distribution of Airbnbs may follow the same pattern across different cities, and several factors, including the number of residents who work in the creative industries, may determine their location, according to an article published in *EPJ Data Science*.

Dr. Giovanni Quattrone, corresponding author at Middlesex University, UK said: "Previous economic models have overly emphasized the importance of the distance from the city center. Yet, we find that other factors may be just as important , for example the presence of educated, creative workers and what we call bohemian people, which some scholars refer to as the 'creative class'."

The researchers investigated the distribution of Airbnb rental properties in relation to geographic, social and economic conditions of neighbourhoods across eight US cities: Austin, Los Angeles, Manhattan, New Orleans, Oakland, San Diego, San Francisco and Seattle.

The consistent pattern of Airbnb distribution they found allowed the authors to build a predictive model that could potentially allow them in future to predict where Airbnbs are likely to be located in another city. This predictive model was validated by predicting the Airbnb distribution in the eight cities in the study, which the authors were able to do with high accuracy. The model may be useful for regulators of Airbnb, aiming to create policies to help prevent an excessive number of short-term rentals in the same neighbourhood, while encouraging the growth of Airbnb in areas where the economy would benefit from more guests.

Dr. Quattrone said: "One of the key findings of this study was the striking consistency of the results across the eight U.S. cities we investigated. We specifically selected these cities because they vary in size, population composition, wealth, and cost of living. Given these differences, the consistency we have observed suggests that, to a certain degree, our model could be applied to cities that have not been previously analysed, predict the spread of Airbnb properties across that city, and suggest reasons for Airbnb distribution."

To build their model, the researchers downloaded all of the Airbnb

listings in each location and measured distance to the city centre, along with geographic and socioeconomic factors, including transport links, average household income, residents who work in the creative industries and distances to public places of interest.

The authors caution that although the eight cities studied capture a variety of socioeconomic conditions, all are located in the US, so the findings may not be generalizable to cities in other countries.

More information: Giovanni Quattrone et al, Analyzing and predicting the spatial penetration of Airbnb in U.S. cities, *EPJ Data Science* (2018). DOI: 10.1140/epjds/s13688-018-0156-6

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