Estimating the occupancy rate of non-traditional accommodation. The case of Airbnb.

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Abstract

In the last few years a growing interest for what is commonly known as “sharing economy” has been recorded in academic research, media and everyday public discourse. Sharing is nothing new; what is new is the scale and the penetration of these experiences into daily life, stemming from the huge development of Internet platforms and mobile applications which expanded the concept of community to the global level. Online platforms currently offer several kinds of products and services but sharing economy marketplaces have flourished particularly within the field of travel and tourism, in which locals supply services to tourists (Ert et al., 2016). As tourism is with no doubt one the sectors most affected by the introduction of ICT and, for this reason, it is in continuous adaptation with new trends, the constant renewing and the change in the social paradigm encourage people to choose alternative types of tourism far away from the traditional schemes.

There is no question that Airbnb is the undisputed posterchild of this new “collaborative tourism”. On a global level, this commission-based web-platform, is now surpassing the major hotel chains in term of beds availability, and its disruptive power on tourism destinations and competitors, has been probably understood with a massive delay (Oskam and Boswijk, 2016).
This paper analyses a very important case-study for international tourism, the Balearic Islands, by assessing and evaluating the dimension of AirBnB offer and demand in the accommodation sector of the islands, and to provide insights for tourism policy and planning.

By performing statistical analysis on a rich panel of 32,000 observations (data has been collected through Airdna throughout empirical investigation by applying different methodologies.) we studied the occupancy rate of Airbnb listing during the summer season 2016. Thanks to the availability of daily data, precise geographical location, host characteristics and other internal and external features, we can provide a detailed analysis of the determinants of demand and in some sense of the “success” of the listings published. Within those drivers we dedicated special attention to price, location, online reputation and performance of the “competitors”.

Due to the distribution of the dependent variable, which has fractional nature and its skewness to the left, due to the massive presence of zero, implementing basic linear models as well as pure binary ones would generate critical concerns.

For this reason, we implemented a mixture discrete-continuous model in the light of our belief that there is something qualitative different between listings that have been booked, at least sometimes, and listings that presented an occupancy rate equals to zero. This will shed light on what tourists are willing to book (and pay for) as well as which are the characteristics that makes a property totally undesirable in eyes of travellers.

This paper will not bring only further knowledge about the Airbnb phenomenon, provide insights for destination tourism policy and planning but will represents an improvement in the methodology used thanks to the accurate treatment of price endogeneity, which implies non-trivial effect while interpreting estimates and elasticities, the choice of an ad hoc functional model and the reliability of data.