Airbnb in major cities: Analysing the spatiality of peer-to-peer accommodations using GIS-based raster representation

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Abstract

In recent years, the development of digital technologies and the diffusion of ICT worldwide alongside with the growth of Web 2.0 have facilitated and enabled the emergence of peer-to-peer (P2P) based online platforms that promote user-generated content, sharing, and collaboration. These platforms and marketplaces are byproducts of a larger economic-technological phenomenon called the sharing economy. P2P marketplaces associated with sharing economy operate particularly within the field of travel and tourism. The most popular P2P rental site is Airbnb, which since its foundation in 2008 has grown extremely rapidly and now surpasses the major hotel chains in accommodation offered and market valuation and is present in more than 34 000 cities in 191 countries. In this study, we seek to understand how the proliferation of Airbnb is shaping the short-term rental markets of major cities, which areas are more affected and whether there is any spatial concentration. The central question of the research is that how the different social and geographical indicators influence the spatiality of Airbnb in major cities. To display the changes we utilized a mapping method that visualize the spatiality of Airbnb using a raster image visualisation taking into consideration different social and geographical indicators. The results may reveal the positive and negative side-effects of Airbnb. Moreover, we can locate those parts of the cities, which have seen the greatest pressure from tourism or "touristification" and its negative impacts on cities and residents. Finally, we conclude with implication for design and future research.

Keywords: peer, to, peer accommodation, GIS, Airbnb, sharing economy, global cities

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