

## Research Objectives

The aim of the research project is to identify and analyse local differences in the development and functioning of Airbnb networks in comparison to the traditional hotel industry. The analysis focuses on the characteristics of Airbnb networks and traditional hotels in selected capital cities of the European Union with intensive tourism. The research proposal is motivated by the assumption that the increasing importance of Airbnb in tourism services has a significant impact on the sustainable development of cities and on the usage of housing assets.

Consumption habits and the provision of services are undergoing significant changes in the recent years. The development of information and communication technology (ICT) enabled the emergence of online platforms. Due to the wide adoption of smart devices and the expansion of 4G networks, the usage of platforms in services provision strongly increased. As transaction costs are significantly reduced by online platforms, almost anyone can provide services outside the formal services sector. Peer-to-peer services (*consumer-to-consumer* services) provided via platforms gained significant market shares and seem to be substitutes for services provided by traditional firms. As a result, online platforms changed the functioning of markets both at the local and global level. The research proposal is examining the changes in the hotel services.

## Methodology

The empirical analysis will be based on advanced *data-science* tools, implemented for the construction of the data base, data visualisation and statistical analysis. The project is based on the analysis of big data, obtained from websites with the usage of *web-scraping* techniques. Web-scraping is an innovative method of collecting unstructured data from websites with the usage of a web-crawler.

Various sources of data will be used for the analysis: Airbnb.com, Booking.com (popular platform for traditional accommodation providers) and Tripadvisor.com (platform collecting tourist attractions). The analysed platforms are leading in their services and they are recognisable across Europe.

To verify the research hypotheses, the author will employ various statistical methods, including Exploratory Spatial Data Analysis (ESDA) and hedonic regression. For data visualisation, among other techniques Kernel Density Estimation (KDE) will be used.

The analysis will include EU capital cities with intensive tourism. In order to involve all major geographical areas of the EU (touristic Iberian Peninsula, Central-Europe, Visegrad countries, Scandinavia, Balkans etc), the analysed cities will be selected from every region. The minimum number of analysed cities will be 10.

## Discipline-Contribution

The proposed research project aims to contribute to the literature with the following:

1. Compare the spatial distribution of Airbnb and traditional accommodation providers;
2. Determine whether the services provided via Airbnb are complementary for the traditional hotel industry, and reveal the differences between them;
3. Analyse the impact of Airbnb on the sustainable development of cities and tourism;
4. Present the sharing economy's level of development across the European Union.