

Exploring sources of satisfaction and dissatisfaction in Airbnb accommodation using unsupervised and supervised topic modelling

ABSTRACT

This study aims to examine key attributes affecting Airbnb users' satisfaction and dissatisfaction through the analysis of online reviews. A corpus that comprises 59,766 Airbnb reviews from 27,980 listings located in 12 different cities is analyzed by using both Latent Dirichlet Allocation (LDA) and supervised LDA (sLDA) approach. Unlike previous LDA based Airbnb studies, this study examines positive and negative Airbnb reviews separately, and results reveal the heterogeneity of satisfaction and dissatisfaction attributes in Airbnb accommodation. In particular, the emergence of the topic “guest conflicts” in this study leads to a new direction in future sharing economy accommodation research, which is to study the interactions of different guests in a highly shared environment. The results of topic distribution analysis show that in different types of Airbnb properties, Airbnb users attach different importance to the same service attributes. The topic correlation analysis reveals that home like experience and help from the host are associated with Airbnb users' revisit intention. We determine attributes that have the strongest predictive power to Airbnb users' satisfaction and dissatisfaction through the sLDA analysis, which provides valuable managerial insights into priority setting when developing strategies to increase Airbnb users' satisfaction. Methodologically, this study contributes by illustrating how to employ novel approaches to transform social media data into useful knowledge about customer satisfaction, and the findings can provide valuable managerial implications for Airbnb practitioners.

Keyword: Customer satisfaction; Sharing economy; Airbnb; Text mining; Supervised topic modeling; Big data; User-generated content