Literature Review:
Does Superhost Accreditation Benefit Airbnb Hosts in Chicago? If so, How?

Yongfei Lu

April 29, 2020

1. Introduction

First proposed by Michael Spence in 1973, signalling theory has made a fundamental impact on our understanding of transactions in the market. According to him, educational credentials serve as reliable signals to employers when they are making hiring decisions in the labor market (Michael, 1973). Scholars further explore the mechanisms under the hood and find that adverse selection in the eBay online market caused by information asymmetries can be mitigated by rich information exchange through bandwidth and technology (Gregory, 2011). Recently, a new form of economy unrolls swiftly in online markets via the platforms like Airbnb, which is named 'sharing economy'. It has been claimed that one standard deviation increase in Airbnb listings is associated with a rise in asking rents of 0.4% in Boston (Keren and Mark, 2017). This, consequently, leads us to questions like how these establishers and lessors apply the signalling theory, consciously or unconsciously, to build up their own businesses on the Internet. To emit positive signals to consumers, Airbnb has launched the Superhost program since 2019, which automatically certificates those mostly dedicated to providing outstanding hospitality service as superhosts. The focus of the research, therefore, is to explore whether the superhost accreditation benefits Airbnb hosts in the city of Chicago and how the mechanisms work if it is the case.

2. Important Room Features

A myriad of research has been done revolving the important attributes that make a room stand out in the market. Even though consumers tend to evaluate their living experience based on past hotel stays, their evaluation standard varies across different cities and differs from that of conventional hotels. Considering the complexity of the relationship between determinants and room price, non-parametric approaches, such as random forest and decision tree models, are employed to identify the critical factors (Manojit and Subrata, 2019). This inspires the researcher to use the decision tree and KNN models to explore what room features are mostly associated with price setting. In addition, large volumes of review comments have also become a valuable asset for researchers to extract consumers' emotions from via machine learning methods. Through sentiment analysis, 'location', 'amenities' as well as 'host' are the 3 important factors that contributes to a good living experience for tenants, while 'noise' is mostly likely to cause unpleasant comments (Mingming and Xin, 2019). As situations can vary across cities, the researcher would like to employ the same method to investigate how various room features impact travelers' living experience in the city of Chicago. In particular, combined with the Chicago's crime data, the researcher is keen to check how heavily safety concerns are considered by the short-term tenants.

3. Price Setting and Revenue

In literature, there are contradictory opinions and assessments on the brand effect. Using the 13-month panel dataset on 1998-99 Internet shopping behavior, researchers show that information use for price comparison weakens the pull of brand by reducing shopping at concentrated branded retailers by approximately one tenth (Waldfogel and Chen, 2006). In the case of Airbnb, where price comparison is allowed and within easy reach, we can reasonably

regard superhost accreditation as the special ‘brand’, or positive signal. In the hedonic price regression model, reputational aspects of the rooms, including rating scores and duration of membership, are found to be associated with economic reward (Timm et al., 2017). However, report from AirDNA shows that on the whole, superhosts charge less on a nightly basis but enjoys higher occupancy rate (Scott, 2018). Another research, based on 33 cities listed on Airbnb.com, is contradictory to this and demonstrates that hosts with superhost status, more listings and verified identities usually set prices at a higher level since these are regarded as a kind of quality signals (Dan et al., 2017). As stated before, cases vary across locations. Such difference in research conclusion stems from use of distinct datasets which includes data for different cities. In this case, to develop a clear picture of Chicago, we have to only rely on the dataset of Chicago.

4. Conclusion

In conclusion, the literature stated above gives an inspiration for the researcher to explore the situation in the city of Chicago. We will firstly apply the decision tree model and sentiment analysis to extract major room features to which consumers attach great importance. On top of this, we’ll then explore how hosts’ revenue is impacted by these features with superhost status as a critical explanatory variable. If superhost status does exert a significant influence on revenue, we’ll further explore the underlying channels by studying what attributes separate superhosts from common ones. In this case, KNN model will be useful to classify hosts and check whether superhosts charge more. The machine learning methods subtly circumvent the limitation of using linear regression models and thus can more precisely capture the relationship between superhost status and revenue in the city of Chicago.

The major contribution of the research is to give a big picture of Chicago's online rental situation by applying the computational research method. With the regionally specific mechanism uncovered, the research can provide local hosts with effective guidance on how to improve their room facilities and operations so as to gain more from the short-term tourism boosted by the sharing economy. Besides, consumers can also benefit from the guidance through making wiser consumption decisions if they know about the true value of superhosts' room to them.

References

Michael Spence, “Job Market Signaling,” The Quarterly Journal of Economics, 1973, 87(3), 355-374.

Gregory Lewis, “Asymmetric Information, Adverse Selection and Online Disclosure: The Case of eBay Motors,” American Economic Review, 2011, 101 (4).

Keren Horn, Mark Merante, “Is home sharing driving up rents? Evidence from Airbnb in Boston,” Journal of Housing Economics, 2017, 38, 14-24.

Manojit Chattopadhyay, Subrata Kumar Mitra, “Do airbnb host listing attributes influence room pricing homogenously?” International Journal of Hospitality Management, 2019, 81, 54-64.

Mingming Cheng, Xin Jin, “What do Airbnb users care about? An analysis of online review comments,” International Journal of Hospitality Management, 2019, 76, 58-70.

Waldfogel, J. and Chen, L., “Does information undermine brand? Information intermediary use and preference for branded web retailers,” The Journal of Industrial Economics, 2006, 54, 425-449.

Teubner, Timm and Hawlitschek, Florian and Dann, David, “Price Determinants on Airbnb: How Reputation Pays Off in the Sharing Economy,” Journal of Self-Governance and Management Economics, 2017, 5, 53-80.

Scott Shatford, “What is Airbnb’s Superhost Status Really Worth?” 2018. https://www.airdna.co/blog/airbnb_superhost_status

Dan Wang, Juan L. Nicolau, “Price determinants of sharing economy based accommodation rental: A study of listings from 33 cities on Airbnb.com,” International Journal of Hospitality Management, 2017, 62, 120-131.