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Impact of Hospital Distribution on Accommodation-sharing Platforms

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Extended Abstract**Impact of Hospital Distribution on Accommodation-sharing Platforms***Jialin Nie¹, Xiaofei Zhang^{2*}, Yefei Yang³*^{1,2}Business School, Nankai University, Tianjin, 300000, China³School of Economics and Management, Beijing Jiaotong University, Beijing, 100000, China

Abstract: Neighborhood elements have been considered important for the accommodation industry, which not only affects the demand for accommodation but also affects the experience of consumers. This effect is more pronounced for accommodation-sharing platforms as they try to display the whole surrounding environmental information to attract more consumers. However, current research focuses on the impact of tourist attractions, transportation hubs, and business districts, which has ignored the influences of healthcare-related factors on incidental accommodation demand. This study develops a theoretical framework based on aggregation externalities theory and tests the associate hypotheses with data from a large city to explore how hospital distribution influences the operation of accommodation-sharing platforms. The study indicates that distance to the hospital has positive and significant effects on the distribution of listings, the number of reservations, and consumer satisfaction. Hospital ranking strengthens the effects on distribution and reservations. This paper presents a novel study that brightens the gap between accommodation sharing and healthcare resources, providing recommendations for the operation of shared accommodation platform operators and landlords.

Keywords: Accommodation-sharing, hospital distribution, externality, consumer satisfaction, hospital ranking

1. INTRODUCTION

Accommodation-sharing has received increased recognition and has become a common accommodation option for many consumers. For an accommodation-sharing platform, the purpose of the operation is to improve the service, develop more users and obtain greater benefits. Therefore, as essential indicators to measure landlord engagement behavior and consumer accommodation choice and experience, the distribution of listings, the number of reservations, and consumer satisfaction are critical to platform operations.^[1] A suitable location allows listings to attract more consumers and deliver better services. Although existing studies have explored the effects of listing locations to a certain extent, most of them focus on the transportation hub and tourist attraction^[1]. Few studies have investigated the effects of healthcare-related infrastructure on platform operations. According to statistics, as a major part of traveling, seeking healthcare services also brings many patients to large cities^[2], which can further benefit accommodation-sharing. Therefore, this study fills this gap. We propose the first research question: *How does the hospital distribution influence the operation of accommodation-sharing platforms?* The top hospitals provide the best medical and health services in the region, attracting more patients, especially patients from other cities who are potential consumers of the platforms. Thus, the second research question leading this study is: *Whether the effects of hospital distribution are contingent on hospital ranking?*

2. THEORETICAL FOUNDATION AND HYPOTHESES

Marshall proposed that physical advantages are important reasons that companies might choose a particular location^[3]. Physical advantages, also defined as exogenous externalities, are advantages created by city size, transportation infrastructure, public service facilities, entertainment/dining options, tourism resources, et al.. Heightened demand, reduced search costs, information sharing, and resource spillover are some of the cited externalities. Moreover, Agglomerated firms will benefit from externalities, and geographical proximity of inter-related industries often stimulates stronger externalities^[4]. Healthcare-related infrastructure, as an

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important public service facility, creates advantages that conform to the definition of exogenous externalities, which may attract surrounding hosts to join the sharing behavior and attract more consumers. Based on this theory and previous studies, we developed a research model associated with six hypotheses. We hypothesize that hospital distribution positively affects *the distribution of listings, the number of reservations, and consumer satisfaction*. And the effects of hospital distribution are moderated by *hospital ranking*.

3. RESEARCH METHODOLOGY AND RESULTS

The study setting is Beijing which is the capital of China. As China's political and cultural center, Beijing has a large number of accommodation-sharing listings and leading medical resources, which provides a good foundation for our research. We chose *xiaozhu.com* as the research context of our empirical study, which is one of the leading accommodation-sharing platforms in China. Using automated Python scripts, we first collected basic information on 6,352 listings in Beijing on *xiaozhu.com* and 34,856 reviews. Then, we collected Beijing hospital information on *data.beijing.gov.cn*.

We used independent-samples T-test and multi-linear regression (MLR) analysis to test hypotheses. The results show that the number of listings around the hospital (22.3984, $p < 0.01$) is significantly larger than that of the control point (7.6758, $p < 0.01$). Hospital is significantly and positively related to order volume (0.1282, $p < 0.01$) and sentiment value (0.1201, $p < 0.05$). These results support hypotheses H1, H2, and H3. We also confirmed the moderation effects of hospital ranking. The number of listings around the top hospital (31.0370, $p < 0.05$) is significantly larger than that of the control point (20.0891, $p < 0.05$). Moreover, hospital ranking strongly moderates the relationship between hospital distribution and the number of reservations (0.1553, $p < 0.05$). Thus, hypotheses H4 and H5 are supported. However, the interaction term of hospital*top is positively but not significantly related to the sentiment value (0.1212, $p > 0.10$). Therefore, hypothesis H6 is not supported.

4. CONCLUSION AND DISCUSSION

These findings make the following theoretical and practical contributions. Theoretically, to the best of our knowledge, this study is one of the first that brightens the gap between accommodation sharing and healthcare resources. Second, this study expands the externalities theory to the field of accommodation-sharing and investigated the mechanism of these effects by exploring the different effects of hospitals with different rankings. Practically, our findings suggest platform managers motivate landlords around the hospital to join the sharing behavior through incentive policies, which will autonomously attract more consumers. For hosts, we suggest highlighting the geographical characteristics in the listing introduction or label module to attract more consumers and pay attention to consumers' travel purposes and provide the corresponding assistance to improve satisfaction. This study also has some limitations. Geographical factors are complicated. Although this study randomly selected control points and control variables, which alleviated the effects of other environmental factors to a certain extent, it could not completely eliminate these effects.

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