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### Does Online Product Presentation Matter: An Empirical Analysis of the Effects of Listing Photos on Short-term Rental Purchases

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**Full Research Paper**

# Does Online Product Presentation Matter: An Empirical Analysis of the Effects of Listing Photos on Short-term Rental Purchases

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**Abstract:** Under the rapid development of the sharing economy, short-term rental has become prevalent in recent years. However, how to promote consumer purchases is an important practical issue for short-term rental platforms. This study aims to explore the promoting effects of listing photos on short-term rental purchases in a representative Chinese room-sharing platform — Xiaozhu.com. Based on information adoption theory and cue utilization theory, this paper applies the econometrics model that integrates image processing techniques to estimate the effects of listing photos. The results show that the photos taken by professional photographers from Xiaozhu.com and listing photos with high brightness and clarity can help enhance consumers' willingness to book, whereas the hue of listing photos does not significantly increase renter reservations. The findings provide useful guiding suggestions for short-term rental platforms and room providers, which can help them bring a better purchasing experience to consumers.

## 1. INTRODUCTION

With the rapid development of new technologies and the popularity of personalized consumption concepts, short-term rental has been chosen by more and more people. Short-term rental such as Airbnb enables “regular people” (i.e., as opposed to business entities) to rent out their spare rooms or unoccupied houses and apartments and serve tourists. Short-term rental is essentially an experiential service. Online information is the only information cue when consumers make the purchase decision. For short-term rental platforms, how to decrease information asymmetry and promote consumers to make purchase decisions have become important practical issues.

In short-term rental platforms, listing photos can directly reflect housing information, which can help consumers assess whether the listing meets its own needs and then make reasonable purchase decisions. Therefore, the effects of the presentation of the listing photo on consumers' purchase behavior should be attached great importance to. However, in the existing research on short-term rental platforms, researchers usually touch on user-generated content such as text, or numerical information provided by merchants as determinants to affect consumers' purchasing decisions. There is still a space for the study of images provided by merchants. As an important part of the merchant-generated content, the influence mechanism of listing photos on consumer behaviors is of great significance. Therefore, it is necessary to conduct in-depth research.

This study focuses on the effects of listing photos on short-term rental purchases in a representative Chinese room-sharing platform — Xiaozhu.com. Based on information adoption theory and cue utilization theory, we apply the econometrics model that integrates image processing techniques to evaluate the effects of listing photos on listing purchases, which we want to discuss from more in-depth and thorough perspectives in the study.

## 2. RESULTS

We conducted an empirical study to evaluate the effects of listing photos on listing purchases made on Xiaozhu.com. We found that the photos from the professional photography service on Xiaozhu.com have a

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significant impact on the sales of listings. Compared with the photos taken by the hosts, the photos taken by professionals from Xizozhu.com are more credible, and consumers are more inclined to believe in the authenticity of the listing information, which in turn encourages consumers to make purchase decisions. The quality of the photos in our study is expressed as information entropy, hue, brightness and clarity of the image. The image information entropy does not have a significant effect on listing purchases, whereas it is significant at different price levels. The results show that listing photos containing only warm tone or cool tone do not better promote consumer purchase intentions, listing photos with cool color and warm color for different scenes may be more likely to trigger consumers' pleasure and prompt them to make purchasing decisions. The effects of the brightness and clarity of listing photos are consistent with our experience and common sense.

### 3. CONTRIBUTIONS

This study has the following theoretical contributions. First, this study introduces information adoption theory from online shopping to short-term rental. We conducted in-depth research on listing photos from the perspectives of image credibility and image quality, and verified the significant influence of listing photos on listing purchases, which further enrich the literature on listing purchases in the sharing economy. Second, the findings of this study also expand the research on the characteristics of listing photos in short-term rentals. There are few empirical studies on the characteristics of listing photos, and most of them only focus on the hue and brightness of the photos. We extract the text, information entropy and clarity of the photos and enrich the study. Additionally, this study extends the application of cue utilization theory in the context of the sharing economy. Based on cue utilization theory, a more comprehensive analysis of the image quality characteristics can be carried out from two aspects that affect consumer cognition and emotion.

This study also has certain practical contributions for online short-term rental platform operators and hosts. For hosts on the short-term rental platform, they should pay more attention to the importance of listing photos on the platform. Listing photos with cool color and warm color for different scenes will give consumers a better visual experience. Additionally, the host can also choose the professional photography service on Xiaozhu.com, or invite a professional photographer to complete the collection of listing photos, to enhance the trust of consumers. The research results of the control variables introduced in this study show that the host's application for real-name certification, application of as many labels as possible, and implementation of loose cancellation policy are all conducive to the growth of listing purchases. For online short-term rental platform managers, they should do a good job of management and supervise the quality of the photos provided by the host. In addition, they should fully promote the professional photography service, or invite experts to train and guide hosts.

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