



Article Title

An analysis of customer room choice model and revenue management practices in the hotel industry

Citation

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Abstract

Considering the limitations of existing studies on the customer choice behaviour, this paper tries to use the variable precision rough set (VPRS) approach to establish a customer room choice model (CRCM) based on the logit model, which satisfies the required precision. This model could analyze the data set of customer room choice and directly identify real attributes, which affect customer room choice and the weights of these attributes without prior information; and then the probability of the customer room choice can be conducted by the CRCM. In terms of the results, hotels can predict customer demand of each rate class and improve their precision, in order to increase hotel revenue.

Methods

A study has been conducted by using a two-round Delphi investigation performed on a group of 10 experts (academics, consultants and managers). In the first round, the participants have been asked, with an open questionnaire, to identify the major factors, which affect customers to choose a hotel room. Multinomial logit model has been used in this paper.

Results

The findings indicate that the customers in the hotel are very sensitive to room price, hence, it is very important for a hotel to offer varied fare classes to meet the different demands of different kinds of customers. Also, the CRCM reveals that the hotel could expand rate classes to achieve higher revenue. Moreover, if the ratio of different classification of hotel room is calculated and the average room revenue and total revenue of the hotel are achieved, then longitudinal comparison could be made and current operating condition could be mastered.

Conclusion

Above all, based on the multinomial logit model, the CRCM is established by using the VPRS approach in this paper. The model can be used to measure the probability of room choice by analyzing the characteristics and preferences of customers. Besides, in contrast with the logit models and the initial rough set, the CRCM with the VPRS has three advantages (no prior info & no analytical expression function; uncertain raw data process; no loss of valuable info).