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Article Title

Revenue management: resolving a revenue optimization paradox

Citation

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Abstract

Purpose – The objectives of this study are to investigate the relationship between hotel room demand and room rates, and to find a viable solution for the optimal room rate that maximizes the total profit.
Design/methodology/approach – There are various studies in the literature on how room rates affect profitability, and how the optimal room rate that maximizes the total revenue can be determined. Most of these studies assume an algebraic relationship between room rates and room demand, and obtain the optimal solution by applying calculus to the revenue or profit function. This study adopts the alternative approach of using a model with a demand function that has been shown to be a superior causal forecasting model in some markets, and develops a new method to optimize the total profit.
Findings – The traditional method of applying calculus to the profit function based on a causal forecasting model leads to unrealistic solutions. This gives rise to the paradox that, on the one hand, there is a superior causal forecasting model based on room rates, but on the other hand, the traditional method does not yield a realistic solution for room rate optimization. This study analyzes the underlying causes of this paradox and proposes a method to resolve it.