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Author: Koupriouchina, L.A.
Title: Judgmental adjustments in revenue management: exploring the impact of user overrides on the accuracy of system-generated occupancy forecasts at multiple forecasting horizons
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Continuous communication between hotels and RMS software providers is a key element in modern revenue management systems. Due to the dynamic and complex nature of forecasting and re-forecasting processes, the algorithms behind RMS really function. Due to the high numbers of forecasts, it is crucial to avoid misleading interpretations, encouraging helpful override behavior, and minimize override behaviors that are damaging for the forecasting performance. Regular forecast monitoring could also help to compensate for the "black box" effect related to an incomplete understanding by the Revenue Managers of how the algorithms behind RMS really function. Due to the high numbers of forecasts, and the dynamic and complex nature of forecasting and re-forecasting processes, this framework, however, cannot be developed in isolation. Close cooperation and continuous communication between hotels and RMS software providers is a key condition for the continuing success of hotel revenue managers.

REFERENCE


References


Murphy, A. H. (1993). What is a good forecast - an essay on the nature of goodness in weather forecasting. Weather and Forecasting, 8(2), 281-293.


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The field of hotel revenue management has developed rapidly in the past decades. Automated revenue management systems with complex and protected algorithms have greatly changed the Revenue Management profession, demanding a new set of skills including but not limited to technical know-how, critical thinking and problem-solving skills, and business acumen. Today's Revenue Managers increasingly need to understand the broader organizational perspective in order to stimulate and enable interdepartmental co-operation. The business environment in which hotels operate has also become much more complex and is characterized by the entrance of new players, channels, and disruptive technologies. To create accurate occupancy forecasts under these conditions is difficult, and hotels have become increasingly reliant on advanced computer systems that continually reforecast occupancies on a forecasting horizon. However, the performance of these systems is not flawless, and revenue managers sometimes choose to override their revenue management systems. Whether these user overrides actually add value has not yet been subjected to rigorous academic study. The aim of this thesis, therefore, is to explore the relationship between judgmental adjustments and the accuracy of system-generated hotel occupancy forecasts at multiple forecasting horizons.

The first study investigates the applicability of existing forecast accuracy measures and provides a critical review and discussion of forecast accuracy measures for the evaluation of hotel forecasting performance. By computing 17 forecast accuracy measures on 2,043 pairs of machine-generated forecasts, revenue manager's predictions, and on the actual hotel occupancy figures, the study demonstrates that different accuracy measures generate conflicting results. Since forecast accuracy evaluations impact the calibration of forecasting accuracy models, this empirical study draws attention to the importance of choosing the appropriate accuracy measure to analyze forecast errors and related issues.