



### Article Title

Estimating Future Room Occupancy Fluctuations to Optimize Hotel Revenues

### Citation

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### Abstract

This study proposes a hotel demand estimation mechanism that assesses the likelihood of forthcoming occupancy peaks and troughs applicable to different hotel classifications. In anticipating rate fluctuations, the approach is less dependent than many prevailing hotel forecasts on short-term seasonal-related factors. In operating revenue management systems, hotel managers should predict forthcoming occupancy upturns and downturns to prepare accurate mid to long-run estimates. The proposed approach reduces the financial risks associated with volatile occupancy rates and facilitates efficient resource management. The average contraction period for Hong Kong hotel occupancies from one peak point to the next trough was found to exceed the duration of the corresponding expansion period.

### Methods

The authors opted for the BSM approach to extract smooth growth from the Hong Kong quarterly hotel occupancy rates.

### Results

The results show that the average contraction period (from one peak to the next trough) is longer than the expansion period (from one trough to the next peak) for occupancies across all categories of hotel. This suggests that the “pick-up” speed of Hong Kong’s hotel industry is faster than its “slow-down” counterpart.

### Conclusion

Overall, the average contraction period exceeds the equivalent expansion period. This suggests that the Hong Kong Hotels Association as the industry key body could play a role in informing strategies to maintain hotel revenues. In order to maximize such revenues at the level of chains or individual properties, hotel managers should maximize profitability by identifying the optimum service mix during expansion and contraction periods.