IJHM Mentor text: Prediction accuracy for reservation-based forecasting methods applied in Revenue Management

1. Introduction

* Advance booking
* RM: what’s RM, RM boost interests in forecasting,

“As reported in Polt (1998), a 20% reduction in forecasting errors could translate into 1% incremental revenue generated from RM systems.”

* Pickup emerges: a number of studies tested their performances.
* Pickup methods are nor sufficient for business…
* The key idea of this work: “reservation data should be regarded as realizations of random variables rather than deterministic values.”

We introduce a new framework that … we here develop two variants of the model

* To the best of our knowledge, this proposal represents the first attempt
* The practical implication are test in an empirical setting using real reservation data from xx hotel. Our \_\_\_ are shown to provide a better to ARMA models, which have been traditionally used in hospitality research.
* Literature review starts: Three types of forecasting mdoels
* The focus of this study is on pickup because… 1. Popular among small and medium sized hotels; 2.
* The remainder of the paper is organized as follows (“S3 address the question of *how to embed the pickup method into a general stochastic framework and we introduce both the distribution-free and the GLM approach*)

1. Partial booking data and Pickup Models

Hotels’ booking data involve two time variables: when the reservation is made (booking date) and when the guest arrives (check-in date). In this Section, we introduce the basic setting for reservation based forecasting methods.

* 1. Incremental bookings (models)
  2. Cumulative bookings (models formulas blabla)
  3. Pickup methods in RM (models formulas blabla)

1. A new framework:
2. Empirical study

In order to test the performance of stochastic pickup (CL and GLM) predictors, a sample of real reservation data was collected from…. The information sotred in each reservation record includes the booking date, the arrival date, the LOS, and the number of rooms booked. The time series of daily room occupancy *(not rate, the absolute value)* are shown in Fig. 1.

(it uses “days prior” instead of “DBA”)