



Patterns of Regional Travel Behavior: An Analysis of Japanese Hotel Reservation Data

[Aki-Hiro Sato](#)

(Submitted on 2 Apr 2012)

This study considers the availability of room opportunities collected from a Japanese hotel booking site. We empirically analyze the daily number of room opportunities for four areas. To determine the migration trends of travelers, we discuss a finite mixture of Poisson distributions and the EM-algorithm as its parameter estimation method. We further propose a method to infer the probability of opportunities existing for each observation. We characterize demand-supply situations by means of relationship between the averaged room prices and the probability of opportunity existing.

Comments: 22 pages, 16 figures; International Review of Financial Analysis (2011)

Subjects: **Data Analysis, Statistics and Probability (physics.data-an);**
Physics and Society (physics.soc-ph)

DOI: [10.1016/j.irfa.2011.06.016](https://doi.org/10.1016/j.irfa.2011.06.016)

Cite as: [arXiv:1204.0442](https://arxiv.org/abs/1204.0442) [physics.data-an]
(or [arXiv:1204.0442v1](https://arxiv.org/abs/1204.0442v1) [physics.data-an] for this version)

Submission history

From: Aki-Hiro Sato [[view email](#)]

[v1] Mon, 2 Apr 2012 15:49:26 GMT (449kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

physics.data-an

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1204](#)

Change to browse by:

[physics](#)

[physics.soc-ph](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

