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## The Optimal Overbooking and Pricing Policies for US Major Airlines

by

**Yoshinori Suzuki**

Assistant Professor of Transportation and Logistics  
Department of Logistics, Operations, and MIS  
College of Business  
Iowa State University  
300 Carver Hall  
Ames, Iowa 50011 USA  
Phone: (515) 294-5577; Fax: (515) 294-2534  
e-mail: [ysuzuki@iastate.edu](mailto:ysuzuki@iastate.edu)

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## Abstract

### *"The Optimal Overbooking and Pricing Policies for US Major Airlines"*

Overbooking in the airline industry has been studied intensively in the operations research area. These studies consider only the trade-off between the marginal revenue received and marginal penalty (e.g. compensations) incurred by an airline for overbooking an additional passenger on a particular flight, and ignore the possible revenue effect of rejecting (bumping) passengers. This paper seeks the optimal overbooking policies for US major airlines by considering how denied-boarding passengers can affect an airline's current and future revenues. Since overbooking can be reduced by increasing airfares (and vice versa), we develop a dynamic optimization model that seeks the best combination of overbooking and pricing policies that jointly maximize an airline's passenger revenue over time. Sensitivity analyses are performed to provide important normative implications to airline management and researchers.