A Dynamic Structural Model of the Impact of Loyalty Programs on Customer Behavior

Wednesday, 10 December 2008
10am – 11am
MSB.1.02

Professor Scott Neslin
Tuck School of Business, Dartmouth College

Abstract
We develop and estimate a dynamic structural model to determine the impact of frequency reward and customer tier components of a loyalty program on customer behavior. The contribution of this paper is that: (1) we provide an integrated analysis and measurement of the impact of two critical components of a loyalty program; (2) we develop a comprehensive model incorporating customers’ purchase and cash-in decisions, rewarded behavior, state dependence, heterogeneity, and forward-looking behavior; and (3) our research answers questions regarding the strength of response to frequency reward and customer tier programs, level of heterogeneity, and the corresponding policy implications. Using data from an airline’s loyalty program, we find that a two-segment solution fits the data best both in estimation and validation samples, revealing a “customer-tier focused” segment that highly values the customer tier component but attaches a net negative value to the frequency reward, and a “loyalty program enthusiasts” segment that values both frequency reward and customer tier programs. Further, we illustrate points pressure and rewarded behavior effects and find that while both program components increase the number of paid flights, paid no cash-in flights decrease under the frequency reward program.

Presenter: Scott Neslin
Email: scott.a.neslin@dartmouth.edu