Choice-set Demand in Revenue Management: Unconstraining, Forecasting and Optimization

Haensel, A.

2012

document version
Publisher's PDF, also known as Version of record

citation for published version (APA)
Haensel, A. (2012). *Choice-set Demand in Revenue Management: Unconstraining, Forecasting and Optimization*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

FOCUS ON PROFIT!

Maximize revenue and profit by understanding and considering your customers' buying behavior. How price sensitive are your customers? What are their preferences? How strong are the competitor influences or cannibalization effects in your own product portfolio? These questions must be answered analytically in order to obtain a quantitative understanding of the customers' choice process—and hence a clear picture of the demand in the market. In "Choice-Set Demand in Revenue Management", we propose the notion of choice-sets as our model for the customers' preferences and buying decisions. Unconstraining is the related process which extracts demand information with choice behavior from product sales data. Once we obtain the information of current and past demand data, the immediate next step is the demand forecasting. Finally, with an accurate estimate of the future demand, we continue with the optimization process to derive optimal sales controls and pricing actions which maximize the overall revenue or profit.

—Alwin Haensel

Alwin studied mathematics at the Humboldt University of Berlin with an exchange year at the Imperial Science College London. In 2008, he began his PhD research on Revenue Management at the VU University Amsterdam. Alwin has also worked on RM projects with companies from diverse industries such as air travel, car rental, hotels and e-commerce.

CHOICE-SET DEMAND IN REVENUE MANAGEMENT

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Unconstraining, Forecasting & Optimization

BY ALWIN HAENSEL