Discrete Choice Modelling and Air Travel Demand: Theory and Applications

Description:

In recent years, airline practitioners and academics have started to explore new ways to model airline passenger demand using discrete choice methods. This book provides an introduction to discrete choice models and uses extensive examples to illustrate how these models have been used in the airline industry. These examples span network planning, revenue management, and pricing applications. Numerous examples of fundamental logit modeling concepts are covered in the text, including probability calculations, value of time calculations, elasticity calculations, nested and non-nested likelihood ratio tests, etc.

The core chapters of the book are written at a level appropriate for airline practitioners and graduate students with operations research or travel demand modeling backgrounds. Given the majority of discrete choice modeling advancements in transportation evolved from urban travel demand studies, the introduction first orients readers from different backgrounds by highlighting major distinctions between aviation and urban travel demand studies. This is followed by an in-depth treatment of two of the most common discrete choice models, namely the multinomial and nested logit models. More advanced discrete choice models are covered, including mixed logit models and generalized extreme value models that belong to the generalized nested logit class and/or the network generalized extreme value class. An emphasis is placed on highlighting open research questions associated with these models that will be of particular interest to operations research students. Practical modeling issues related to data and estimation software are also addressed, and an extensive modeling exercise focused on the interpretation and application of statistical tests used to guide the selection of a preferred model specification is included; the modeling exercise uses itinerary choice data from a major airline. The text concludes with a discussion of on-going customer modeling research in aviation.

Discrete Choice Modelling and Air Travel Demand is enriched by a comprehensive set of technical appendices that will be of particular interest to advanced students of discrete choice modeling theory. The appendices also include detailed proofs of the multinomial and nested logit models and derivations of measures used to represent competition among alternatives, namely correlation, direct-elasticities, and cross-elasticities.

Author:

Laurie A. Garrow, Ph.D., is an assistant professor in the School of Civil and Environmental Engineering at the Georgia Institute of Technology. Her research addresses the development and application of advanced models of travel demand based on discrete choice methods. Prior to joining the faculty, she worked for four years at United Airlines in their revenue management research and development group. Her dissertation won first prize in the 2004 Aviation Applications Section of the Institute for Operations Research and the Management Sciences (INFORMS) and honorable mention in the 2004 Eric Pas dissertation competition sponsored by the International Association of Travel Behavior Research (IATBR). She is the 2009 recipient of the Council of University Transportation Centers-American Road and Transportation Builders Association (CUTC-ARTBA) New Faculty Member Award, one of the most prestigious awards given to an untenured faculty member in transportation that recognizes research and teaching contributions. She is also the recipient of a CAREER award that was jointly funded in 2009 by two programs at the National Science Foundation - the Decision, Risk and Management Sciences Program and the Service Enterprise Systems Program.

Contents:

- Introduction
- Binary logit and multinomial logit models
- Nested logit model
- Structured extensions of MNL and NL discrete choice models
- Network GEV models
- Mixed logit
- MNL, NL, and OGEV models of itinerary choice
- Conclusions and directions for future research
- Index.

RESEARCHANDMARKETS

Ordering: Order Online - http://www.researchandmarkets.com/reports/1205737/

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.

RESEARCHANDMARKETS

Fax Order Form

To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit

http://www.researchandmarkets.com/contact/

Order Information

Please verify that the product information is correct.

Product Name:	Discrete Choice Modelling and Air Travel Demand: Theory and Applications
Web Address:	http://www.researchandmarkets.com/reports/1205737/
Office Code:	OC8DIMMMUSWVTV

Product Format

Please select the product format and quantity you require:

Quantity

Hard Copy: ☐   EUR 91 + EUR 25 Shipping/Handling

* Shipping/Handling is only charged once per order.

Contact Information

Please enter all the information below in **BLOCK CAPITALS**

Title: Mr ☐   Mrs ☐   Dr ☐   Miss ☐   Ms ☐   Prof ☐

First Name: _____   Last Name: _____

Email Address: * _____

Job Title: _____

Organisation: _____

Address: _____

City: _____

Postal / Zip Code: _____

Country: _____

Phone Number: _____

Fax Number: _____

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)

Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card:

☐ American Express

☐ Diners Club

☐ Master Card

☐ Visa

Cardholder's Name _____

Cardholder's Signature _____

Expiry Date _____ | _____

Card Number _____

CVV Number _____

Issue Date _____ | _____
(for Diners Club only)

☐ Pay by check:

Please post the check, accompanied by this form, to:

Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer:

Please transfer funds to:

Account number	833 130 83
Sort code	98-53-30
Swift code	ULSBIE2D
IBAN number	IE78ULSB98533083313083
Bank Address	Ulster Bank, 27-35 Main Street, Blackrock, Co. Dublin, Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: _____

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA

+353-1-481-1716 or +353-1-653-1571 - From Rest of World