

Revenue Management: Advanced Strategies and Tools to Enhance Firm Profitability

Sheryl E. Kimes

Cornell University, Ithaca,
United States
sek6@cornell.edu

Jochen Wirtz

National University of Singapore,
Singapore
jochen@nus.edu.sg

now

the essence of knowledge

Boston — Delft

Foundations and Trends[®] in Marketing

Published, sold and distributed by:

now Publishers Inc.
PO Box 1024
Hanover, MA 02339
United States
Tel. +1-781-985-4510
www.nowpublishers.com
sales@nowpublishers.com

Outside North America:

now Publishers Inc.
PO Box 179
2600 AD Delft
The Netherlands
Tel. +31-6-51115274

The preferred citation for this publication is

S. E. Kimes and J. Wirtz. *Revenue Management: Advanced Strategies and Tools to Enhance Firm Profitability*. Foundations and Trends[®] in Marketing, vol. 8, no. 1, pp. 1–68, 2013.

This Foundations and Trends[®] issue was typeset in L^AT_EX using a class file designed by Neal Parikh. Printed on acid-free paper.

ISBN: 978-1-68083-029-3
© 2015 S. E. Kimes and J. Wirtz

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of the publishers.

Photocopying. In the USA: This journal is registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by now Publishers Inc for users registered with the Copyright Clearance Center (CCC). The 'services' for users can be found on the internet at: www.copyright.com

For those organizations that have been granted a photocopy license, a separate system of payment has been arranged. Authorization does not extend to other kinds of copying, such as that for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. In the rest of the world: Permission to photocopy must be obtained from the copyright owner. Please apply to now Publishers Inc., PO Box 1024, Hanover, MA 02339, USA; Tel. +1 781 871 0245; www.nowpublishers.com; sales@nowpublishers.com

now Publishers Inc. has an exclusive license to publish this material worldwide. Permission to use this content must be obtained from the copyright license holder. Please apply to now Publishers, PO Box 179, 2600 AD Delft, The Netherlands, www.nowpublishers.com; e-mail: sales@nowpublishers.com

Foundations and Trends[®] in Marketing
Volume 8, Issue 1, 2013
Editorial Board

Editor-in-Chief

Jehoshua Eliashberg
University of Pennsylvania
United States

Editors

Bernd Schmitt, Co-Editor
Columbia University
Olivier Toubia, Co-Editor
Columbia University
David Bell
University of Pennsylvania
Gerrit van Bruggen
Erasmus University

Pradeep Chintagunta
University of Chicago
Dawn Iacobucci
Vanderbilt University
Raj Raganathan
University of Texas, Austin
J. Miguel Villas-Boas
University of California, Berkeley

Editorial Scope

Topics

Foundations and Trends[®] in Marketing publishes survey and tutorial articles in the following topics:

- B2B marketing
- Bayesian models
- Behavioral decision making
- Branding and brand equity
- Channel management
- Choice modeling
- Comparative market structure
- Competitive marketing strategy
- Conjoint analysis
- Customer equity
- Customer relationship management
- Game theoretic models
- Group choice and negotiation
- Discrete choice models
- Individual decision making
- Marketing decisions models
- Market forecasting
- Marketing information systems
- Market response models
- Market segmentation
- Market share analysis
- Multi-channel marketing
- New product diffusion
- Pricing models
- Product development
- Product innovation
- Sales forecasting
- Sales force management
- Sales promotion
- Services marketing
- Stochastic model

Information for Librarians

Foundations and Trends[®] in Marketing, 2013, Volume 8, 4 issues. ISSN paper version 1555-0753. ISSN online version 1555-0761. Also available as a combined paper and online subscription.

Foundations and Trends[®] in Marketing
Vol. 8, No. 1 (2013) 1–68
© 2015 S. E. Kimes and J. Wirtz
DOI: 10.1561/17000000037



Revenue Management: Advanced Strategies and Tools to Enhance Firm Profitability

Sheryl E. Kimes
Cornell University, Ithaca,
United States
sek6@cornell.edu

Jochen Wirtz
National University of Singapore,
Singapore
jochen@nus.edu.sg

Contents

1	Introduction	2
2	An Overview of Revenue Management	4
2.1	Service characteristics that encourage the application of RM	4
2.2	A strategic framework for assessing revenue management .	7
3	The Role of Price in Revenue Management	10
3.1	The role of dynamic pricing in RM	10
3.2	The history of price in RM research and practice	13
3.3	The use of rate fences in RM pricing	14
3.4	How prices are set in practice	16
3.5	Summary and conclusions on the role of price in RM . . .	21
4	The Role of Time in Revenue Management	23
4.1	Explicit versus implicit sale of time	23
4.2	Time configuration	25
4.3	Degree of control over service duration	26
4.4	Degree of customer contact	27
4.5	Summary and conclusions on the role of time in RM . . .	29
5	The Role of Space in Revenue Management	31
5.1	The interplay of space and time	32

	iii
5.2 Space: the third strategic lever	34
5.3 Summary and conclusions on the role of space in RM . . .	40
6 Potential Customer Conflicts Caused by RM and Their Management	41
6.1 Potential conflicts arising from a revenue management . .	42
6.2 Understanding customer reaction to RM pricing	43
6.3 Marketing and organizational strategies	47
6.4 Summary and conclusions on potential customer conflicts .	55
7 Summary and Future Research Directions	57
7.1 Future research directions	57
7.2 Summary and conclusions	60
References	61

Abstract

Much of the past research on revenue management (RM) has focused on forecasting and optimization models and, more recently, on adaptation of RM to the specific needs in various industries, such as restaurants, car rental, transport and even health care services. Surprisingly, although many industries have become increasingly customer-focused, the customer seems to have been relatively forgotten in this stream of research. Our intent in this monograph is to help explore the role of marketing in RM in more depth.

1

Introduction

Revenue management (RM) is the application of information systems and pricing strategies to allocate the right capacity to the right customer at the right place at the right time. In practice, RM has meant determining pricing according to predicted demand levels so that price-sensitive customers who are willing to purchase at off-peak times can do so at favorable prices, while price-insensitive customers who want to purchase at peak times, will be able to do so.

RM has been widely studied [for a review of the RM literature, see Boyd and Bilegan, 2003, McGill and van Ryzin, 1999, Weatherford and Bodily, 1992] and has been applied to a number of industries including the airline industry [Smith et al., 1992], the hotel industry [Hanks et al., 1992], the restaurant industry [Kimes et al., 1998], the golf industry [Kimes, 2000], professional services [Siguaw et al., 2003], broadcast advertising [Bollapragada et al., 2002] and meeting space [Kimes and McGuire, 2001]. Companies using RM have shown a revenue increase of 2–5 percent [Hanks et al., 1992, Kimes, 2004, Smith et al., 1992], which is significant given the fixed-cost nature of many services.

Deregulation of the American airline industry was the major impetus for the development of RM. Before deregulation in 1978,

major carriers offered one-price services between cities. Immediately after deregulation, many new airlines emerged, and one airline, People's Express, developed an aggressive low-cost strategy. The People's Express story is well known: their airfares were considerably lower than those of the major carriers, and customers were attracted to the limited service that People's Express flights offered. The major carriers such as American Airlines, United Airlines, and Delta Airlines, aided by new computerized reservation systems, employed variable pricing on a flight-by-flight basis to match or undercut fares offered by People's Express. Cost-conscious passengers then switched back to the major carriers, and People's Express was eventually forced out of business. Donald Burr, the former CEO of People's Express, attributes his airline's failure to the lack of good information technology and the subsequent inability to practice RM [Cross, 1997].

Seeing the benefits of differential pricing, most major North American carriers instituted RM. RM allowed airlines to determine the minimum fare (of a set mix of fares) that should be available for a specific flight.

Not surprisingly, most of the earlier research on RM occurred within the context of the airline industry. Much of the past research on RM has focused on forecasting and optimization models [Bitran and Mondshein, 1995] and, more recently, on adaptation of RM to the specific needs in various industries, such as restaurants, car rental, transport and even health care services. Surprisingly, although many industries have become increasingly customer-focused, the customer seems to have been relatively forgotten in this stream of research. Our intent in this monograph, is to help explore the role of marketing in RM in more depth.

In Section 2, we provide an overview of RM and discuss approaches that firms can use to more profitably manage and define the ways in which they sell their capacity. In the next three sections, we will give an in-depth discussion of the roles that price, time and space play in RM. In Section 6, we discuss the marketing and customer conflicts that arise from the application of various RM approaches. We conclude with a summary and recommendations for future research.

References

- J. S. Adams. Towards an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67:422–436, 1963.
- C. Areni and D. Kim. The influence of in-store lighting on consumers' examination of merchandise in a wine-store. *International Journal of Research in Marketing*, 11:117–125, 1994.
- J. R. Averill. Personal control over aversive stimuli and its relationship to stress. *Psychological Bulletin*, 8(4):286–303, 1973.
- R. D. Badinelli. An optimal, dynamic policy for hotel yield management. *European Journal of Operational Research*, 121:476–503, 2000.
- J. Baker. The role of the environment in marketing services. In J. A. Czepiel, C. A. Congram, and J. Shanahan, editors, *The Services Challenge: Integrating for Competitive Advantage*, pages 79–84. American Marketing Association, Chicago, 1986.
- J. Baker, D. Grewal, and M. Levy. An experimental approach to making retail store environmental decisions. *Journal of Retailing*, 68(4):445–460, 1992.
- T. K. Baker and D. A. Collier. A comparative revenue analysis of hotel yield management heuristics. *Decision Sciences*, 30(1):239–256, 1999.
- M. J. Beckmann. Decision and team problems in airline reservations. *Econometrica*, 26(1):134–145, 1958.
- P. P. Belobaba. Airline yield management: an overview of seat inventory control. *Transportation Science*, 21(2):63–73, 1987.
- P. P. Belobaba. Application of a probabilistic decision model to airline seat inventory control. *Operations Research*, 37(2):183–197, 1989.

- P. P. Belobaba. *Optimal vs. heuristic methods for nested seat allocation*. AGIFORS, Cambridge, MA, USA, 1992.
- L. L. Berry. The time-buying consumer. *Journal of Retailing*, 5(4):58–68, 1979.
- P. Bhatia. Hurry up and eat. *Wall Street Journal*, June 21(W1), 2002.
- M. J. Bitner. Servicescapes: the impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(April):57–71, 1992.
- G. Bitran and R. Caldentey. An overview of pricing models for revenue management. *Manufacturing and Service Operations Management*, 5(3):203–339, 2003.
- G. Bitran and S. V. Mondschein. An application of yield management to the hotel industry considering multiple day stays. *Operations Research*, 43(3):427–443, 1995.
- G. R. Caldentey Bitran and S. V. Mondschein. Coordinating clearance markdown sales of seasonal products in retail chains. *Operations Research*, 46(5):609–624, 1998.
- S. Bollapragada, H. Cheng, M. Phillips, M. Garbiras, M. Scholes, T. Gibbs, and M. Humphreville. Nbc’s optimization systems increase revenues and productivity. *Interfaces*, 32(1):47–60, 2002.
- L. E. Bolton, L. Warlop, and J. W. Alba. Consumer perceptions of price (un)fairness. *Journal of Consumer Research*, 29(4):474–492, 2003.
- E. A. Boyd and I. C. Bilegan. Revenue management and e-commerce. *Management Science*, 49(10):1363–1386, 2003.
- L. Canina and C. A. Enz. Revenue management in US hotels. Cornell University Center for Hospitality Research Report, 2006.
- W. J. Carroll and R. C. Grimes. Evolutionary change in product management: Experiences in the car rental industry. *Interfaces*, 25(5):84–104, 1995.
- R. B. Chase. Where does the customer fit in a service operation? *Harvard Business Review*, 56(6):137–142, 1978.
- S. S. Chen, K. B. Monroe, and Y. Lou. The effects of framing price promotion messages on consumers’ perceptions and purchase intentions. *Journal of Retailing*, 74(3):353–372, 1998.
- R. G. Cross. *Revenue Management: Hard Core Tactics for Market Domination*. Bantam Dell Publishing Group, New York, 1997.
- R. J. Dolan and H. Simon. *Power Pricing*. The Free Press, New York, 1996.

- R. J. Donovan, J. R. Rossiter, G. Marcolyn, and A. Nesdale. Store atmosphere and purchasing behavior. *Journal of Retailing*, 70(3):284–294, 1994.
- W. Elmaghraby and P. Keskinocak. Dynamic pricing, research overview, current practices and future directions. *Management Science*, 49(10):1287–1296, 2003.
- S. Fournier, S. Dobscha, and D. G. Mick. Preventing the premature death of relationship marketing. *Harvard Business Review*, 76(1):42–51, 1998.
- G. Gallego. A demand model for yield management. Technical Report, Columbia University: Department of Industrial Engineering and Operations Research, New York, NY, 1996.
- G. Gallego and G. van Ryzin. Optimal dynamic pricing of inventories with stochastic demand over finite horizons. *Management Science*, 40(8):999–1020, 1994.
- M. K. Geraghty and E. Johnson. Rm saves national car rental. *Interfaces*, 27(1):107–127, 1997.
- C. E. Green. Demystifying distribution: building a distribution strategy one channel at a time. TIG Global Special Report. Hospitality Sales and Marketing Institute, 2006.
- J. P. Guilford and P. Smith. A system of color preferences. *American Journal of Psychology*, 72:487–502, 1959.
- R. B. Hanks, R.P. Noland, and R.G. Cross. Discounting in the hotel industry, a new approach. *Cornell Hotel and Restaurant Administration Quarterly*, 33(3):40–45, 1992.
- A. Heching, G. Gallego, and G. van Ryzin. Mark-down pricing: An empirical analysis of policies and revenue potential at one apparel retailer. *Journal of Revenue and Pricing Management*, 1(2):139–160, 2002.
- L. Heracleous and J. Wirtz. Singapore airlines’ balancing act — Asia’s premier carrier successfully executes a dual strategy: it offers world-class service and is a cost leader. *Harvard Business Review*, 88(7/8):145–149, 2010.
- M. K. Hui and J. E. G. Bateson. Perceived control and the effects of crowding and consumer choice on the service experience. *Journal of Consumer Research*, 18(2):174–184, 1991.
- J. Jacoby, G. J. Szybillo, and C. Kohn. Time and consumer behavior: An interdisciplinary overview. *Journal of Consumer Research*, 2(4):320–339, 1976.
- X. Jing and M. Lewis. Stockouts in online retailing. *Journal of Marketing Research*, 48(2):342–354, 2011.

- D. Kahneman and A. Tversky. Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2):263–291, 1979.
- D. Kahneman, J. L. Knetsch, and R. H. Thaler. Fairness as a constraint on profit seeking: Entitlements in the market. *American Economic Review*, 76:728–741, 1986a.
- D. Kahneman, J. L. Knetsch, and R. H. Thaler. Fairness and the assumptions of economics. *Journal of Business*, 59(4):285–300, 1986b.
- S. E. Kimes. Perceived fairness of yield management. *Cornell Hotel and Administration Quarterly*, 3(1):22–29, 1994.
- S. E. Kimes. Revenue management on the links: Applying yield management to the golf-course industry. *Cornell Hotel and Restaurant Administration Quarterly*, 41(1):120–127, 2000.
- S. E. Kimes. Revenue management: Implementation at Chevys Arrowhead. *Cornell Hotel and Restaurant Administration Quarterly*, 44(4):52–67, 2004.
- S. E. Kimes and R. B. Chase. The strategic levers of yield management. *Journal of Service Research*, 1(2):156–166, 1998.
- S. E. Kimes and K. A. McGuire. Function space revenue management: A case study from singapore. *Cornell Hotel and Restaurant Administration Quarterly*, 42(6):33–46, 2001.
- S. E. Kimes and B. M. Noone. Perceived fairness of yield management: An update. *Cornell Hotel and Restaurant Administration Quarterly*, 43(1):28–29, 2002.
- S. E. Kimes and L. M. Renaghan. The role of space in revenue management. In Ian Yeoman and Una McMahon-Beattie, editors, *Revenue Management, A Practical Pricing Perspective*, pages 17–28. 2011.
- S. E. Kimes and G. M. Thompson. Restaurant revenue management at Chevys: Determining the best table mix. *Decision Sciences Journal*, 35(3):371–391, 2004.
- S. E. Kimes and G. M. Thompson. An evaluation of heuristic methods for determining the best table mix in full-service restaurants. *Journal of Operations Management*, 23(6):599–617, 2005.
- S. E. Kimes and J. Wirtz. Perceived fairness of revenue management in the U.S. golf industry. *Journal of Revenue and Pricing Management*, 1(4):332–344, 2002.
- S. E. Kimes and J. Wirtz. Has revenue management become acceptable? findings from an international study on the perceived fairness of rate fences. *Journal of Service Research*, 6(2):125–135, 2003.

- S. E. Kimes, R. B. Chase, S. E. N. Choi Ngonzi, and P.Y. Lee. Restaurant revenue management. *Cornell Hotel and Restaurant Administration Quarterly*, 40(3):40–45, 1998.
- S. E. Kimes, J. Wirtz, and B.M. Noone. How long should dinner take? measuring expected meal duration for restaurant revenue management. *Journal of Revenue and Pricing Management*, 1(3):220–233, 2002.
- K. J. Klassen and T. R. Rohleder. Combining operations and marketing to manage capacity and demand in Services. *The Service Industries Journal*, 21(2):1–30, 2001.
- S. P. Ladany and A. Arbel. Optimal cruise-liner passenger cabin pricing policy. *European Journal of Operational Research*, 55:136–147, 1991.
- E. J. Langer. *The Psychology of Control*. Sage, Beverly Hills, CA, 1983.
- T. C. Lee and M. Hersh. A model for dynamic airline seat inventory control with multiple seat bookings. *Transportation Science*, 27(3):252–265, 1993.
- K. Littlewood. Forecasting and control of passenger bookings. AGIFORS Symposia, 1972.
- C. H. Lovelock. Strategies for managing capacity constrained service organizations. In C. H. Lovelock, editor, *Managing Services: Marketing, Operations and Human Resources*, pages 154–168. Prentice-Hall, New Jersey, 2nd edition, 1992.
- C. H. Lovelock. *Services Marketing: People, Technology, Strategy*. Prentice Hall, Englewood Cliffs, NJ, 4th edition, 2001.
- C. H. Lovelock and J. Wirtz. *Services Marketing: People, Technology, Strategy*. Prentice Hall, Upper Saddle River, New Jersey, 7th edition, 2011.
- M. Martins and K. B. Monroe. Perceived price fairness: a new look at an old construct. *Advances in Consumer Research*, 21:75–78, 1994.
- A. S. Mattila and J. Wirtz. Congruency of scent and music as a driver of in-store evaluations and behaviour. *Journal of Retailing*, 77(2):273–289, 2001.
- A. S. Mattila and J. Wirtz. The role of store environmental stimulation and social factors on impulse purchasing. *Journal of Services Marketing*, 23(1): 562–567, 2008.
- J. I. McGill and G. van Ryzin. Revenue management: Research overview and prospects. *Transportation Science*, 33(2):233–256, 1999.
- A. Mehrabian and J. A. Russell. *An Approach to Environmental Psychology*. MIT Press, Cambridge, MA, 1974.

- R. E. Milliman. Using background music to affect the behavior of supermarket shoppers. *Journal of Marketing*, 46(Summer):86–91, 1982.
- R. E. Milliman. The influence of background music on the behavior of restaurant patrons. *Journal of Consumer Research*, 13(2):286–289, 1986.
- K. B. Monroe. The influence of price differences and brand familiarity on brand preferences. *Journal of Consumer Research*, 3(June):42–49, 1976.
- V. G. Morwitz, E. A. Greenleaf, and E. J. Johnson. Divide and prosper: consumers' reactions to partitioned prices. *Journal of Marketing Research*, 35:453–468, 1998.
- I. C. L. Ng, J. Wirtz, and K. S. Lee. The strategic role of unused service capacity. *International Journal of Service Industry Management*, 10(2):211–238, 1999.
- B. M. Noone, S. E. Kimes, and L. M. Renaghan. Integrating customer relationship management and revenue management: A hotel perspective. *Journal of Revenue and Pricing Management*, 2(1):7–21, 2003.
- B. M. Noone, J. Wirtz, and S. E. Kimes. The effect of perceived control on consumer responses to service encounter pace: A revenue management perspective. *Cornell Hospitality Quarterly*, 53(4):295–307, 2012.
- B. N. Noone, S. E. Kimes, A. S. Mattila, and J. Wirtz. The effect of meal pace on customer satisfaction. *Cornell Hotel and Restaurant Administration Quarterly*, 48(3):231–245, 2007.
- B. N. Noone, S. E. Kimes, A. S. Mattila, and J. Wirtz. Service encounter pace: its role in determining satisfaction with hedonic services. *Journal of Service Management*, 20(4):380–403, 2009.
- M. Prewitt. Chains save space, support sales with 'value engineering principles'. *Nations Restaurant News*, 15(1), October 2007.
- H. M. Proshansky, W. H. Ittelson, and L. G. Rivlin. Freedom of choice and behavior in a physical setting: Some basic assumptions. In H. M. W. H. Proshansky Ittelson and L. G. Rivlin, editors, *Environmental Psychology: Man and His Physical Setting*, pages 419–439. Holt, Rinehart & Winston, New York, 1970.
- W. J. Quain, M. Sansbury, and D. Quain. Revenue enhancement, part 2. *Cornell Hotel and Restaurant Administration Quarterly*, 40(2):76–81, 1999.
- S. K. A. Robson. Turning the tables: The psychology of design for high-volume restaurants. *Cornell Hotel and Restaurant Administration Quarterly*, 40(3):56–63, 1999.

- S. K. A. Robson, S. E. Kimes, F. D. Becker, and G. W. Evans. ‘consumers’ responses to inter-table spacing in restaurants. *Cornell Hospitality Quarterly*, 52(3):253–264, 2011.
- K. V. Rohlfs and S. E. Kimes. Customer perceptions of best available rates. *Cornell Hotel and Restaurant Administration Quarterly*, 48(2):151–162, 2007.
- E. E. Sasser. Match supply and demand in service industries. *Harvard Business Review*, 48(November–December):133–140, 1976.
- L. A. Schlesinger and J. L. Heskett. The service-driven service company. *Harvard Business Review*, 69(5):71–81, 1991.
- K. W. Shaie and R. Heiss. *Color and Personality*. Hans Huber, Bern, 1964.
- J. Siguaw, S. E. Kimes, and J. Gassenheimer. Sales force revenue management. *Journal of Industrial Marketing Management*, 32(7):539–551, 2003.
- H. Simon and R. J. Dolan. Price customization. *Marketing Management*, 7 (Fall):11–17, 1998.
- R. W. Simpson. Using network flow techniques to find shadow prices for market and seat inventory control. Cambridge, MA, MIT Flight Transportation Laboratory, 1989.
- A. Smith, R. Bolton, and J. Wagner. A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research*, 34:356–372, 1999.
- B. A. Smith, J. F. Leimkuhler, and R. M. Darrow. Yield management at American Airlines. *Interfaces*, 22(1):8–31, 1992.
- B. C. Smith. Personal communication, 2001.
- R. Sommer. *Personal Space: The Behavioral Basis of Design*. Englewood Heights, NJ, Prentice-Hall, 1969.
- B. A. Sparks and J. McColl-Kennedy. Justice strategy and options for increased customer satisfaction in a services recovery setting. *Journal of Business Research*, 54(3):209–218, 2001.
- P. Szuchman and W. Tesoriero. Hurry up and putt – with iron hand, golf marshals get rough on slow duffers: Mr. blanco’s marching orders. *Wall Street Journal*, W1, April 9 2004.
- K. Talluri and G. van Ryzin. An analysis of bid-price controls for network revenue management. *Management Science*, 44(11):1577–1593, 1998.
- S. Tax, S. Brown, and M. Chandrashekar. Customer evaluation of service complaint experiences: Implications for relationship marketing. *Journal of Marketing*, 62(2):60–76, 1998.

- R. F. Thaler. Mental accounting and consumer choice. *Marketing Science*, 4(3):199–214, 1985.
- F. V. Wangenheim and T. Bayon. Behavioral consequences of overbooking service capacity. *Journal of Marketing*, 71(4):36–47, 2007.
- L. R. Weatherford. Optimization of joint pricing and allocation of perishable revenue management problems with cross-elasticity. *Journal of Combinatorial Optimization*, 1:277–304, 1997.
- L. R. Weatherford and S. E. Bodily. A taxonomy and research overview of perishable-asset revenue management: yield management, overbooking and pricing. *Operations Research*, 40(5):831–844, 1992.
- E. L. Williamson. Airline network seat inventory control: Methodologies and revenue impacts. MIT Flight Transportation Laboratory Report, 1992.
- J. Wirtz and S. E. Kimes. The moderating role of familiarity in fairness perceptions of revenue management. *Journal of Service Research*, 9(3):229–240, 2007.
- J. Wirtz, A. S. Mattila, and R. L. P. Tan. The moderating role of target-arousal state on the impact of affect on satisfaction — an examination in the context of service experiences. *Journal of Retailing*, 76(3):347–365, 2000.
- J. Wirtz, S. E. Kimes, J. P. T. Ho, and P. Patterson. Revenue management: resolving potential customer conflicts. *Journal of Revenue and Pricing Management*, 2(3):216–228, 2003.
- J. Wirtz, A. S. Mattila, and R. L. P. Tan. The role of desired arousal in influencing consumers' satisfaction evaluations and in-store behaviors. *International Journal of Service Industry Management*, 18(2):6–24, 2007.
- J. Wirtz, P. Chew, and C. H. Lovelock. *Essentials of Services Marketing*. Prentice Hall, Singapore, 2nd edition, 2012.
- L. Xia and K. B. Monroe. Price partitioning on the Internet. *Journal of Interactive Marketing*, 18(4):63–73, 2004.
- L. Xia, K. B. Monroe, and J. L. Cox. The price is unfair! a conceptual framework of price fairness perceptions. *Journal of Marketing*, 68(October):1–15, 2004.
- W. Zhao and Y. Zheng. A dynamic model for airline seat allocation with passenger diversion and no-shows. *Transportation Science*, 35(1):80–98, 2001.