Revenue Management: Advanced Strategies and Tools to Enhance Firm Profitability

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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.
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


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