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Prices, prices and prices: A study in the airline sector

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HIGHLIGHTS

- This article creates and empirically analyzes a dynamic pricing framework.
- The study identifies three pricing perspectives.
- Firms combine these different perspectives in their pricing strategies.
- The weights of these pricing perspectives change according to different factors.
- The effect of the environment and the nature of the strategy are analyzed.

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ABSTRACT

This article creates and empirically analyzes a dynamic pricing framework. The model includes the main theories on prices in the literature, and dynamically analyzes how companies change their pricing policies according to different circumstances. Through the use of regressions, the article shows the relative long and short-term impact on pricing equations (strategic versus operational matters), and on production conditions versus demand perspectives in the setting of operational prices. In addition, it highlights how the proportions of these pricing perspectives change in the airline sector according to the effect of the environment on the configuration of the strategy (determined by monthly and hourly seasonality), and also according to the nature of this competitive strategy (determined by the characteristics of the company and the destination airport). The results confirm our framework, and show how firms combine the different perspectives in their pricing strategies.

1. Introduction

"The new business environment is characterized by unpredictability, complexity, and changes" (Garrigós, Palacios, & Narangajavana, 2008: 361), and this is especially the case with the development of new technologies and increasing competition on the Internet. Easier access to information for customers and the increasing dynamism of the environment have transformed the basis of competitiveness and have led to a revolution in marketing and management tools. In order to deal with these new situations, one of the most critical elements for firms is the ability to set and manage pricing strategies, especially for companies active in highly dynamic and "hyper-competitive" industries (Jallat & Ancarani, 2008: 465).

The key objective of pricing strategies "is maximizing sellers' profits by capturing consumers' heterogeneous product valuations and accounting for competition and cannibalization" (Kim, Natter, & Spann, 2009: 44). However, nowadays traditional price strategies are changing very rapidly, sometimes evolving into dynamic and complex pricing policies aimed at dealing with the new environment and the competition. As Choi and Mattila (2009: 43) point out, "Internet-based channels tend to encourage firms to use pricing to influence consumers by dynamically managing prices in the multichannel marketing environment". Hence, alongside classic strategic perspectives, new dynamic pricing strategies have emerged as particularly useful tools, due to the advances in new technology and the growing prevalence of Internet retailing (Haws & Bearden, 2006: 305).

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Faced with the new environmental circumstances, the airline industry has pioneered the development and implementation of new management and marketing tools for revenue and yield management (Boyd, 2006; Lindenmeier & Tscheulin, 2008), and for publicity, promotion, sales and communication (Yu, 2008). In particular, some important innovations in pricing strategies for dealing with the new environment originate from the airline industry (Jallat & Ancarani, 2008). Hence, nowadays "the literature on airline pricing abounds with works explaining differences in airfares" (Obeng, 2008: 168), due to this sector's importance in shaping dynamic pricing management models, which are spreading to other service industries (Choi & Mattila, 2009).

Currently, research into prices and new revenue management tools in the management and marketing literature in general is growing significantly (Bolton & Myers, 2003; Chandran & Morwitz, 2005; Choi & Mattila, 2009; Cross, 1997; Desiraju & Shugan, 1999; Grewal & Lindsey-Mullikin, 2006; Kim et al., 2009; Koçaş & Bohlmann, 2008; Shirai, 2003; Srinivasan, Pauwels, & Nijs, 2008; Viswanathan, Kuruzovich, Gosain, & Agarwal, 2007; Zettelmeyer, 2000), especially in the tourism sector (Davies & Downward, 2007; Hayes & Ross, 1998; Hofer, Windle, & Dresner, 2008; Kashyap & Bojanic, 2000; Kimes, Barrash, & Alexander, 1999; Mangion, Durbarry, & Sinclair, 2005; Obeng, 2008; Stavins, 2001; Yu, 2008).

However, the literature about which is the "appropriate" price to set for a given time and circumstance is still limited, because this issue is very difficult to analyze and empirically investigate in general terms. First of all, different factors can influence and affect prices (temporary factors, internal or external factors, demand and production characteristics, or even strategic factors). Secondly, the diverse perspectives on setting prices (for instance, short and long-term perspectives) have multiple impacts and consequences, such as on short-term profitability (Homburg, Hoyer, & Koschate, 2005; Marn & Rosiello, 1992), but also on various strategic factors such as customer perceptions (Campbell, 1999), loyalty and repurchase intentions (Homburg et al., 2005), or even the company image, which obviously have a major impact on the success and competitiveness of companies. Also, previous studies on prices are a rather diverse group, as the problem is analyzed from many different perspectives in the literature and there are no studies that cover the problem in its entirety.

This study makes a contribution to the literature by creating a framework which summarizes all the main developments in pricing strategies, and by studying empirically the importance or weights of the diverse perspectives in the shaping of firms' prices, and how these weights dynamically change according to circumstances. Specifically, after creating our model, and adapting it to the airlines sector, our study applies it to the Alicante-London market with 2211 cases of prices, studying and analyzing the following aspects.

First of all, we examine the composition, weight or relative importance of three perspectives on price equations: the long-term prices (called long-term strategic prices), and the short-term prices, with the focus here on both a demand perspective (demand prices) and the impact of production conditions (a production or yield prices perspective). In order to do this, we take the theoretical model of Jallat and Ancarani (2008) and important empirical developments in the airline industry (Pels & Rietveld, 2004; Pitfield, 2004, 2005) as our starting point. Secondly, we consider the dynamic evolution of the structure of these price equations, or the change in the weights of these three perspectives, provoked by changes in environmental conditions (specifically monthly and hourly seasonality), which mainly affect the significance of internal versus external circumstances in the configuration of prices (Porter, 1980; Prahalad & Hamel, 1990). Finally, we also highlight the importance of the nature of the firm's competitive strategy (differentiation versus cost (Porter, 1980)) in the evolution of the price functions in each marketplace, by emphasizing the determining role of the characteristics of the airlines and the destination airports (Borenstein & Rose, 1994; Giaume & Guillou, 2004; Stavins, 2001). The study is also postulated as a starting point for the future creation of possibly more sophisticated pricing models.

2. Theoretical model and propositions

The study of prices has its origins in the very emergence of classical economic theory in the late 18th century. The first theories highlighted price competition and the importance of cost factors (Adam Smith and David Ricardo), while later ones stressed the impact of the interaction of supply and demand in determining prices (Bertrand, 1883; Cournot, 1938). The improvement of the models of perfect competition, and the development of the industrialized economy and managerial theories, led to the recognition of the importance in the configuration of prices of issues such as individual benefits, the maximization of utility, equilibrium conditions, the impact of partial equilibriums and dynamic competition (Edgeworth, 1897; Knight, 1921; Marshall, 1890), and the cost of negotiation and information asymmetries (Coase, 1937; Williamson, 1975).

In the second half of the 20th century, the economic literature considered interrelated markets, with an emphasis on market structures, economies of scale, or product differentiation (Hick, 1946; Kaldor, 1961; Schmalensee, 1981). This literature is linked to the developments in industrial organization and some managerial perspectives (the schools of design, planning and positioning, etc.) (Andrews, 1987; Ansoff, 1965; Selznick, 1957), with numerous studies of strategic segmentation and contributions made by Michael Porter (1980, 1985), which led to the consideration of prices as strategic tools for market positioning, and to a greater emphasis on demand, the market, power over customers, and rivalry (Beier & Stern, 1969; Pfeffer & Salancik, 1978) as vital factors in determining prices.

Other approaches, involving psychology (Blankership, 1943), the behavioral sciences (Cyert & March, 1963; Maslow, 1943), systems theory (Barnard, 1938), and especially the development of the literature on marketing, established the importance of prices suiting market conditions, social needs, and customer satisfaction conditions (Howard, 1957; Vaile, Drether, & Cox, 1952). Specifically, pricing research was consolidated in marketing in the 60s with an emphasis on transactions, the first steps in customer orientation, and the establishment of the so-called marketing mix (McCarthy, 1960). In these studies, prices were considered a vital objective for marketing and the basis for the development of marketing strategies (Drucker, 1969; Kotler, 1972).

Research has increasingly emphasized the importance of the exchange rather than the transaction, and the study of prices adapted to the interests of customers and competitors. Gradually, the idea of price was replaced by the idea of value with the development of relational marketing (Grönroos, 1995) as opposed to the previous transactional marketing. In the new arena, the management of customer relationships became essential for the setting of pricing policies (Winer, 2001). Today, research emphasizes the significance of behavior and customer perceptions, the sources of price differentiations, the importance of internal and external reference prices for the customer (Campo & Yagüe, 2007; Read, Dew, Sarasvathy, Song, & Wiltbank, 2009; Shirai, 2003), the importance of penetration prices, changes of prices and interactive prices (Kim et al., 2009; Wolk & Spann, 2008), fair and ethical prices (Campbell, 1999; Choi & Mattila, 2009; Homburg et al., 2005) and in general relational prices. Essentially, the aim is to build and strengthen long-term customer relationships. In addition, the new