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Linkages between customer service, customer satisfaction and performance in the airline industry: Investigation of non-linearities and moderating effects

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ABSTRACT

The paper investigates the linkages between customer service, customer satisfaction, and firm performance in the US airline industry. In particular, the moderating effects of market concentration and firm dominance on the service–satisfaction–performance relationship are examined. Our major finding is that market concentration dampens the relationship between customer satisfaction and airline profitability. Although the same moderating relationship was not found for market power, these results, combined, indicate that airlines can increase profits in concentrated markets without providing for the same, concomitant increases in customer satisfaction as airlines operating in more competitive markets. From a public policy perspective, our results point to the importance of regulators monitoring airline actions, such as mergers and alliances, that serve to increase the concentration of markets, but may result in lower levels of customer satisfaction.

1. Introduction

There has been considerable research done on investigating the relationship between customer service, customer satisfaction and firm performance. A firm should be able to increase customer satisfaction by improving its customer service, ultimately leading to better firm performance. A number of research papers in Accounting, Operations Management, Marketing, and Transportation and Logistics have found these links (e.g., Banker et al., 2000; Behn and Riley, 1999; Anderson et al., 1994, 1997; Anderson and Mittal, 2000; Capon et al., 1990; Dresner and Xu, 1995). However, other research has found an inconsistent relationship between customer service, satisfaction and performance (e.g., Anderson and Mittal, 2000; Johnston et al., 1990; Johnston, 1995; Mersha and Adlakha, 1992; Ittner and Larcker, 1998; Arthur Andersen, 1994). The first objective of this paper is to investigate moderating variables that may influence the linkage between customer satisfaction and performance. In particular, we examine how this relationship may be moderated by market structure variables; notably market power and market concentration. We hypothesize that when a market is less competitive, either due to firm dominance or to high concentration in a market, then the link between customer satisfaction and firm performance will be weak. The rationale for this conjecture is that when a market is less competitive, there are fewer options open to customers. Even dissatisfied customers will purchase products or services from firms operating in these markets. Therefore, there will be fewer incentives for firms to improve their customer service in order to increase satisfaction.

A second objective of this study is to examine potential non-linearities in the relationship between customer service and customer satisfaction. Most of the empirical work has modeled a linear relationship between service and satisfaction (e.g.,

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Sim et al., 2010; Yee et al., 2008, 2010; Homburg et al., 2005; Nagar and Rajan, 2005; Behn and Riley, 1999; Riley et al., 2003). However, there could very well be diminishing marginal returns to the provision of customer service. Therefore, the impact of customer service on satisfaction could depend on the level of services being provided. At low service levels, increases in services could produce significant changes in satisfaction levels. But at higher service levels, changes in satisfaction could be less significant due to diminishing marginal returns. Thus, we allow for nonlinear relationships in our model.

Following the work of Dresner and Xu (1995), we use the airline industry as the market setting for our research. The airline industry provides an excellent setting for the study of the service–satisfaction–performance relationships because of the publically available data on all three types of variables. In addition, airlines compete on defined origin–destination routes, so market structure variables can be computed from public data.

The remainder of this paper is organized as follows. Section 2 provides a brief literature review and presents our hypotheses. In Section 3, the research model is developed and the data and variables described. Our results are presented in Section 4 and discussed in Section 5. Section 6 concludes the paper.

2. Literature review and hypotheses development

2.1. Customer service and customer satisfaction

The relationship between service and satisfaction has received considerable interest among scholars. In the Transportation and Logistics field, Dresner and Xu (1995) examined the link between customer service and customer satisfaction using data from the airline industry. They found that three measures of customer service – mishandled baggage, ticket over-sales, and on-time performance, were all positively related to customer complaints, their measure for customer satisfaction. In particular, reducing mishandled baggage and ticket over-sales (leading to fewer bumped passengers) and increasing on-time flight performance, all contributed to fewer customer complaints recorded by the US Department of Transportation. Park et al. (2004), using data on the Korean airline industry, found a similar relationship between airline service quality and customer satisfaction. Comparable results have also been found in other industries. For example, using subjective data from the retail industry, Babakus et al. (2004) found that perceived service quality leads to customer satisfaction. A similar finding was made by Yee et al. (2008, 2010) using a survey of 206 service shops based in Hong Kong.

Most of the empirical work in the Transportation and Logistics field has assumed a linear relationship between customer service and customer satisfaction (e.g., Sim et al., 2010; Yee et al., 2008, 2010; Homburg et al., 2005; Nagar and Rajan, 2005; Behn and Riley, 1999). However, the relationship is likely to be nonlinear due to diminishing marginal returns to customer service. It stands to reason that increasing customer service leads to higher satisfaction, but that diminishing marginal returns eventually sets in. This nonlinear view has been supported in a number of studies (e.g., Anderson and Mittal, 2000; Matzler et al., 2004; and more recently, Slevitch and Oh, 2010; Finn, 2011).

Therefore, our first hypothesis is as follows:

H1. Satisfaction increases with customer service, but at a diminishing marginal rate.

2.2. Customer satisfaction and firm performance

Although a few studies have found no significant relationship (Arthur Andersen, 1994), or even a negative relationship between customer satisfaction and financial performance (Ittner and Larcker, 1998), the preponderance of the literature suggests that higher customer satisfaction contributes to higher performance; for example through lower marketing costs or due to lower price elasticity of demand. Along these lines, in their study of the Swedish market, Anderson et al. (1994), using 1989–1990 company-level market share data, suggest that the provision of high customer satisfaction positively impacts future financial returns. Customer satisfaction can improve profitability because it influences the repurchase behavior of customers (e.g., Stank et al., 1999; Verhoef, 2003). Thus, customer satisfaction leads to customer loyalty, which in turn contributes to the profitability of a firm (Anderson et al., 1994; Mittal and Kamakura, 2001). In addition, satisfied customers may be willing to pay premium prices for products, thus also contributing to increased profitability (Homburg et al., 2005).

Perhaps the most relevant literature to this study is Dresner and Xu (1995) and Behn and Riley Jr. (1999). Dresner and Xu (1995), in addition to examining the impact of customer service on customer satisfaction as noted above, also looked at the impact of satisfaction on profitability in the airline industry. Their finding suggests that increased satisfaction contributes to higher profits, even after controlling for the additional costs involved in providing that higher level of satisfaction. Supplementing Dresner and Xu (1995), Behn and Riley Jr. (1999), incorporate a number of operating measures into their model in order to determine how nonfinancial airline information, including customer satisfaction, relates to financial performance. Using an instrumental variables approach, similar to Dresner and Xu (1995), they find a positive link between customer satisfaction and operating income. Furthermore, in two airline industry studies, Yee et al. (2008, 2010) also find a significant positive relationship between customer satisfaction and firm performance.

The findings from the literature suggest that higher levels of customer satisfaction will lead to improved firm performance. Thus our second hypothesis is the following:

H2. Higher customer satisfaction leads to higher profitability.