HOW MUCH CONTROL DO MANAGERS REALLY HAVE OVER CUSTOMER SATISFACTION?

by

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CHAPTER 1

INTRODUCTION

This dissertation examines the extent to which a firm's efforts to improve customer satisfaction are constrained or limited by industry characteristics and country differences. Specifically, we examine the extent to which industry structure and country differences, rather than managers, determine customer satisfaction. Using Fornell's (1995) view of customer satisfaction as a market-based measure of firm performance, and extending the Industrial Organization and International Business literatures, we suggest customer satisfaction to be jointly determined by managerial actions, industry characteristics, and country specifics. We find that customer satisfaction is indeed jointly determined by managerial actions, industry characteristics and country differences. We also find that industry characteristics and country differences explain a very significant portion (around 80% on average) of cross-industry and between-countries variance in customer satisfaction, explaining some of the frustration experienced by managers trying to understand and influence customer satisfaction (Anderson and Mittal, 2000; BusinessWeek, 2000).

Customer satisfaction has received considerable interest in the marketing literature (Oliver, 1996; Fornell et al, 1996; Yi, 1991), mainly due to its behavioral and economic consequences on firm financial and economic performance (Anderson, Fornell and Rust, 1997; Fornell, 1995). However, both practitioners (Business Week, 2000; Wall

Street Journal, 2000) and academicians (Bolton, 1998; Mittal, Ross and Baldasare. 1998; Reichheld and Teal, 1996) have expressed concern about establishing the links between firm efforts to improve customer satisfaction, customer satisfaction itself, and its expected consequences. In part these concerns may arise because managers influence on satisfaction may be limited by structural factors, such as the nature of competition, industry practices, or country specific variables[1].

The primary goal of this research is to provide a better understanding of the extent to which a firm's efforts to improve customer satisfaction are constrained or limited by industry and country characteristics. In addition, the theory, methodology, and sample used in this study have significant advantages over previous research efforts on this topic.

First, we establish the extent to which customer satisfaction is influenced by industry characteristics, by beneficially extending the Industrial Organization literature linking industry characteristics to firm financial performance. Using customer satisfaction as a market-based measure of firm performance, we extend Industrial Organization insights into the determinants of firm performance (Jayachandran, Gimeno and Varadarajan, 1999) to explain customer satisfaction as being jointly determined by industry characteristics (Bain, 1956; Schamlensee, 1989) and firm actions (Rumelt, 1991; Wernerfelt, 1984).

Second, we use the American Customer Satisfaction Index (ACSI) database, which provides a nationally representative sample of goods and services, and is by far the most comprehensive customer satisfaction database. Additionally, we use the Swedish

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[1] Figure 1 illustrates this systematic cross-industry variation in customer satisfaction for the United States.

Customer Satisfaction Barometer (SCSB) and the Korean National Customer Satisfaction Index (NCSI) databases, and usefully extend the International business literature to analyze the impact of country characteristics in explaining cross-industry and between-country differences in customer satisfaction. International business research generally agrees that cultural, financial, legal, and economic factors vary by country (Borkowski, 1999; Huff and Alden, 1998; Furrer, Liu, and Sudharshan, 2000; Sivadas, 1998), and they impact managers and firm performance, and make it more difficult to evaluate their performance (Borkowski, 1999). Additionally, Anderson and Fornell (1994) suggest that understanding how these factors influence customer satisfaction has important implications on how firms might allocate their resources in different parts of the global economy.

Finally, we use a hierarchical Bayes methodology. We believe this to be the most appropriate methodology given the structure of the data – firms nested within industries – delivering unbiased estimates and a rigorous approach to the research question.

Understanding the limits of managerial influence on satisfaction has obvious important implications, and will be useful for evaluating performance, developing marketing strategy, and allocating resources. From a benchmarking perspective, understanding how industry characteristics affect customer satisfaction facilitates the understanding of what constitutes a good satisfaction score and will make inter-industry and between-countries comparisons of customer satisfaction scores more meaningful. In addition, it allows for the prioritization and allocation of resources to where they are more efficient. Furthermore, the ability to understand the unique roles of firm and industry characteristics in determining customer satisfaction has important public policy

implications, such as industry concentration regulation. Likewise, the ability to understand the role played by country characteristics in determining customer satisfaction is particularly important in this age of multinational firms and increased economic globalization. Additionally, academics can benefit from a better understanding of external factors that influence the level of customer satisfaction provided by a firm. Finally, this is an important, new and relatively unexplored area, in need for more rigorous and comprehensive research (Anderson, 1994; Fornell and Johnson, 1993).

Positing customer satisfaction as a market-based measure of firm performance, allows us to usefully extend both the Industrial Organization and International Business literatures to investigate the influence of specific industry characteristics (i.e. market concentration, advertising intensities, perceived product quality, services versus goods) and country characteristics (i.e. GDP per capita, literacy rates, urbanization levels, unemployment rates) on customer satisfaction. Findings suggest that industry characteristics and country differences account for as much as 80% of the variance in customer satisfaction, explaining some of the frustration experienced by managers with customer satisfaction programs (BusinessWeek, 2000; Wall Street Journal, 2000).

This dissertation proceeds as follows: chapter 2 reviews the relevant literature on customer satisfaction and industrial organization, and motivates the research question. In chapter 3 we address the methodology used – hierarchical Bayes – describe the dataset, and test the main hypothesis and the appropriateness of the methodology used. In chapter 4 we develop additional hypotheses concerning specific industry characteristics and their impact on customer satisfaction. In chapter 5 we test these hypotheses and discuss the findings. Chapter 6 reviews the extant literature on country differences and develops

additional hypotheses concerning country differences and satisfaction. We also describe the Swedish and Korean datasets and test the hypotheses developed using the same methodology. Chapter 7 discusses the results of the empirical tests, reviews limitations of this research, suggests directions for future research, and concludes.

CHAPTER 2

INDUSTRY CHARACTERISTICS AND CUSTOMER SATISFACTION

2.1 Customer Satisfaction

Customer satisfaction is a central construct for modern marketing theory and practice. The marketing concept emphasizes the delivery of satisfaction (not just products or services) to customers, as a means of achieving superior financial performance (Kotler, 2000). Therefore, it is not surprising to observe increasing interest in customer satisfaction research, given the increased competition, maturing markets, and dramatic technological changes facing most competitors and markets (Fornell, 1992). These changes in the marketplace are indicative of the difficulties to compete on the basis of technology alone, as more and more firms are using customer satisfaction as a means of differentiating themselves, and aggressively pursuing customers, heightening the significance of the behavioral and economic consequences of customer satisfaction (Fornell, 1995).

Several studies have found a positive association between customer satisfaction and customer retention (Anderson and Sullivan, 1993; Yi, 1991), satisfaction and reduced customer complaints (Fornell and Wernerfelt, 1987), and between satisfaction and positive word-of-mouth (Anderson, 1996). Additionally, customer retention (i.e. loyalty)

is positively associated with increased future revenues (Fornell, 1992; Rust et al., 1995), reduced costs of future transactions (Reichheld and Sasser, 1990), decreased price-elasticities of demand (Anderson, 1996), and providing defense against competitors' actions (Fornell, 1992). Finally, other researchers have established a positive link between customer satisfaction and firm financial performance (Anderson, Fornell and Rust, 1997; Mazvancheryl, Anderson and Fornell, 2000). From the above discussion, an argument can be made for interpreting customer satisfaction as a measure of firm performance, particularly of a firm's future financial performance (Anderson, Fornell and Rust, 1997).

As in many other areas of research in marketing, there are two very different conceptualizations of customer satisfaction in the literature. The one that is usually associated with individual level customer satisfaction is viewed as a post-choice judgment of a specific purchase occasion. Accordingly, Hunt (1976) defines customer satisfaction as "…an evaluation rendered that the [consumption] was at least as good as supposed to be…" The other conceptualization of customer satisfaction is a more aggregate measure, based on all past purchase and consumption experiences (Anderson, Fornell and Lehmann, 1994; Fornell, 1992), providing a common denominator for generalizations across firms, industries and sectors (Fornell, 1995; Fornell et al., 1996).

Given the economic consequences of customer satisfaction, recent research efforts have shifted focus increasingly to the firm level. While transaction specific individual level satisfaction can be extremely useful in understanding what went wrong or right with a particular experience, cumulative measures of satisfaction are more appropriate for understanding the economic consequences (e.g. loyalty and repurchase rates) of customer

satisfaction at the firm level (Anderson and Fornell, 1994). Additionally, from a methodological point, an aggregate measure of satisfaction will lead to cancellation of individual customer differences and random factors (Katona, 1975), thus reducing measurement error, increasing the applicability and predictive power of customer satisfaction (Anderson and Fornell, 1994; Epstein, 1980).

From the above discussion, it seems natural that by suggesting customer satisfaction as a measure of firm performance, one would focus on satisfaction as the buyer's overall evaluation of the total purchase and consumption experience (Anderson, Fornell and Lehmann, 1994; Fornell, 1992), rather than on a particular evaluation of a specific transaction (Oliver, 1980, 1993; Yi, 1991), specially when the purpose of this research is to provide a better understanding of the extent to which a firm's efforts to improve customer satisfaction are constrained or limited by industry characteristics.

2.2 Industrial Organization

The field of industrial organization provides a rich body of research on the determinants of firm financial performance (Bain, 1956; Demsetz, 1973; Porter, 1980, 1985; Gilbert, 1984; Rumelt, 1986; Wernerfelt, 1984; Schmalensee, 1989; Tirole, 1997). Particularly, the literature on the association (or lack thereof) between industry characteristics and firm performance is immense, and much of the discussion rests on the different measures of performance and industry characteristics (Schmalensee, 1989).

Industries have different economic characteristics and these can clearly impact the differences in industry profitability (Suutari, 2000). For instance, the nine largest U.S. drug companies had a median five-year average return on capital of 27.4%, with the best

performer having an average return of 54.7%, and the weakest, 14.1%. By contrast, the eight largest U.S. airlines yielded a median five-year average return on capital of 10.2%, with the best performer having a five-year average return of 14.9%, and the poorest, 8.0%. Similarly, the three largest U.S. soft-drink companies had a median five-year average customer satisfaction score of 85 (out of 100), with the best performer exhibiting a score of 87, and the weakest, 82. By comparison, the eight largest airline carriers exhibited a median five-year average satisfaction score of 69 (out of 100), with the best performer displaying a score of 77, and the worst, 62. The above discussion exemplifies how differences in industry characteristics can generate such differences in customer satisfaction.

Jayachandran, Gimeno and Varadarajan (1999) provide an excellent summary of the industrial organization insights into the determinants of firm performance. The structure-conduct-performance paradigm (Bain, 1956) explains why some industries – on average – are more profitable than others. While the efficiency perspective (Demsetz, 1973) provides insights into why some firms in a given industry are more profitable than other firms. The competitive advantage notions advanced by Porter (1980, 1985) provide insights into how the structural characteristics of an industry and the competitive strategy pursued by a business, jointly determines the performance of that business. Finally, the resource-based view of the firm (Barney, 1991; Wernerfelt, 1984; Rumelt, 1986) attempts to explain superior firm performance in terms of firm-specific resources that are rare, valuable, and non-imitable. Overall, and independently of which specific paradigm we choose, the general findings of industrial organization research seem to suggest that three elements: (1) general environment, (2) industry environment, and (3) firm

resources/actions, jointly determine competitive advantages, market performance and ultimately, financial performance for the firm (Jayachandran, Gimeno and Varadarajan, 1999).

Industrial organization theory and findings can be constructively extended to investigate the influence of industry characteristics (i.e. industry environment) and country characteristics (i.e. general environment) on customer satisfaction – a market-based measure of firm performance. Rumelt's (1991) seminal paper provides a starting point to analyze the influence of industry characteristics on customer satisfaction.

In his paper, Rumelt (1991) finds that managerial actions[1] explain nearly five times as much variance in firm financial performance as industry characteristics. These same results were later replicated (Caroll, 1993; Roquebert, Phillips and Westfall, 1996). However, several more recent studies (Brush and Bromiley, 1997; McGahan and Porter, 1997) suggest that industry characteristics may be significantly more important than originally suggested by Rumelt (1991). Additionally, Brush, Bromiley and Hendrickx (1999) suggest that a possible explanation for the conflicting findings may rest on the differences between the methodologies employed – variance components analysis and analysis of variance – and propose an alternative approach using a simultaneous equation model. This debate is far from finished, especially as newer and more appropriate

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[1] In his paper Rumelt separates firm/managerial actions into corporate effects (β_k) and business-unit effects (ϕ_{ik}). Rumelt finds that corporate effects and business-unit effects account for 80% of the variance in firm financial performance, therefore explaining five times more variance than industry characteristics.

methodologies are developed, suggesting that an argument can be made for the importance of industry characteristics in influencing firm performance (Suutari, 2000).

Positing customer satisfaction as a market-based measure of performance (Fornell, 1992), we can profitably extend the insights provided by industrial organization research to explore the relative role that country differences, industry characteristics, and managerial actions have in determining customer satisfaction. However, and despite the inherent appeal of formulating customer satisfaction as being jointly determined by managerial actions and industry characteristics, relatively little work has been done in this domain. The majority of customer satisfaction studies addressing the role of industry characteristics versus managerial actions as determinants of satisfaction fail to explicitly include industry characteristics or country differences in the analyses[2]. Examples include comparing services versus goods (Anderson, 1996), differentiated versus undifferentiated industries (Fornell and Johnson, 1993), or sector versus sector (Fornell et al., 1996). While these studies provide important insights concerning cross-industry differences in customer satisfaction, they do not supply comprehensive theoretical approaches that address the relative size and importance of industry characteristics in determining

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[2] Most studies address the role of industry characteristics or country differences by relying on a priori classification schemes, splitting firms into pre-assigned groups, such as services versus goods, or durables versus non-durables. Country differences are usually deal with by classifying countries into predetermined groups such as industrialized, or third-world countries. These classifications do not allow researchers to determine the exact impact that a specific firm action, industry characteristic or country variable has on customer satisfaction.

customer satisfaction, being more descriptive than prescriptive. In addition, none examines the relative variance explained by industry versus firm differences.

2.3 Industry Characteristics and Customer Satisfaction

Despite the existence of an extensive body of research on customer satisfaction (Fornell et al., 1996, Yi, 1991), both managers (Business Week, 2000; Wall Street Journal, 2000) and academicians (Anderson and Mitall, 2000; Bolton, 1998; Reichheld and Teal, 1996) have expressed concern about establishing the links between firm efforts to improve customer satisfaction, satisfaction itself, and its expected consequences.

Industries have different economic characteristics (e.g. degree of concentration, level of product differentiation, installed and utilized capacity, etc.) and these can clearly impact the differences in industry profitability (Suutari, 2000). The works of Porter (1980, 1985) summarize the impact that differential structural characteristics of an industry and the competitive strategy pursued by a firm in that industry, jointly determine that firm's financial performance. Similarly, both the efficiency perspective and the resource-based view of the firm paradigms (Demsetz, 1973; Barney, 1991; Wernerfelt, 1984) provide industry characteristics versus firm actions type of explanations for differences in firm performance. These industrial organization concepts are easily and fruitfully extended to analyze the impact that industry characteristics and firm actions have on determining customer satisfaction.

However, should we expect a similar result for customer satisfaction to that found by Rumelt (1991) for financial performance? Should we expect managerial actions to account for as much as 80% of the variance in customer satisfaction? Probably not, for

the following reasons: first, customer satisfaction is a market-based measure of firm performance, therefore less prone to managerial manipulation[3], suggesting that the extent to which managers may be able to influence it, may be significantly more limited than their influence in determining financial performance. Second, customer satisfaction is only one element contributing for a firm's financial performance (i.e. balanced scorecard), and managers have different objectives that they must meet, further indicating that the influence of managerial actions in determining customer satisfaction will likely be lower than on determining financial performance.

Third, Brush, Bromiley and Hendrickx (1999) suggest that the methodology employed by Rumelt (1991) – variance components analysis – may explain the large percentage of variance in firm performance attributed to corporate effects. Brush and colleagues indicate that given the nature of the data – firms nested within industries – using a simple variance components model may be spuriously inflating the relevance of corporate effects. In chapter 3 we describe in detail the methodology used for this research – hierarchical Bayes – that clearly separates between industry and firm variance. This methodology is the more appropriate methodology to use, and provides a rigorous approach to the research question. Brush and colleagues (1999) suggest that using this more appropriate methodology should reveal that industry characteristics are more important than suggested by Rumelt's seminal paper (1991).

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[3] Practitioner-oriented publications (Fortune Magazine, 1999; Wall Street Journal, 2000) have implied that financial performance is sometimes prone to managerial manipulation, given its short-run implications on

The above discussion suggests that industry characteristics are likely to explain a larger percentage of the variance in customer satisfaction than they explain in financial performance, suggesting the following hypothesis.

Hypothesis 1: Industry characteristics should explain a greater[4] proportion of the variance in customer satisfaction than they explain in financial performance.

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firm performance (i.e. stock market), thus suggesting that the real magnitude of the influence of managerial actions in determining financial performance may be over-estimated.

[4] We propose to test this hypothesis in two different ways: first we will compare the percentage of variance in customer satisfaction attributable to industry characteristics using the hierarchical Bayes methodology described in chapter 3, and compare that to the result obtained by Rumelt (1991). Second, we will also analyze the percentage of variance in firm financial performance attributable to industry characteristics using the same hierarchical Bayes methodology.