THE ANTECEDENTS AND CONSEQUENCES OF THE NICHE APPROACH TO HEALTHCARE DELIVERY

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ABSTRACT

OBJECTIVE: Niche hospitals represent a growing segment in the health care industry. A
niche strategy is an approach that focuses on a narrow market segment that its resources
and capabilities can exploit (Porter, 1980; Powers and Khan, 2004). The purpose of the
proposed study was to provide an understanding of the antecedents and consequences of
the niche approach to healthcare delivery. The interaction of the niche strategy and the
physician-owner as a unique bundle of resources was also examined. The subsequent
model tested the relationships among generic strategies, market effects, firm effects, and
financial performance.

RESEARCH DESIGN AND METHODS: The evaluation of the Porterian focused
differentiation strategy, also referred to as the niche approach to healthcare delivery,
revealed efficient models that explain financial performance. The evaluation of the fully
specified model suggested the use of Hierarchical Least Squares Regression as it was
desirable to confirm the hypotheses about the potential relationships among the variables
in the model. The full model consisted of one continuous dependent variable, five
independent variables representing the market effects, and seven independent variables
representing firm level effects. One way Analysis of Variance (ANOVA) was used to assess the differences in variation between specialty and traditional acute care hospitals. Pearson correlations were calculated to assess the correlations between each of the factors in the study.

RESULTS: The years of certification and occupancy percentage are statistically significant in the Porterian model. Ten percent increases in occupancy rates would provide a 22 percent increase in the dependent variable, ROA. The Porterian focused-differentiation variable was statistically significant and a 10 percent increase of this variable was found to contribute to a 15 percent increase in ROA. The Adjusted R-squared for the model was 8.1. While two of the firm level variables were found to be statistically significant, none of the market level variables were found to be significant.

CONCLUSIONS: The niche or focused factory strategy, as applied to healthcare, provides increased focus and efficiencies through repetition. Porter’s (1980) framework can help hospital decision makers understand the dynamic nature of market forces, how these forces affect the strategic approaches of competitors, and how the interaction of these forces impact the financial performance of the firm.
DEDICATION

I am indebted to my family and friends for their love and support throughout this process. The journey has been long and arduous but the reward, in so many ways, is derived from the journey itself because of the immense lessons learned along the way.

Thank you to Antonina for being so supportive and loving. Thank you to my unborn daughter. This effort has been for you more than for me.

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CHAPTER 1: INTRODUCTION

Niche hospitals represent a growing segment in the health care industry (Rosman, 2001; Devers, Brewster and Ginsburg, 2003). The Center for Medicare & Medicaid Services (CMS) and the Government Accountability Office (GAO) define a niche facility as a hospital that is primarily or exclusively engaged in the care & treatment of patients with cardiac or orthopedic conditions (Rosman, 2001; GAO, 2003; Schneider, Ohsfeldt, Morrisey, Zelner, and Miller, 2005). What distinguishes niche hospitals from other hospitals is that these entities are partially owned by the physicians who refer patients to them (Iglehart, 2006). Other single-service (also known as specialty) hospitals such as rehabilitation, psychiatric, children’s, and cancer facilities are not viewed or regulated in the same manner as these specialty hospitals. CMS also notes that these niche hospitals have patients receiving surgical procedures and most discharges are within related Diagnostic Related Groups (DRGs). For purposes of this research, niche hospitals will have some physician ownership and exhibit other characteristics as defined by CMS and enumerated above.

In recent years there have been drastic changes in Federal reimbursement policies for health services within the United States (Autry, 1986; Andro, Robertson, and Glandon, 1987; Rosman, 2001). The Balanced Budget Act of 1997 reduced Medicare
hospital insurance payments by 7% and substantially decreased hospital profitability (Altman, Shactman, and Eilat, 2006). In 2003 Medicaid reimbursed hospitals at 92% of costs, and Medicare reimbursed 95% of costs (Altman et. al, 2006). As the U.S. population ages, more Americans will depend on public programs as they transition from private, employer-sponsored insurance to Medicare. These changes and others have precipitated the growth of niche hospitals because stakeholders in the healthcare sector have sought the higher margins offered by niche hospitals and a release from the subsidization of non-profitable services offered in traditional acute-care facilities (Rosman, 2001; Devers et al., 2003; Schneider, Ohsfeldt, Morrisey, Zelner, and Miller 2005).

Rather than subsidizing full service emergency rooms and other non profitable business units, niche hospitals focus on only the most profitable business units such as cardiac and orthopedic. Niche hospitals employ a niche strategy. A niche strategy focuses on a narrow market segment that the organization’s resources and capabilities can exploit (Porter, 1980; Powers and Khan, 2004).

The Center for Medicare & Medicaid Services (CMS) defines a niche facility as a hospital that is primarily or exclusively engaged in the care & treatment of patients with cardiac or orthopedic conditions (Rosman, 2001; Schneider et. al, 2005). CMS also notes that these niche hospitals have the following characteristics: some physician ownership, most discharges within related Diagnostic related groups (DRGs), patients receiving surgical procedures, and patients receiving any other specialized type of services.
designated by CMS. For purposes of this study, the preceding CMS definition will denote a niche entity.

The effectiveness of the niche strategy in healthcare is of particular interest to the healthcare management field because of the increasing financial resources being consumed by the healthcare industry (Rosman, 2001; Devers et al., 2003; Altman, et al., 2006). Until recently, few major studies had empirically assessed the efficacy and effects of the niche strategy in healthcare (Schneider et al., 2005; Cram, Rosenthal, and Vaughan-Sarrazin, 2005). The purpose of this research is to evaluate antecedents and consequences of the niche strategy to healthcare delivery in the healthcare industry.

Significance of the Study

This study makes a contribution to the management literature as well as to the practice of healthcare management. While there have been studies that empirically examine strategic approach of firms in the healthcare industry, these studies have not assessed the niche approach to healthcare delivery (Dess and Davis, 1984; Calori and Ardisson, 1988; Hill, 1988; Kumar, Subramanian and Yauger, 1997). For instance, a firm that adequately assesses its unique resources and capabilities and matches that to a particular strategic approach (low cost, focus, differentiation) should perform better than the firm that omits this evaluation (Dess and Davis, 1984; Spanos and Lioukas, 2001). Specialty hospitals have the physician/owner as this unique resource and they employ the
niche strategy to healthcare delivery as its strategic approach (Rosman, 2001; Schneider et. al, 2005).

Conducting research in the healthcare industry provides contextual results for the field of strategic management. This study applies Porter’s theoretical framework for analyzing how firms exploit market opportunities to a healthcare setting. Also, the complimentary characteristics between corporate strategies and firm resources have not been adequately explored (Collis, 1991; Mahoney and Pandian, 1992; Spanos and Lioukas, 2001). This study evaluates the antecedents and consequences of the niche strategy to healthcare delivery. While the RBV perspective will not be empirically explored in this study, it will be discussed in relation to its overall impact on the other variables in the study.

Healthcare organizations will benefit from this research because managers will receive empirical information on the efficacy and effects of specific organizational firm-level strategies in the healthcare industry. In the past 25 years there have been drastic changes in Federal reimbursement policies for health services within the United States (Altman, 2006). These changes have precipitated the growth of niche hospitals because stakeholders in the healthcare sector have sought the higher margins offered by niche hospitals (Rosman, 2001; Altman et. al, 2006). Managers and executives should be knowledgeable of the organizational strategies employed to gain superior fiscal returns and that exploit opportunities in Federal and state reimbursement policies and the healthcare industry as a whole.
Research Questions

The purpose of this research is to evaluate antecedents and consequences of the niche strategy to healthcare delivery. This study addresses the following questions:

- Do specialty hospitals differ in financial performance from non-niche hospitals?
- What market level and firm level factors impact the performance of niche and non-niche hospitals?

Organization

This chapter introduces the phenomenon being examined and the questions posed. Chapter two offers background information. Also, the literature on generic strategies, the Resource-Based View, performance, market-level effects and firm-level effects is reviewed. Chapter three presents hypotheses resulting from the literature review and explains the sample and research methods utilized to test these hypotheses. The fourth chapter presents the study’s results such as the sample size, the analyses of hypotheses, and sample characteristics. The final chapter, chapter five, summarizes research results, offers various explanations for the results, conveys practical implications, provides study limitations, and considers future research directions.
Niche hospitals represent a growing segment in the health care industry (Rosman, 2001; Devers et al., 2003). The U.S. healthcare system has a tradition of niche hospitals especially in areas such as children’s services or rehabilitation (Schneider et. al, 2005; Devers et al., 2003; Rosman, 2001). However, a new generation of specialty hospitals is increasingly focused on specialties such as cardiac and orthopedic care that are available in virtually any acute care hospital (NJHA, 2003). Growth in these specialty hospitals has been rapid – the number of facilities tripled from 1990 to 2003 (GAO, 2003; Iglehart, 2006). There are now more than 100 of these niche hospitals in a small number of states (Iglehart, 2006).

Niche hospitals are distinguished from traditional acute care hospitals in that these entities are partially owned by the physicians who refer patients to them (Iglehart, 2006). CMS also notes that these niche hospitals have the following characteristics: most discharges within related Diagnostic related groups (DRGs), patients receiving surgical procedures, and patients receiving any other specialized type of services designated by CMS. In essence, CMS is attempting to distinguish between traditional and specialty hospitals. Traditional hospitals will not have most discharges within related DRGs because they have many different departments and specialties. However, specialty hospitals will primarily have one specialty and all discharges will be within related disease and procedural categories.
Previous Research

Niche hospitals employ a focused strategy to healthcare delivery (Peteraf, 1993; Rosman, 2001; NJHA, 2003). There is data to support that the niche strategy in healthcare can offer improvement in hospital outcomes and quality of care (Schneider et al., 2005; Dimick, Cowan, Stanley, Henke, Pronovost, and Upchurch, 2003; Begg, Cramer, Hoskins, and Brennan, 1998). There are several studies that address the effectiveness of the niche approach to healthcare delivery. While these studies do not occur in a specialty hospital setting, they do evaluate the niche approach to healthcare delivery.

The Begg et al. (1998) study found that hospitals that treat a relatively high volume of patients for selected surgical oncology procedures report lower surgical in-hospital mortality rates than hospitals with a low volume of the procedures (Begg et al., 1998). Higher volume was linked with lower mortality for pancreatectomy (P=.004), esophagectomy (P<.001), liver resection (P=.04), and pelvic exenteration (P=.04). The most significant results were for esophagectomy, for which operative mortality rose to over 17% in low-volume hospitals, compared with 3.4% in high-volume hospitals, and for pancreatectomy, for which the corresponding rates were 12.9% vs. 5.8%. This data supports the hypothesis that when surgical teams in hospitals with specialty expertise provide complex surgical oncologic procedures, mortality rates are lower.
In the Begg et al., (1998) study, hospitals were classified by volume on the basis of the total number of procedures performed in the study between the years of 1984 and 1993. Since the study was restricted to patients 65 years or older, the concern was that the measure of volume might not accurately reflect experience with the procedure because many procedures would be performed in the hospitals in younger patients and in patients who were not diagnosed as having cancer. To evaluate the validity of the measure of volume, the New York State discharge database was examined (Begg et al., 1998). All hospitals at which the index procedure had been performed at least 6 times between the years 1990 and 1995 in cancer patients 65 years or older were identified. The hospitals were ranked according to the number of procedures performed in patients 65 years or older and also according to the total number of procedures across all ages. The high values of these correlations support the use of volume as calculated in the study as a valid measure of the ranking of hospitals based on the total volume of procedures conducted.

The Dimick et al., (2003) study was much more specific than the Begg et al., (1998) study. The physicians evaluated the hypothesis that surgeon specialty and provider volumes are related to outcome of intact abdominal aortic aneurysm repair in the United States. Operative repair of an intact abdominal aortic aneurysm (AAA) is a complex surgical procedure associated with considerable risk for postoperative morbidity and mortality (Dimick et al., 2003). Abdominal aortic aneurysm is performed in a variety of hospitals with no uniformity of outcome. It was observed that there was 62% increased risk for mortality with AAA repair performed by general surgeons compared with
vascular surgeons. Furthermore, low surgeon volume (<5 cases per year) was associated with 83% increased risk for death. Both of these studies validate the success of the niche approach to healthcare delivery. Those hospitals that have higher volumes in certain procedures can produce better outcomes in certain contexts.

Schneider et al., (2005) went beyond the clinical impact of the niche strategy to healthcare delivery and analyzed the economic and policy implications of niche hospitals. The group reviewed evidence on efficiency, demand, case mix, and quality. The profit margins of acute care hospitals in markets with and without niche hospitals were statistically analyzed. They found no evidence suggesting that general hospitals have been financially harmed by competition from niche hospitals. They found that general hospitals residing in markets with at least one niche hospital have higher profit margins than those that do not compete with niche hospitals.

The study also found that niche hospitals provide less indigent care than tax-exempt hospitals. The research offered insight into the extent of physician ownership and some of the characteristics of the facilities and labor force. Finally, niche hospitals were determined to at the very least provide equivalent care to that provided by general hospitals. The intensity and quality of services at niche hospitals are likely to be higher than in traditional acute-care hospitals, according to the report.

Niche hospitals tend to focus on either cardiac and/or orthopedic specialties (Rosman, 2001; Cram et al., 2005). They also do not have to cross-subsidize as traditional acute-
care hospitals do. Because niche hospitals can avoid unprofitable business lines that traditional acute-care hospitals cannot there has been recent legislation aimed at preventing the growth of these hospitals (Cram et al., 2005; Schneider et al., 2005; USDOJ, 2004). There are potential ethical concerns because physicians would have an interest in referring the less problematic patients to facilities in which they are financial stakeholders while referring sicker patients to community hospitals (Rosman, 2001; Devers et al., 2003).

While there have been studies that empirically examine the generic strategy of firms, these studies have not adequately assessed the niche strategy to healthcare delivery. Conducting research in the healthcare industry provides contextual results for the field of strategic management because the empirical results can be generalized to other industries. The evaluation of how firms leverage unique resource capabilities in conjunction with their strategic approach has both practical and academic applications. Again, while the RBV perspective will not be empirically explored in this study, it will be discussed.
 CHAPTER 2: LITERATURE REVIEW

Michael Porter (1980) developed a framework for analyzing competitive strategies. Porter argues that firms employ one of four “Generic strategies” in order to gain competitive advantage or outperform their competitors. The strategies can be defined as narrow or broad along one dimension and low cost or unique in the other dimension. Fundamentally, competitive advantage stems from the value a firm can create for its buyers that is greater than the firm's cost of creating it (Porter, 1985). Consumers attach a value or amount that they are willing to pay for items and superior value comes from offering lower prices than competitors for equivalent benefits or offering unique benefits that justify a higher price.

According to Porter, firms really only choose three possible generic strategies (Porter, 1985). First, firms can choose a strategy that competes on the basis of cost. The low cost leader in any market gains competitive advantage from being able to produce at the lowest cost. Factories are built and maintained to deliver the lowest possible costs of production in this particular strategic approach.

Some companies focus more on value than cost. These firms espouse a differentiation generic strategy. The differentiator targets goods and services at specific segments while charging an above-average price. This allows firms to have the consumer focus on value rather than price and this strategy tends to generate higher profit margins.
Some firms choose a focus or ‘niche’ strategy. When an organization can neither afford a wide scope cost leadership nor afford a wide scope differentiation strategy, a niche strategy could be more suitable. Here an organization focuses effort and resources on a narrow, defined segment of a market. Niche firms concentrate on a particular group of customers, geographic markets, or product line segments. A company could use either a cost focus or a differentiation focus in this strategic approach. Niche hospitals are hospitals that employ the niche strategy.

Porter asserts that decisions made at the business level are driven by market scope and the source of competitive advantage (Schermerhorn, 2006). Market scope refers to the narrowness or broadness of the market strategy. The source of competitive advantage refers to whether the firm will compete on the basis of lower price or product uniqueness. Firms and organizations that employ a differentiation strategy seek competitive advantage based on uniqueness. The goal is to distinguish themselves from the competition by clearly showing differences between their products and services and the rival organizations’ products and services. Polo Ralph Lauren, for example, distinguishes itself in terms of product quality and uniqueness by redefining “how American style and quality is perceived” (Schermerhorn, 2006).

Organizations that pursue a cost leadership strategy concentrate on producing goods and services that will be sold for a cheaper price than competitors to bolster profits (Porter, 1985; Schermerhorn, 2006). The goal is to be operationally efficient in production, marketing, distribution, and other organizational systems (Schermerhorn,
The Vanguard Group, a financial services firm, has succeeded in keeping costs for their mutual funds at industry lows and passing those savings on to customers. Finally, some organizations choose focus strategies that concentrate on a particular market demographic or segment with the objective of serving its needs better than any of its rivals. Organizational resources and expertise are focused on a specific customer group, geographical region, or product or service line (Porter, 1985; Schermerhorn, 2006).

Porter’s typology has been empirically tested. Dess and Davis (1984) established the construct validity of Porter’s typology and superior performance was associated with the espousal of generic strategies. Dess and Davis (1984) posited that Porter’s (1980) generic strategies represent three broad types of strategic groups. Subsequently, the choice of strategy denotes “the choice of which strategic group to compete in” (Porter, 1980, p.189). Firms espousing one of these generic strategies should outperform those firms that do not choose one, referred to by Porter as “stuck in the middle.” Wright (1987) asserts that the focus strategy is not a viable strategy in general, except for smaller firms. This is because larger firms will have much greater capital and labor investments and will need to have access to larger markets than the smaller firm in order to receive an adequate return on their investments.

Nayyar and Templeton’s (1991) testing of Porter’s typology suggested refinement based on information asymmetries on the choice of generic strategies. Firms with superior knowledge about their potential markets should have more success in their
strategic approach than firms with less knowledge or information. Lee, Lim, Guan and Tan (1999) offer three generic strategies for Small to Medium Enterprises (SMEs). The article employs a game theoretic approach to model the bigger firms’ reactions to market entries by SMEs. The three strategies for SME’s are (a) the niching strategy- filling market gaps by offering products differentiated from but substitutable to that of the bigger rivals, (b) the free-riding strategy- exploiting the market development efforts of the bigger rivals by offering products identical to theirs’, and (c) forming strategic alliances to gain competitive advantages over the bigger rivals and/or to deter them from adopting aggressive competitive actions against the SMEs.

Empirical analyses that examine the most appropriate of Porter’s generic strategies (differentiation, low cost, or niche) have been insightful. Hill (1988) examined differentiation versus low cost from a contingency perspective. Hill found that differentiation can be a way of achieving a low-cost position. However, since there frequently is no unique low-cost position, a firm may have to base its sustainable competitive advantage on the simultaneous and continuous pursuit of both low cost and differentiation. Hill also found that differentiation could be used in emerging industries with high growth, significant learning and scale economies, and potential for product differentiation, and in mature industries with significant technological change.

Calori and Ardisson (1988) found that differentiation strategies are effective when equated to ‘zero default’ strategy(product quality regularity, punctuality of deliveries, quick response to unexpected orders, quick and correct answers to requests, short
delivery times) and these strategies offer the major opportunity for differentiation. These strategies were found to be competitive with a low-cost position. Companies that were successful in attaining the ‘total advantage’ (differentiation plus low cost) over their competitors enjoyed the highest market share, growth, and profitability. The viability of the niche strategy as a source competitive advantage is noticeably scant in the strategy literature.

Generic Strategies in Healthcare

The application of Porter’s generic strategies to a particular industry environment has also been empirically examined. Kim and Lim (1988) examined the application of the Porter’s generic strategy with a focus on a high-growth industry in a rapidly developing country. A taxonomic approach to examining the relationship between task environment and strategy was found to be effective even for a developing economy. Differentiation, overall cost leadership, and focus were present in the factor analysis of strategic elements, but not as pure types. There were elements of the differentiation strategy that were present in the cost leadership approach, for example. Grossman (1989) found that the niche strategy in the Japanese banking industry provided a competitive edge. Parker and Helms (1992) found that firms in global industries must take into account the salient characteristics of the particular industry when adopting strategies.

As early as 1986, Autry and Thomas noted that changes in the health care environment have produced more competitive challenges. Recent research has shown that
this trend continues. Kumar, Subramanian and Strandholm (2002) examined the linkages among perceived environmental changes in the health care industry, corresponding strategic adaptations, and their impact on select performance measures as reported by managers. Their study tested the applicability the concept of adaptation and performance that is at the heart of competitive strategy. The authors noted that the strategic approaches in healthcare must adapt to a rapidly changing environment.

The Niche Strategy

A 21st century interpretation of Porter’s typology is offered by Sheth and Sisodia (2002). Sheth and Sisodia posit a "rule of three" in which competitive forces in mature markets will always create dominant players. These three players are generalists offering a wide array of products or services and inevitably compete against each other, while specialist companies operate happily on the periphery by attending either to product specialization or to niche market specialization.

Dalgic and Leeuw (1994) assessed the niche strategy concept in the international business domain. They define niche marketing as focused and targeted. The market is considered to be relatively small comprised of customers with similar needs (i.e. cardiac patients). The authors also argue that a niche strategy can result in greater profits. Linneman and Stanton (1991) also suggested the effectiveness of the niche strategy. They cited a study carried out by the Strategic Planning Institute, called “Profit Impact of Marketing Strategy” (PIMS), which analyzed hundreds of business units from different
types of businesses. Return on investment from larger markets averaged 11 percent and smaller markets averaged 27 percent. There definitely appears to be a fiscal advantage, in some cases, for a niche approach.

Given the scant literature applying the generic strategy typology to the healthcare sector, literature concerning the niche strategy in healthcare is noticeably absent. Hospitals that follow a focused cost leadership strategy generally enjoy superior performance, while healthcare firms that utilize a combination of cost leadership and differentiation perform poorest (Kumar et al., 1997). Again, the niche approach to healthcare delivery needs much more in-depth research.

Resource-Based View

Edith Penrose’s (1959) book, The Theory of the Growth of the Firm, has widely been hailed by many scholars as the seminal work that provided the cognitive foundations for the modern resource-based theory (RBV) of the firm (Rugman and Verbeke, 2002). Several authors have argued that a firm’s distinct capability to deploy or alter its resources results in competitive advantage (Dierickx and Cool, 1989; Lado, Boyd, and Wright, 1992; Leonard-Barton, 1992; Yeoh and Roth, 1999). This assessment aligns with Penrose’s assertion that ‘a firm may achieve above average returns not because it has better resources, but rather the firm’s distinctive competence involves making better use of its resources’ (Penrose, 1959: 54).
The resource-based view of the firm has provided important new insights into corporate strategy (Barney, 1991; Peteraf, 1993). However, there has been only limited empirical research linked to the theory. Empirical research on resource-based corporate strategy has been particularly difficult because key concepts such as tacit knowledge or capabilities resist direct measurement. Robins and Wiersema (1995) attempted to narrow the gap between theory and empirical research on the multi-business firm. The study developed a resource-based approach to modeling interrelationships among businesses and applied it to the analysis of corporate economic performance. This approach proved to be significant in explaining the financial performance of large manufacturing firms. However, its application to smaller healthcare firms is questionable and will not be employed in this study.

One of the primary contributions of the resource-based view of strategy is its ability to bring together several strands of research in economics, industrial organization, organization science, and strategy itself (Rugman and Verbeke, 2002). The traditional approach to strategy formulation begins with an assessment of organizational competencies and resources (Andrews, 1971; Wernerfelt, 1984; Peteraf, 1993). The firms which are distinctive or superior in comparison to their rivals may enjoy sustained competitive advantage if they are effectively matched to environmental opportunities (Andrews, 1971; Peteraf, 1993). The influence and impact of the physician resource combined with the niche strategy could have ramifications for the performance of the firm. The complimentary characteristics between the niche strategy and the Resource-
Based View (RBV) perspectives can shape firm behavior and subsequently firm performance (Spanos and Lioukas, 2001).

**Firm Effects**

There is data to support that the niche strategy in healthcare can offer improvement in hospital outcomes and quality of care (Schneider et al., 2005; Dimick et al., 2003; Begg et al., 1998). According to the American Surgical Hospital Association, hospitals that specialize in high volumes of cardiac surgery have lower costs and lower mortality rates. “Research shows that higher volume is associated with better quality and [ultimately] leads to lower per-case costs. Drawing on the theory of focused factories, proponents argue that niche hospitals can secure high volumes, thereby improving quality and reducing costs” (Devers et al., 2003).

Niche hospitals have other methods besides high levels of volume to improve quality and reduce expenditures. These facilities are usually equipped with the most innovative technology, efficient “brick-and-mortar” designs, and clinical staff with expertise in one area of medicine. According to Rosman (2001), “MedCath claims that efficiencies are primarily accomplished through a combination of facility design and cross training of the nursing staff.” Niche hospital proponents contend that optimal facilities for delivering niche services can be built, the newest technology and equipment utilized, and a select group of managers and health professionals can continuously improve all aspects of care.
(Devers et al., 2003; Greenwald, Cromwell, Adamache, Shulamit, Drozd. Root, and Devers, 2006).

These specialty hospitals have other methods besides high levels of volume to improve quality and reduce expenditures. These facilities are usually equipped with the most innovative technology, efficient “brick-and-mortar” designs, and clinical staff with expertise in one area of medicine. According to Rosman (2001), “MedCath claims that efficiencies are primarily accomplished through a combination of facility design and cross training of the nursing staff.” Niche hospital proponents contend that optimal facilities for delivering niche services can be built, the newest technology and equipment utilized, and a select group of managers and health professionals can continuously improve all aspects of care (Devers et al., 2003).

Market Effects: Competition

Firms often respond to external market forces by developing a comprehensive strategic approach to increase their performance (Porter, 1980; Porter, 1985; Kumar et al., 1997; Kotha and Vadlamani, 1995; Powers and Kahn, 2004). Firms must employ tools to measure the extent of the competitive environment prior to entry into certain markets. The Herfindahl Index is a measure of competition in industry. The Herfindahl Index, also known as Herfindahl-Hirschman Index or HHI, is a measure of the degree of concentration in an industry and a proxy for the amount of competition among them. It is defined as the sum of the squares of the market shares of each individual firm. As such, it

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can range from 0 to 1 moving from a very large number with market share (0) to a single monopolistic producer (1).

Decreases in the Herfindahl index generally indicate a decrease of pricing power and an increase in competition, whereas increases imply the opposite. The closer that the index is to 1 (100%), the more concentrated the market (Kwoka, 1977; Brown and Warren-Boulton, 1988; Warren-Boulton, 1990). As the market concentration increases, competition and efficiency decrease and the opportunity for collusion and monopoly increase (Kwoka, 1977; Brown and Warren-Boulton, 1988; Warren-Boulton, 1990). This measure has proven to be a valuable tool in assessing the degree of competition in the market (Porter, 1985; Frech and Mobley, 2000).

Market Effects: Strategic Policy

Strategic Policy issues have impacted the healthcare industry and, in particular, specialty hospitals. Certificate-of-Need laws are barriers to entry in the healthcare industry in that they effectively prohibit niche hospitals (and other types of hospitals) from receiving permission for construction in states that have CON laws. An entity that wishes to construct a healthcare facility in a state that has CON laws must be granted permission based on a demonstrated need for the facility in that state. Subsequently, the emergence of a specialty hospital in a state with CON laws is rare. A recent joint report by the United States Department of Justice and the Federal Trade Commission listed Certificate of Need laws as barriers to entry (USDOJ, 2004). The Department of Justice
and the Federal Trade Commission, in a rare collaborative effort, produced a report that strongly denounced policies in the healthcare industry that act as inhibitors to niche providers and other sources of competition (USDOJ, 2004).

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 is expected to reduce payments to ambulatory surgical centers by at least $3.1 billion over a ten-year period. This bill is the most relevant policy issue that niche hospitals faced. The Act placed a moratorium on the development of any niche hospitals that included physician owners in its ownership structure. The moratorium was enacted because there was widespread concern and alarm on the part of general hospital stakeholders that niche hospitals were negatively impacting general hospitals’ financial viability (Altman et. al, 2006). Critics of niche hospitals accuse physicians, who have ownership interest, of cherry-picking healthier patients while leaving the more complex and costly patients to be treated in the traditional hospitals (Rosman, 2001; Devers et al., 2003; Altman et al., 2006).

In effect, while there is not a moratorium on the development of niche hospitals, there is a moratorium on such development if physician investors are involved. A joint report by the United States Department of Justice and the Federal Trade Commission took issue with the anti-competitive stance of Congress and argues for repeal of state Certificate of Need laws and other barriers to entry that inhibit competition (USDOJ, 2004).
Financial Performance

Firms that gain competitive advantage generally espouse a particular strategy to obtain superior financial returns (Porter, 1980). Fundamentally, competitive advantage stems from the value a firm can create for its buyers that is greater than the firm's cost of creating it (Porter, 1985). Consumers attach a value or amount that they are willing to pay for items and superior value comes from offering lower prices than competitors for equivalent benefits or offering unique benefits that justify a higher price.

Organizational performance is one of the primary indicators of successful strategy and, as such, is germane to any true test of strategy (McCracken et al., 2001). The appropriateness of financial performance as a moniker of successful strategy is acknowledged but the selection of an appropriate metric for assessing financial performance is one of the most perplexing issues confronting the strategy researcher (Porter, 1980; Dess and Davis, 1984; McCracken et al., 2001; Powers and Kahn, 2004). When the context of discussion is the healthcare industry the selection of an appropriate measure is just as difficult. The assessment of organizational performance is a major challenge in the healthcare context. While there are several measures of financial performance that are viable heuristics, Return on Assets (ROA) is among the most valid and appropriate measures of hospital performance (McCracken et al., 2001).
In the healthcare field, where profit margins have recently become smaller because of changes in Medicare and private payer insurance, there is an impetus for innovative and effective strategies to improve financial performance (Rosman, 2001; Devers et al., 2003). ROA is defined as net income divided by average total assets and has been used as a metric for assessing the overall financial performance of firms (Porter, 1980; Dess and Davis, 1984; Powers and Kahn, 2004).

Financial performance improves when a business obtains preferential access to strategic assets - those that are valuable, rare, imperfectly tradable and costly to imitate (Markides and Williams, 1996; Spanos and Lioukas, 2001). This is the case with specialty hospitals. The physician-owner is the strategic asset. As the advantage this access affords will decay as a result of asset erosion and imitation by single-business rivals, in the long run only competencies that enable a firm to build new strategic assets more quickly and efficiently than competitors will allow it to sustain above average profits. Both short- and long-run advantages are conditional, however, on organizational structures that allow the firm's divisions to share existing strategic assets and to transfer the competence to build new ones efficiently (Markides and Williams, 1996; Spanos and Lioukas, 2001).

So why use ROA instead of some other measure like cash flow? ROA yields valuable information in reference to the economic rates of return (Jacobson, 1987). One of the central questions in strategy is how do companies leverage their resources to obtain maximum benefit. ROA helps firms to assess that question. Although there are
limitations to ROA as a measure of financial performance, it is perhaps the best heuristic to measure business performance (Jacobson, 1987; Porter, 2004). Cleverley and Harvey (1992) assert that ROA is the primary test of financial performance.
CHAPTER 3: METHODS

Research Questions and Hypotheses

The performance of niche firms in the healthcare industry has only recently been explored empirically (Schneider et al., 2005). However, the factors that ultimately lead to the selection of and performance of these firms have not been empirically examined. The purpose of the proposed study is to provide an understanding of the antecedents and consequences of the niche approach to healthcare delivery. In particular, the examination of the competitive environment and firm strategy will be examined. The subsequent model will test the relationships among strategic approaches, competitive or market factors, and financial performance. The following is a model for examining the antecedents and consequences of the niche approach to healthcare delivery:
The Porterian Focused-Differentiation Model

Figure 1 - Porterian Focused Differentiation Model of Healthcare Delivery
Summary

The antecedents and consequences of the niche strategy to healthcare are of particular interest to the strategy field and to the healthcare industry. The Porterian focused differentiation model of healthcare delivery provides a framework to analyze the strategic approach of healthcare firms and associated outcomes. Antecedents are those things that precipitate or lead to this strategy and consequences are the results of a firm employing this strategy. Healthcare firms espouse a particular strategy because, as in any other industry, they want to maximize shareholder and/or stakeholder value. The purpose of the proposed study is to provide an understanding of the antecedents and consequences of the niche approach to healthcare delivery. In particular, the interaction of the niche strategy and the market effects of specialty and traditional acute care facilities were explored. This study evaluates the following questions:

- What market forces considerations are germane to specialty hospitals decisions in regard to market entry selection?
- Does firm strategy impact financial performance in the healthcare industry?

Research Questions

Firms achieve above average returns because of their distinctive competencies (Penrose, 1959; Peteraf, 1993). It follows that the firms that expand into activities in
which they are distinctly competent have the greatest opportunity for success (Penrose, 1959; Castanias and Helfat, 1991; Peteraf, 1993). Specialty hospitals have distinct competitive advantages because of the physician resource as both an owner and functional employee of the firm (Schneider et al., 2005; Greenwald et al., 2006).

In the healthcare industry, the success of specialty hospitals has been primarily met with increased regulation (Schneider et al., 2005; Iglehart, 2006). In the highly regulated environment of the healthcare industry, adept exploitation of resources with distinctive competencies within the firm can be a primary method of garnering competitive advantage.

Niche hospitals have the unique positioning of having both owner and operator with a significant stake in the success of every facet of the firm. Organizations with the ability to focus and coordinate effort and the ability to accurately evaluate the resource position of the firm in relation to its strategic approach have a strong basis for competitive advantage (Andrews, 1971; Porter, 1981; Spanos and Lioukas).

Research Question 1: Does the financial performance of healthcare facilities vary based on the generic strategy (niche/non-niche) of the healthcare entity?

H1: Niche firms will outperform non-niche firms.

- \( H_{1a} \): Specialty hospitals will have higher ROA than traditional acute care facilities.
H1b: The average ROA of hospitals in an MSA that contains specialty hospitals will be lower than the ROA of hospitals in an MSA that does not have specialty hospitals. The average ROA is the combined ROA of all the hospitals in a given MSA.

The growth of specialty hospitals has been primarily met with increased regulation (Schneider et al., 2005; Iglehart, 2006). The Medicare Modernization Act of 2004 effectively prohibits the construction of hospitals that have physician ownership. Medicare will not remit payments to any facilities with physician ownership that were constructed after 2003. Because of increased regulations, firms must be adept at exploiting resources. Specialty hospitals possess distinctive competencies within the firm that can be a primary method of garnering competitive advantage. With the physician-owner as both a financial stakeholder and functional worker in the firm, niche hospitals have the benefit of having the technical resources that the physician brings combined with the financial motivation to perform (Rosman, 2001; Castanias and Helfat, 1991).

Firms often respond to external market forces by developing a comprehensive strategic approach to increase their performance (Porter, 1980; Porter, 1985; Kumar et al., 1997; Powers and Kahn, 2004). Those firms that can effectively distinguish themselves from their counterparts find opportunities for generating above average returns. As mentioned earlier, firms really only choose three possible generic strategies according to Porter: low cost, differentiator, and focus (niche). Sustained competitive advantage can
be achieved if and only if the resources used to conceive and implement it are valuable, rare, non-imitable, and cannot be replaced or substituted (Barney, 1991).

Research Question 2: How does the competitive marketplace affect healthcare firms’ selection of their strategic approach?

H2: Specialty hospitals will exist in more competitive marketplaces.

- H2a: Specialty hospitals will be positively associated with more competitive hospital markets.
- H2b: Specialty hospitals will be positively associated with areas with high physician supply.

Data Set

This research used a secondary data source, the 2003 Medicare Cost Report. Medicare-certified institutional providers must submit an annual cost report. The provider information that can be gleaned from this report includes facility characteristics, utilization data, cost and charges by cost center (in total and for Medicare), Medicare settlement data, and financial statement data. No individual or facility was identified in this research, and only aggregate measures were presented. The list of specialty hospitals was provided by CMS in the form of an excel spreadsheet. Approval was obtained from the University of Alabama at Birmingham Institutional Review Board prior to the study.
The Medicare Cost report was merged with the 2003 Area Resource File. The basic county-specific Area Resource File (ARF) is the nucleus of the ARF System. It is a database containing more than 6,000 variables for each of the nation’s counties. The ARF contains information on health facilities and health professions, measures of resource scarcity, health status and economic activity along with other measures. The basic file contains geographic codes and descriptors that enable linkages to other files and allow the researcher to aggregate counties into geographic groupings.

The CMS data were merged with the ARF data, necessitating the data cleaning process. An excel file was from the supplemental CMS file that defined provider number and ownership status. The file is named hosp_2003_RPT and can be downloaded from CMS. This file was merged with the existing dataset by provider number. After the merge I validated with a random visual inspection to verify that the data merge was correct and found no errors.

In order to provide a more representative comparison of specialty and traditional hospitals only For Profit (FPs) and Not for Profit (NFPs) were selected. However, several variables were still not normally distributed, necessitating natural log transformations for Average length of Stay, Average Bed days, and population. The total sample size fluctuated because in the case of missing data, pair-wise deletions were used instead of list-wise deletions in order to maximize the dataset.
Also, the logarithm of some variables had to be used because the data was not normal. Certain variables were kurtotic and did not display normally distributed characteristics. Specifically this was done for the following variables: Population, Length of Stay, and Average Bed Days. Finally, ROA was filtered to minimize the impact of kurtosis on the statistical analysis. The data were Windsorized to ½ percent to control for kurtosis. The data became more interpretable. The final sample from which the model was tested had only For Profit (FPs) and Not-for-Profit (NFPs) as all rural and government-owned hospitals were removed from the sample to provide a more accurate assessment of the differences between specialty and traditional hospitals.

Variable Operationalization

The following measures will be used to test the hypotheses:

<table>
<thead>
<tr>
<th>Concept</th>
<th>Variable</th>
<th>Operationalization</th>
<th>Definition</th>
<th>Data Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Level</td>
<td>Competition</td>
<td>Herfindahl Index</td>
<td>Calculated as the sum of the ratios of each hospitals patient days to the market total squared. The lower the index the less concentrated the market (i.e., the more competitive). Market is defined as county.</td>
<td>2003 Area Resource File</td>
</tr>
<tr>
<td></td>
<td>(Dranove, Shanley, and White, 1993; Frech and Mobley, 2000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Level Effects</td>
<td>MSA Market Share</td>
<td>Percentage of Market Share/Firm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm level performance</td>
<td>Log of Avg. Length of Stay</td>
<td>Natural log of ALOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ownership Status</td>
<td>Log of Bed Days Available</td>
<td>Natural log of Available Bed Days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years Certified</td>
<td>Firm Capacity Utilization</td>
<td>Occupancy Percentage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For Profit or Not for Profit</td>
<td>Total number of Years since Licensure</td>
<td>HospitalC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


| Porterian Generic Strategy (Porter, 1980; Porter, 1985; Kumar et. al, 1997; Kotha et. al, 1995; Powers and Kahn, 2004) | Niche or General Hospital | Niche=1, Non-niche=0 | 2003 CMS HospitalC post Report |

<p>| Physician Supply | The ratio of physicians to the overall population in a Metropolitan Statistical Area | 2003 CMS HospitalC post Report | 34 |</p>
<table>
<thead>
<tr>
<th>Performance</th>
<th>Financial performance (Porter, 1980; Dess and Davis, 1984; Powers and Kahn, 2004)</th>
<th>ROA</th>
<th>Net Income divided by Average Total Assets</th>
<th>Tax exempt status of the facility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2003</td>
</tr>
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<td></td>
<td></td>
<td>CMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hospital Cost Report</td>
</tr>
</tbody>
</table>

Figure 2 - Variable Operationalization
Market Level Effects: Competition

Firms often respond to external market forces by developing a comprehensive strategic approach to increase their performance (Porter, 1980; Porter, 1985; Kumar et. al, 1997; Powers and Kahn, 2004). Those firms that can effectively distinguish themselves from their counterparts find opportunities for generating above average returns. As mentioned earlier, firms really only choose three possible generic strategies according to Porter: low cost, differentiator, and focus (niche). Sustained competitive advantage can be achieved if and only if the resources used to conceive and implement it are valuable, rare, non-imitable, and cannot be replaced or substituted (Barney, 1991).

The Herfindahl Index, also known as Herfindahl-Hirschman Index or HHI, is a measure of the size of firms in relationship to the industry and an indicator of the amount of competition among them. Decreases in the Herfindahl index generally indicate an increase of pricing power and an increase in competition, whereas increases imply the opposite. The closer that the index is to 1(100%), the more concentrated the market (Kwoka, 1977; Brown and Warren-Boulton, 1988; Warren-Boulton, 1990). As the market concentration increases, competition and efficiency decrease and the chances of collusion and monopoly increase (Kwoka, 1977; Brown and Warren-Boulton, 1988; Warren-Boulton, 1990). This measure has proven to be a valuable tool in assessing competitive forces in the market (Porter, 1985; Frech and Mobley, 2000). This Index will be used to assess competitive market effects in the study.
Another aspect of competition that will be operationalized is supply and demand. This will be achieved by assessing physician supply in the observed MSAs. Specialty hospitals need a pool of qualified, specialized physicians (Devers et al., 2003). Recent studies of regional variations in Medicare spending found that high spending areas have increased physician supply as compared with other areas (Stensland & Winter, 2006). Higher physician-to-population ratios were associated with increased usage of some services (Wilensky and Rossiter, 1986).

There tends to be correlations between economic growth and health care utilization over time and among large geopolitical units at single points in time (Cooper, 2004). Per capita income correlates with physician supply and health care spending. In fact, economic differences account for more than 80% of the observed differences in physician supply (Cooper, Getzen and Laud, 2003).

**Market Level Effects: Strategic Policy**

In order to test the strategic political climate of the Metropolitan Statistical Areas to be examined in the study, the existence of Certificate-of-Need laws will be assessed. Certificate-of-Need laws are barriers to entry in the Healthcare industry in that they effectively prohibit niche hospitals from receiving permission for construction in states that have CON laws. An entity that wishes to construct a healthcare facility in a state that has CON laws must be granted permission based on a demonstrated need for the facility in that state. Subsequently, the expectation is that the emergence of a specialty hospital
in a state with CON laws does not occur as frequently as in states with no CON laws. A joint report by the United States Department of Justice and the Federal Trade Commission listed Certificate of Need laws as barriers to entry (USDOJ, 2004).

The Porterian focused differentiation strategy and RBV

Porter (1980) argues that firms employ a particular “Generic strategy” in order to gain competitive advantage or outperform their competitors. Firms really only choose three possible generic strategies according to Porter: low cost, differentiator, and focus (niche). Specialty hospitals pursue a Porterian focused differentiation strategy in order to attain sustained competitive advantage. Sustained competitive advantage can be achieved if and only if the resources used to conceive and implement it are valuable, rare, non-imitable, and cannot be replaced or substituted (Barney, 1991).

Specialty hospitals’ reliance on the physician-owner as a source of competitive advantage provides a contextual example of some of the essential tenets of the Resource-Based View. Firms that have unique internal resources and capabilities will enjoy success and, in many cases, enjoy above-average market returns. This is the case with specialty hospitals. The physician-owner is attracted to niche hospitals because of control, scheduling autonomy, patient selection, and additional entrepreneurial earnings and is in many cases an owner and functional employee of the firm (Schneider et al., 2005; Rosman, 2001). Again, though we will not empirically test the RBV perspective the impact of this perspective will be discussed.
For purposes of our study, a hospital’s Generic Strategy will be classified as niche or non-niche. Again, specialty hospitals employ a Porterian focused differentiation strategy while traditional acute care hospitals do not. Specialty hospitals meeting the Center for Medicare and Medicaid services (CMS) and MedPAC’s criteria for niche hospitals will be denoted as niche. This designation aligns with Porter’s (1980) definition of a niche strategy. General hospitals with no physician ownership will be labeled as “non-niche.”

Firm Level Effects

Niche hospitals have other methods besides high levels of volume to improve quality and reduce expenditures. These facilities are usually equipped with the most innovative technology, efficient “brick-and-mortar” designs, and clinical staff with expertise in one area of medicine. According to Rosman (2001), “MedCath claims that efficiencies are primarily accomplished through a combination of facility design and cross training of the nursing staff.” Niche hospital proponents contend that optimal facilities for delivering niche services can be built, the newest technology and equipment utilized, and a select group of managers and health professionals can continuously improve all aspects of care (Devers et al., 2003; Greenwald et. al, 2006). For purposes of this study, firm level effects will be explored.
Financial Performance

Generally speaking, firms that gain competitive advantage espouse a particular strategy to obtain superior financial returns (Porter, 1980; Marlin et al., 2002). In the healthcare field, where profit margins have recently become smaller because of changes in Medicare and private payer insurance, there is an impetus for innovative and effective strategies to improve financial performance (Rosman, 2001; Devers et al., 2003). Hospitals must continually assess their financial viability in this increasingly hyper-competitive environment. Those firms that earn acceptable return on their assets will maintain financial viability (Burkhardt and Wheeler, 2009).

ROA is defined as net income divided by average total assets and has been used as a metric for assessing the overall financial performance of firms (Porter, 1980; Dess and Davis, 1984; Powers and Kahn, 2004). Typically, studies assessing the financial performance of firms use some form of ROA (Cleverley and Harvey, 1992). The ROA ratio is important because it measures a firm’s ability to generate a return from its investments that is at least equal to the cost of financing those investments (Burkhardt and Wheeler, 2009). Firms that are unable to achieve a positive ROA will, over time, cease to be viable.

It must be noted that effectively capturing ROA in the healthcare industry is complex because of the inconsistencies among the different ownership types of hospitals. There will be inconsistencies in net income between a tax-exempt, not for profit hospital with
net income from an investor-owned, for-profit hospital. Tax-exempt hospitals are not publicly traded and do not dispense dividends in the traditional sense. Their dividends are paid to the community in the form of charity care, social goods, and other services (Conrad, 1984). Whereas these societal dividends have been expensed prior to calculating net income by not-for-profit firms, for-profit firms subtract dividends from net income. Therefore, net income for a not-for-profit will be less than that for a for-profit firm. This must be taken into consideration when comparing financial performance for firms with different ownership structures.

Method Of Analysis

This was a comparative study of both niche and traditional hospitals. The statistical approach assessed whether there was a difference between traditional and niche hospitals based on market effects, operational effects, and financial performance. This was done using Hierarchical Least Squares and ANOVA (Analysis of Variance). Further, the profit status of the hospital was also evaluated to see if there were statistically significant differences. Laffrey (1986) used a similar approach to examine perceived weight, perceived health status, health conception, and health behavior choices in normal-weight and overweight adults. Walsh (1985) investigated the differences between runners and non-runners in terms of specific health beliefs.

The dependent variable was ROA. The investigation was done so that it was possible to discriminate between and among groups on the basis of the presence, absence, or
amount of the independent variable (Brink and Wood, 1998). The relevant extraneous variables were measured so that their effect on the dependent variable could be estimated. This analysis identified the significant one-way, two-way, and three way associations between financial performance, market effects, firm effects, and generic strategy.

Measures

The evaluation of the Porterian focused differentiation strategy, also referred to as the niche approach to healthcare delivery, revealed efficient models that explain financial performance. The evaluation of the fully specified model suggested the use of Hierarchical Least Squares Regression as it was desirable to confirm the hypotheses about the potential relationships among the variables in the model. The data dictionary for the variables in the model is listed below. The full model consisted of one continuous dependent variable, five independent variables representing the market effects, and seven independent variables representing firm level effects. One way Analysis of Variance (ANOVA) was used to assess the differences in variation between specialty and traditional acute care hospitals. Pearson correlations were calculated to assess the correlations between each of the factors in the study.
ROA- Net Income/Total Assets
SPEC- Specialty hospital
FT_MDs- Full-time Physicians
CON- Certificate of Need laws
MSA_HHI- Herfindahl-Index, level of competition
MHInc- Per Capita Income
POP- Logarithm of population
ALOS_Log- Logarithm of Average Length of Stay
YRS_CERT- Years Certified
Firm Capacity Utilization- Occupancy Percentage
BedDayAv_Log- Natural Log of Average Bed days
MSA_MKTSHR- Market Share

PROFIT STATUS- Tax exempt status, for profit or not for profit
MSA ROA- Aggregate level ROA

Figure 3- Data Dictionary for Statistical Model
Sample

The sample used for this study was 2003 Medicare Cost Report. The data were merged with the Area Resource File. The basic county-specific Area Resource File (ARF) is the nucleus of the ARF System. The original sample included 5688 hospitals, including 64 specialty hospitals. Several of the variables were heavily kurtotic. Average length of stay, Average Bed days, population, ROA, and MSA ROA all had unacceptable kurtosis numbers. As mentioned above, statistical techniques were employed to make the data interpretable.
CHAPTER 4: RESULTS

The raw data was first input into SPSS in order to generate a descriptive analysis of the data. Table 1 and Table 2 show the percentage of for profit hospitals and the numerical breakdown of all of the hospitals in the sample. For profit hospitals comprise 24.4 percent and NFPs make up 75.6 percent of the hospitals.
Figure 4- Ratios of For Profit and Not For Profit Hospitals
Figure 5 - Ownership Percentage and Profit Status
The raw data analysis is shown in table 1. As can be seen, several of the variables are heavily kurtotic. This output includes every hospital in the CMS dataset. Several assumptions had to be verified in order to proceed with the study. Studemond (2001) provided several classical assumptions that should be met when performing Least Squares Regression: 1) The regression model is linear in its coefficients, 2) The model is correctly specified, 3) All explanatory variables are uncorrelated with the error term, 4) No explanatory variable is a perfect linear function of any other explanatory variable(s). These assumptions were met with the final sample analysis.

It was determined that to have an accurate comparison of specialty and traditional acute care hospitals a more selective sample should be chosen. Specifically, the removal of rural and government-owned hospitals was deemed appropriate as these facilities have different profit-maximizing strategies from specialty hospitals and traditional acute care hospitals. This statistical treatment of the data is shown in Table 2.
<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Std. Error</th>
<th>Kurtosis</th>
<th>Std Error</th>
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<tbody>
<tr>
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<td>5698</td>
<td>1.20333</td>
<td>94.500</td>
<td>1.31805</td>
<td>56.01386</td>
<td>-13.558</td>
<td>.002</td>
<td>41.654</td>
<td>.005</td>
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<td>HHI</td>
<td>6688</td>
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<td>1.00000</td>
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<td>-1.508</td>
<td>.005</td>
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<td>pop</td>
<td>9244</td>
<td>0.00000</td>
<td>9.077538</td>
<td>0.7301429</td>
<td>1.72085</td>
<td>3.716</td>
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<td>15.286</td>
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<td>Median Household Income</td>
<td>5007</td>
<td>$17,375</td>
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<td>$41,816.33</td>
<td>$12,067.418</td>
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<td>.004</td>
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<td>.007</td>
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<td>.002</td>
<td>-1.508</td>
<td>6.063</td>
<td>.005</td>
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<td>MSA FTMDs</td>
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<td>36.197</td>
<td>3.085685</td>
<td>5.584.361</td>
<td>2.609</td>
<td>.003</td>
<td>11.814</td>
<td>.006</td>
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<tr>
<td>MSA Market Share</td>
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<td>1.00000</td>
<td>3.67538</td>
<td>4.322418</td>
<td>5.700</td>
<td>.002</td>
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<td>ALOS</td>
<td>5678</td>
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<td>54.480</td>
<td>172.993</td>
<td>382.0555</td>
<td>2.803</td>
<td>.003</td>
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<td>RECEIYAY</td>
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<td>517.445</td>
<td>40.72405</td>
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<td>2054897</td>
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<td>Years Certified</td>
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<td>Profit status</td>
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<td>1.101</td>
<td>.001</td>
<td>-5.891</td>
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<td>130.00</td>
<td>1.31758</td>
<td>20.81394</td>
<td>-3.038</td>
<td>.002</td>
<td>15.0397</td>
<td>.005</td>
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<tr>
<td>Valid of N (infrequent)</td>
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<td></td>
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</table>

Table 1 - Descriptive Statistics for raw CMS data for Porterian Model with Profit Status
Table 2 represents the raw data with filters to remove rural and government-owned hospitals. The removal of these hospitals decreased the sample size by approximately 43 percent, from 5688 to 3288. Also, the original sample included several variables that were not normally distributed. Specifically, Average length of stay, Average Bed days, population, ROA, and MSA ROA all had unacceptable kurtosis levels. The data were windsorized at ½ percent to control for kurtosis in the ROA and MSA ROA variables. Natural log transformations were done to normalize the data for the Average length of stay, Average Bed Days, and Population variables as well. After these transformations the data became interpretable.
<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std Error</td>
<td>Std Error</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>3230</td>
<td>-59.73</td>
<td>59.73</td>
<td>3.6432</td>
<td>15.04652</td>
<td>-0.893</td>
<td>0.043</td>
</tr>
<tr>
<td>HI</td>
<td>3230</td>
<td>0.094</td>
<td>1.0083</td>
<td>0.202003</td>
<td>0.9507457</td>
<td>1.130</td>
<td>0.043</td>
</tr>
<tr>
<td>Log of MSA Population</td>
<td>3234</td>
<td>9.905</td>
<td>10.11</td>
<td>0.87325</td>
<td>1.04672</td>
<td>0.32</td>
<td>0.043</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>3694</td>
<td>$37,658</td>
<td>$77,524</td>
<td>$40,945.07</td>
<td>$12,147.529</td>
<td>1.168</td>
<td>0.044</td>
</tr>
<tr>
<td>Certificate of Need</td>
<td>3230</td>
<td>0.0</td>
<td>1.0</td>
<td>0.3</td>
<td>0.468</td>
<td>0.750</td>
<td>0.043</td>
</tr>
<tr>
<td>MSA FTE MDs</td>
<td>3232</td>
<td>4.0</td>
<td>25.07</td>
<td>4.03256</td>
<td>6.27722</td>
<td>2.305</td>
<td>0.043</td>
</tr>
<tr>
<td>MSA Market Share</td>
<td>3230</td>
<td>0.0303</td>
<td>1.0000</td>
<td>0.06595</td>
<td>0.111122</td>
<td>1.694</td>
<td>0.043</td>
</tr>
<tr>
<td>Log of Avg Length of Stay</td>
<td>3229</td>
<td>1.0</td>
<td>8.6</td>
<td>1.524</td>
<td>0.7451</td>
<td>2.593</td>
<td>0.043</td>
</tr>
<tr>
<td>Log of Bed Days Avail</td>
<td>3232</td>
<td>0.0</td>
<td>13.0</td>
<td>10.38</td>
<td>0.699</td>
<td>-0.474</td>
<td>0.043</td>
</tr>
<tr>
<td>Firm Capacity Utilization</td>
<td>3229</td>
<td>0.0303</td>
<td>1.4200</td>
<td>0.56178</td>
<td>0.273985</td>
<td>-0.259</td>
<td>0.043</td>
</tr>
<tr>
<td>Years Certified</td>
<td>3238</td>
<td>-2.0</td>
<td>38.5</td>
<td>27.131</td>
<td>13.3931</td>
<td>-0.938</td>
<td>0.043</td>
</tr>
<tr>
<td>Profit status</td>
<td>3230</td>
<td>0.0</td>
<td>1.0</td>
<td>0.31</td>
<td>0.461</td>
<td>0.896</td>
<td>0.043</td>
</tr>
<tr>
<td>MSA FTE MDs</td>
<td>3230</td>
<td>4.0</td>
<td>25.07</td>
<td>4.03256</td>
<td>6.27722</td>
<td>2.305</td>
<td>0.043</td>
</tr>
</tbody>
</table>

Table 2 - Descriptives for Raw CMS Data for Model Without Rural and Government Hospitals
Table 3- Porterian Model with Profit Status Variable

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>118</td>
<td>4.982</td>
<td>.024</td>
<td>.981</td>
</tr>
<tr>
<td>Prop2_Log</td>
<td>- .009</td>
<td>.019</td>
<td>.000</td>
<td>.021</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>- .091E-5</td>
<td>.000</td>
<td>.005</td>
<td>1.071</td>
</tr>
<tr>
<td>Certificate of Need</td>
<td>- .532</td>
<td>.064</td>
<td>.017</td>
<td>.940</td>
</tr>
<tr>
<td>MSA FT MOs</td>
<td>0.00</td>
<td>.000</td>
<td>.105</td>
<td>.345</td>
</tr>
<tr>
<td>MSA Market Share</td>
<td>- .048</td>
<td>1.325</td>
<td>.000</td>
<td>.036</td>
</tr>
<tr>
<td>AvgLOS2_Log</td>
<td>- .467</td>
<td>.339</td>
<td>-.024</td>
<td>-1.222</td>
</tr>
<tr>
<td>BedDayAv2_Log</td>
<td>1.25</td>
<td>.380</td>
<td>.008</td>
<td>.348</td>
</tr>
<tr>
<td>Firm Capacity Utilization</td>
<td>15.704</td>
<td>1.515</td>
<td>.227</td>
<td>10.364</td>
</tr>
<tr>
<td>Years Certified</td>
<td>- .116</td>
<td>.024</td>
<td>-1.03</td>
<td>.300</td>
</tr>
<tr>
<td>Profit status</td>
<td>2.98</td>
<td>.569</td>
<td>.009</td>
<td>.524</td>
</tr>
<tr>
<td>MSA RCA</td>
<td>1.06</td>
<td>.013</td>
<td>.145</td>
<td>8.318</td>
</tr>
<tr>
<td>SPEC</td>
<td>12.941</td>
<td>2.380</td>
<td>.988</td>
<td>5.394</td>
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</table>

* Table 3- Porterian Model with Profit Status Variable
A profit status variable had been introduced in the original sample to determine whether or not profit status was statistically significant. The profit status variable was not shown to be significant in any of the models (see Table 3). The sample size in Table 5 was 3226. Due to the small number of specialty hospitals in the original sample (n=64) and since the Profit status variable was not significant, the sample size was constrained further. This precipitated pairing the sample down to only include For Profit hospitals. This excluded all hospitals that were Not for Profit, rural, or government-owned. This decreased the sample to a size of 995. A Pearson Correlation was performed to assess interactions among the variables in the study. This is shown in table 4.
Table 4 - Pearson Correlation for Porterian Model without Profit Status Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Return on Assets</td>
<td>0.228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Market Concentration (HF)</td>
<td>0.265</td>
<td>-0.010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Log of MBA Population</td>
<td>12.907</td>
<td>-0.035</td>
<td>-0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Median Household Income</td>
<td>$45,382.13</td>
<td>-0.028</td>
<td>-0.008</td>
<td>0.597</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Certificate of Need</td>
<td>0.260</td>
<td>-0.023</td>
<td>0.218</td>
<td>-0.298</td>
<td>-0.184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. MLA Full Time MDs</td>
<td>4,630.41</td>
<td>-0.082</td>
<td>-0.054</td>
<td>0.796</td>
<td>0.007</td>
<td>-0.203</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. MLA Market Share</td>
<td>0.195</td>
<td>0.004</td>
<td>0.035</td>
<td>-0.046</td>
<td>-0.411</td>
<td>0.158</td>
<td>-0.505</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Log of Avg Length of Stay</td>
<td>1.196</td>
<td>0.168</td>
<td>-0.223</td>
<td>0.185</td>
<td>0.131</td>
<td>0.010</td>
<td>0.106</td>
<td>-0.187</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Log of Bed Days Avail</td>
<td>10.368</td>
<td>-0.037</td>
<td>-0.241</td>
<td>0.300</td>
<td>0.019</td>
<td>0.223</td>
<td>0.086</td>
<td>0.036</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Firm Capacity Utilization**</td>
<td>0.537</td>
<td>0.065</td>
<td>-0.069</td>
<td>0.202</td>
<td>0.217</td>
<td>0.000</td>
<td>0.175</td>
<td>-0.047</td>
<td>0.308</td>
<td>0.468</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Years Certified*</td>
<td>26.695</td>
<td>-0.151</td>
<td>0.011</td>
<td>0.051</td>
<td>0.102</td>
<td>0.075</td>
<td>0.118</td>
<td>0.232</td>
<td>0.214</td>
<td>0.408</td>
<td>0.148</td>
<td></td>
</tr>
<tr>
<td>12. Specialty status***</td>
<td>0.030</td>
<td>0.148</td>
<td>0.006</td>
<td>-0.028</td>
<td>-0.040</td>
<td>-0.002</td>
<td>-0.092</td>
<td>-0.107</td>
<td>0.148</td>
<td>-0.304</td>
<td>0.197</td>
<td>-0.314</td>
</tr>
</tbody>
</table>

* n = 995
* p < .05
** p < .01
The mean ROA is 4.23 for all hospitals in the study. ROA is defined as net income divided by average total assets and has been used as a metric for assessing the overall financial performance of firms (Porter, 1980; Dess and Davis, 1984; Powers and Kahn, 2004). The degree of market concentration, a measure of competition is .29. This indicates that, overall, hospitals in this sample are in competitive marketplaces.

Table 6 presents the descriptive statistics and the variable correlations. These are cross-sectional correlations. Competition is highly correlated with two variables: population (-0.80) MSA Market Share (.84). Population is highly correlated with full time physicians (0.80) and market share (-0.65). These are all of the high levels of correlations that were statistically significant. All of the hospitals in the final sample used to test the model consisted of For Profit hospitals. The total number of hospitals was 995 with 3 percent being For Profit specialty hospitals. All government, rural, and Not for Profit hospitals were removed from the sample.

An Analysis of Variance was performed on the sample data (ANOVA). The results of the One-Way ANOVA for Specialty Hospitals vs. traditional acute care are presented in Table 5. ROA levels for both specialty and traditional acute care hospitals were found to be statistically significant. For every $100 invested specialty hospitals returned $16.50 while traditional acute care hospitals returned about $3.80. As previous research has alluded to, specialty hospitals tend to avoid states that have Certificate-of-Need laws (CON). The study found that while 30% of traditional acute care hospitals are located in states with CON laws, only 6% of specialty hospitals are located in such states.
Table 5 - Porterian Model for Specialty and traditional acute care Hospitals

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean for Specialty</th>
<th>Mean for Traditional acute care</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets</td>
<td>16.522</td>
<td>3.817</td>
<td>0.000</td>
</tr>
<tr>
<td>Market Concentration (HHI)</td>
<td>0.206</td>
<td>0.285</td>
<td>0.847</td>
</tr>
<tr>
<td>Log of MSA Population</td>
<td>12.706</td>
<td>12.871</td>
<td>0.357</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$42,713.00</td>
<td>$45,452.70</td>
<td>0.210</td>
</tr>
<tr>
<td>Certificate of Need</td>
<td>0.060</td>
<td>0.300</td>
<td>0.004</td>
</tr>
<tr>
<td>MSA Full Time MD's</td>
<td>2,558.36</td>
<td>4,707.51</td>
<td>0.101</td>
</tr>
<tr>
<td>MSA Market Share</td>
<td>0.015</td>
<td>0.255</td>
<td>0.001</td>
</tr>
<tr>
<td>Log of Avg Length of Stay</td>
<td>0.92</td>
<td>1.526</td>
<td>0.000</td>
</tr>
<tr>
<td>Log of Bed Days Available</td>
<td>8.887</td>
<td>10.624</td>
<td>0.000</td>
</tr>
<tr>
<td>Firm Capacity Utilization</td>
<td>0.307</td>
<td>0.545</td>
<td>0.000</td>
</tr>
<tr>
<td>Years Certified</td>
<td>3.524</td>
<td>27.775</td>
<td>0.000</td>
</tr>
<tr>
<td>MSA ROA</td>
<td>8.630***</td>
<td>3.345</td>
<td>0.066</td>
</tr>
</tbody>
</table>

n = 995

*** MSA ROA not included in Correlations
Table 6 - Regression Analysis for Porterian Focused Differentiation Model

Results of ROA Regression Analysis for Porterian Focused Differentiation Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>$p^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Level Effects</strong></td>
<td></td>
</tr>
<tr>
<td>Market Concentration (HHI)</td>
<td>-0.095</td>
</tr>
<tr>
<td>Log of MSA Population</td>
<td>0.005</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>0.006</td>
</tr>
<tr>
<td>Certificate of Need</td>
<td>-0.018</td>
</tr>
<tr>
<td>MSA Full Time MD's</td>
<td>-0.109</td>
</tr>
<tr>
<td><strong>Firm Level Effects</strong></td>
<td></td>
</tr>
<tr>
<td>MSA Market Share</td>
<td>0.116</td>
</tr>
<tr>
<td>Log of Avg Length of Stay</td>
<td>0.044</td>
</tr>
<tr>
<td>Log of Bed Days Available</td>
<td>-0.059</td>
</tr>
<tr>
<td>Firm Capacity Utilization **</td>
<td>0.221</td>
</tr>
<tr>
<td>Years Certified *</td>
<td>-0.109</td>
</tr>
<tr>
<td><strong>Porterian Model</strong></td>
<td></td>
</tr>
<tr>
<td>Focused Differentiation Strategy **</td>
<td>0.149</td>
</tr>
</tbody>
</table>

| $R^2$ for total equation | 0.032  |
| Adjusted $R^2$ for total equation | 0.001  |
| $F$ for total equation    | 164.780 |

$n = 995$

*Standardized Coefficients

* $p < .05$

** $p < .01$

ROA is Dependent Variable
Hierarchical Least squares regression was used to fully specify the model. Market effects were first loaded then firm effects. The Porterian strategy variable, specialty, was added last. This is shown in Table 6. The years of certification and occupancy percentage are statistically significant in the Porterian model. Ten percent increases in occupancy rates would provide a 22 percent increase in the dependent variable, ROA. The Porterian focused-differentiation variable was statistically significant and a 10 percent increase of this variable was found to contribute to a 15 percent increase in ROA. The Adjusted R-squared for the model was 8.1. While two of the firm level variables were found to be statistically significant, none of the market level variables were found to be significant.

This study tested the antecedents and consequences of the niche approach to strategy. The study was attempting to examine the niche approach to healthcare delivery as proposed in the Porterian focused differentiation model. The antecedents consisted of market and firm effects. The consequences consisted of the financial ramifications. One tailed Pearson’s r correlations were used because the technique tests a null hypothesis in which the direction of the effect was specified in advance.
CHAPTER 5: DISCUSSION

The antecedents and consequences of the niche strategy to healthcare are of particular interest to the strategy field and to the healthcare industry. The Porterian focused differentiation model of healthcare delivery provides a framework to analyze the strategic approach of healthcare firms and associated outcomes. Antecedents are those things that precipitate or lead to this strategy and consequences are the results of a firm employing this strategy. Healthcare firms espouse a particular strategy because, as in any other industry, they want to maximize shareholder and/or stakeholder value. The purpose of the proposed study is to provide an understanding of the antecedents and consequences of the niche approach to healthcare delivery. In particular, the interaction of the niche strategy and the market and firm effects of specialty and traditional acute care firms were explored.

Research Question 1: Does the financial performance of healthcare facilities vary based on the generic strategy (niche/non-niche) of the healthcare entity?

H1: Niche firms will outperform non-niche firms.

- H1a: Specialty hospitals will have higher ROA than traditional acute care facilities.
- H1b: The average ROA of hospitals in an MSA that contains specialty hospitals will be lower than the ROA of hospitals in an MSA that does not have specialty hospitals.

Research Question 2: How does the competitive marketplace affect healthcare firms’ selection of their strategic approach?

H2: Specialty hospitals will exist in more competitive marketplaces.

- H2a: Specialty hospitals will be positively associated with more competitive hospital markets.

- H2b: Specialty hospitals will be positively associated with areas with high physician supply.

Hypotheses

H1a: Specialty hospitals will have higher ROA than traditional acute care facilities.

This hypothesis was supported. Specialty hospitals were found to have significantly higher ROA measures than traditional acute care facilities. Specialty hospitals ROA was 16.52 compared with 3.82 for traditional acute care facilities. For every $100 invested specialty hospitals returned $16.50 while traditional acute care hospitals returned $3.82. These were found to be statistically significant. These findings have been validated by previous and more recent data analyses (Rosman, 2001; Devers et al., 2003; Schneider et al., 2005; Altman et al., 2006). Health care executives assert that specialty hospitals
produce much higher margins than traditional acute care hospitals. It is not clear, however, from research presented here that these niche hospitals are successful because of their business model or because they are able to avoid cross-subsidization. While acute care facilities must use more profitable business lines to subsidize less profitable business lines, specialty hospitals do not have this burden.

Specialty hospitals have higher ROA levels than traditional acute care hospitals. Specialty hospitals also captured less market share than traditional acute care hospitals, 0.02 to 0.21, respectively. Again, all of the hospitals in the final sample were For Profit hospitals. Researchers have expressed reservations about the market share-profitability relationship and these findings cast additional doubts on those assumptions. Specialty hospitals have fewer beds and employees, on average, than traditional acute care hospitals but maintain a healthy fiscal advantage over those same firms. While this might appear counter-intuitive, the ability of smaller players in the marketplace to exploit opportunities more expertly than large firms is not anecdotal (Porter, 1985; Linneman and Stanton, 1991; Dalgic and Leeuw, 1994, Sheth and Sisodia, 2002). There appears to be opportunities that niche hospitals exploit more expertly than their traditional acute care competitors.

There might also be other factors at work here. In the GAO’s April 2003 report, 70 percent of the more than 100 specialty hospitals in existence or under development were found to have some degree of physician ownership. Physicians in those specialty hospitals with any degree of physician ownership had combined ownership shares that
averaged slightly more than 50 percent of the hospital. The combined ownership of physicians tended to be smaller at heart hospitals at 31 percent and larger at surgical hospitals at 70 percent. The extent of individual physician ownership varied by hospital, but was typically at lower levels.

For those physician-owners, the impetus for effecting above average returns are more defined than at a traditional healthcare facility. Administrators noted that certain aspects of physician ownership seemed to directly impact financial performance (GAO, 2003b). First, a core group of referring physicians is critical to specialty hospitals’ viability. This is in part because physician ownership can help to ensure referrals. Next, many specialty hospitals create large referral networks even in rural areas to garner admissions. Physician-owners were also encouraged to sell their interests when they retire or if their productivity diminished substantially. Also, it seems as if physician owners are more willing to accept limits on their use of supplies and devices at their own specialty hospitals while they resist efforts at community hospitals to decrease their usage of supplies. Finally, specialty hospitals exert greater control over admissions compared with traditional acute care hospitals.

H₁₆: The average ROA of hospitals in an MSA that contains specialty hospitals will be lower than the average ROA of hospitals in an MSA that does not have specialty hospitals.
This hypothesis was rejected. The average ROA for MSAs that contain specialty hospitals was 8.63 compared to 3.35 for those that did not contain specialty hospitals. These findings were not statistically significant (p>.05). Rejection of this hypothesis is consistent with some of the previous Federal research sanctioned by Med PAC (GAO, 2003a). According to their study, specialty hospitals were geographically dispersed consistent to that of the U.S. population. They found that specialty hospitals tended to locate in areas with higher growth rates which offered more opportunities for the growth of their business.

H$_{2a}$: Specialty hospitals will be positively associated with more competitive hospital markets.

This hypothesis was rejected. The correlation between ROA and the competition variable, the Hirschman-Hirfandahl Index (HHI) was 0.30 to 0.29 for specialty hospitals as compared with traditional acute care hospitals, respectively. Lower values for this index indicate that the market is more concentrated (competitive). This variable was not found to be statistically significant in the ANOVA.

H$_{2b}$: Specialty hospitals will be positively associated with areas with high physician supply.

This hypothesis was rejected. In comparison to general hospitals, specialty hospitals reside in areas with substantially fewer MDs, 2559 as compared with 4707. However, this variable was not found to be statistically significant. Furthermore, prior research
shows that only 15 percent of specialty hospitals are located in non-urban areas (GAO, 2003b). Proportionately, this is consistent with the overall U.S. population. Also, specialty hospitals tended to gravitate to counties that experienced an average growth rate of 11.1 percent, above the national average, from April 1990 through April 2000. In fact, 43 percent of specialty hospitals that opened post-1990 operated in counties that experienced growth rates in excess of 20 percent between the 1990 and 2000. Physician supply is higher in urban than rural areas, on average, and physicians tend to gravitate, in general to areas with the greatest opportunities, both clinical and financial (Cooper, 2004).

Findings not Hypothesized

One finding that was not hypothesized was that specialty hospitals will tend to locate in areas that do not have Certificate-of-Need (CON) laws. Only 6 percent of specialty hospitals were located in states that had CON laws. Certificate-of-Need laws are barriers to entry in the healthcare industry in that they inhibit niche hospitals from receiving permission for construction in states that have CON laws. An entity that wishes to construct a healthcare facility in a state that has CON laws must be granted permission based on a demonstrated need for the facility in that state.

Organizational Implications

Managerial implications for this research are mixed. The healthcare industry currently accounts for over 15% of GDP and, consequently, merits serious attention by
management scholars (Kumar et al., 1997; Altman et al., 2006). Contextual results of an analysis of factors that influence strategic choice can offer insight to managers. The implications of those choices in a healthcare setting can assist healthcare executives in determining the profit-maximizing approaches that can impact the future viability of niche and non-niche hospitals. While it is rather presumptuous to think that a traditional acute care hospital or hospital system would want to or be able to become a niche player in the healthcare industry, it is imperative for managers of firms that fiscally underperform to consider evolutionary short-term changes and more drastic, revolutionary long-term approaches (Duncan et al., 1995).

Limitations

All studies have certain limitations. This study used secondary data available through the Center for Medicare and Medicaid Services (Hospital Cost Report) and the United States Department of Health and Human Services (the Area Resource File). This type of data collection method was chosen because the data being collected was sensitive in nature and primary data collection on several of the measures would have been extremely difficult if not prohibitive.

Another inherent limitation is that the corporate reporting mechanisms are not entirely reliable. For instance, who completed the survey that the CMS and DHHS administered? Was that entity biased or even reliable? Was it the CFO or the secretary that entered the information? How dependable is the information? Even though there is the risk that self-
reported data from CMS cost reports could have inaccuracies, studies have found that executive’s self-reported data on financial performance does not differ significantly with industry surveys as compared with governmental surveys. Also, for practical reasons, the collection of secondary data is the most effective, cost-efficient approach.

The generalizability to less homogenous populations may be limited. The healthcare industry differs significantly from other markets because industry competitors in the healthcare industry are constrained by non-market factors. Healthcare competitors are inhibited by a vast array of federal regulations that complicate the market environment. Also, many of the industry players are NFPs (Not-for-Profit). Most other industries have a purer capitalistic structure and most firms within those industries operate on a for-profit basis. This could cause the results from this study to be less applicable to other settings.

Finally, there appear to be some unresolved issues with the data itself. There were a small number of variables that appeared to have minimum and maximum scores with questionable values. However, it was not thought that these problems compromised the results of the analysis.

Directions for Future Research

The niche approach to healthcare delivery should be studied more extensively based on the results of this study. The benefits of the niche strategy in healthcare have been noted. Both the Begg (1998) study and the Dimick (2003) study showed a positive
correlation between specialization and outcomes. For procedures like esophagectomy, the employment of the focused-factory concept could lead to a 17% decrease in mortality.

Whether or not the proliferation of niche hospitals will continue is debatable. There is intense political opposition that will not likely be assuaged (Feldstein, 1999). The financial value of the niche strategy in certain healthcare environments, however, is compelling. Niche firms, through this study, were shown to produce higher ROA returns than traditional acute care firms. The financial implications of pursuing alternative strategies have been amplified in recent years because of drastic changes in Federal reimbursement policies for health services (Autry, 1986; Rosman, 2001).

The Balanced Budget Act of 1997 reduced Medicare hospital insurance payments by 7% and substantially decreased hospital profitability (Altman et al., 2006). In 2003 Medicaid reimbursed hospitals at 92% of costs, and Medicare reimbursed 95% of costs (Altman et al., 2006). As the U.S. population ages, more Americans will depend on public programs as they transition from private, employer-sponsored insurance to Medicare. These changes and others have precipitated the growth of niche hospitals because stakeholders in the healthcare sector have sought the higher margins offered by niche hospitals and a release from the subsidization of non-profitable services offered in traditional acute-care facilities (Rosman, 2001; Devers et al., 2003; Schneider et al., 2005). Perhaps more attention needs to be paid to the elderly overall to increase overall efficiency for the treatment of chronic conditions and to curtail utilization discrepancies (Glandon et al., 1992; Gunby, 2005).
Summary and Conclusion

The niche or focused factory strategy, as applied to healthcare, provides increased focus and efficiencies through repetition. The Porterian (1980) typology validated the strategy as a viable approach for sustained competitive advantage. Niche providers have applied this central strategic management approach to healthcare. Several studies have noted the efficacy of the focused factory concept in healthcare. The model, simply stated, asserts that with increased volume of surgical and other health-related procedures better outcomes will be realized (Begg et al., 1998; Dimick et al., 2003).

Porter’s framework can help hospital decision makers understand the dynamic nature of market forces, how these forces affect the strategic approaches of competitors, and how the interaction of these forces impact the financial performance of the firm. The contribution of this study is that a central strategic management framework was empirically tested in a hospital setting. This research builds on other management studies of the hospital industry and can provide insight to practitioners on the competitive forces that will impact the financial performance of their firm.
REFERENCES


DATE: 4/10/05

MEMORANDUM

TO: LeJon Poole
Principal Investigator

FROM: Sheila Moore, CIP
Director, UAB OIRB

RE: Request for Determination—Human Subjects Research
IRB Protocol #N090414002 – The Antecedents and Consequences of the Niche Strategy in Healthcare Delivery

An IRB Member has reviewed your application for Designation of Not Human Subjects Research for above referenced proposal.

The reviewer has determined that this proposal is not subject to FDA regulations and is not Human Subjects Research. Note that any changes to the project should be resubmitted to the Office of the IRB for determination.

SM/hw

Appendix A, Institutional Review Board Approval Form