Market Orientation and Organizational Performance in Not-for-Profit Hospitals

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This study explores market orientation in the not-for-profit hospital setting. The authors hypothesize a positive relationship between market orientation and four organizational factors, including professional commitment, professional education, and professional ethics of the senior management team, and organizational entrepreneurship, and three environmental factors, including perceptions of two states of competition and the state of demand. The study also examines the relationship between market orientation and hospital performance. Data from 237 top hospital administrators are used to empirically test the hypothesized relationships. Results provide evidence of a positive association between market orientation and both the professional commitment of the senior management team and organizational entrepreneurship. Furthermore, the study provides strong support for the relationship between market orientation and hospital performance.

Market orientation is the organization-wide generation of market intelligence, dissemination of market intelligence across departments, and the organization-wide responsiveness to market intelligence (Kohli and Jaworski, 1990). The benefits of having a market orientation are pronounced in numerous scholarly papers, textbooks, and speeches (Kotler, 1988; Webster, 1988). High market orientation has been linked to higher business performance (Jaworski and Kohli, 1993; Narver and Slater, 1990). Simply stated, market orientation is theorized to be the central construct behind successful modern marketing management and strategy.

A body of empirical work on the topic of market orientation also is emerging. Researchers have focused on modeling the antecedents and consequences of market orientation, and developing a valid measure of the construct to test its effect on organizational performance (Jaworski and Kohli, 1993; Kohli, Jaworski, and Kumar, 1993; Narver and Slater, 1990; Siguaw, Brown, and Widing, 1994; Slater and Narver, 1994). Previous research, however, has several limitations. First, most studies used strategic business units (SBUs) of a few select corporations, particularly for-profit business corporations, as the unit of analysis. Although such settings provide valuable insights, the robustness of any model of market orientation should be studied using other organization types, specifically not-for-profit organizations (see calls for research by Kohli, Jaworski, and Kumar, 1993; Narver and Slater, 1990). Second, only one study (Jaworski and Kohli, 1993) tested the influence of antecedents on market orientation. The role of additional influences on market orientation within organizations needs to be investigated (Hambrick, 1987; Jaworski and Kohli, 1993; Siguaw, Brown, and Widing, 1994). Third, only two studies (Kohli, Jaworski, and Kumar, 1993; Narver and Slater, 1990) attempted to develop valid measures of market orientation systematically, with limited results. Narver and Slater’s (1990) measure of market orientation was criticized for its narrow focus and inclusion of items that did not reflect specific activities and behaviors representing market orientation (Kohli, Jaworski, and Kumar, 1993). Similarly, realizing the psychometric shortcomings and the pragmatic limitations of their own scale of market orientation, Kohli, Jaworski, and Kumar (1993) strongly recommend additional and substantive attention be paid to market orientation. They suggest that the most promising applications of the measure may lie with not-for-profit organizations (p. 475).

As many practitioners will testify, the current environment confronting not-for-profit organizations is challenging. There is increasing demand for services (Kotler and Andreasen, 1991), pressure from the for-profit sector to curtail tax exempt
status and other privileges (Unterman and Davis, 1984; Mason, 1984; Hodkinson, 1989), enhanced competition among not-for-profits for privately contributed revenues (Schwartz, 1989), and significant shortages of professionally trained and experienced personnel (Wolf, 1984; Cruickshank, 1989). Faced with these conditions, not-for-profit hospitals are seeking ways to survive, to remain viable, and to grow in today’s business environment. Although many specific suggestions have been offered to address these challenges, a number of authors have called for a broader approach, including a model of market orientation in not-for-profit organizations. Indeed, a number of calls have been made for this type of research specifically focusing on not-for-profit hospitals (Hansler, 1988; Wood and Bhuian, 1993).

This study is guided by these and other calls and critiques. Its results contribute to our over-all knowledge of market orientation by extending a host of earlier studies (e.g., Carbon, 1990; Hambrick, 1987; Hambrick, Fredrickson, Korn, and Ferry, 1989; Hansler, 1988; Kohli and Jaworski, 1990; Kotler and Andreasen, 1991; Morris and Paul, 1987; Narver and Slater, 1990; Wood and Bhuian, 1993). Specifically, the research reported here: (1) develops a model describing the relationships between market orientation, its antecedents, and resulting organizational performance (consequences); (2) tests the model by empirically examining eight specific hypotheses concerning the antecedents and consequences of market orientation; and (3) presents the results and implications for managers and researchers seeking prescriptive advice for improving organizational performance. The focus is on not-for-profit hospitals, addressing the call for more research focused in this area.

Background: The Model

In recent years, academicians and practitioners alike have increasingly focused on market orientation and the factors that engender this orientation in organizations. Narver and Slater (1990) and Jaworski and Kohli (1993) note that market orientation always has been of interest to individuals responsible for attaining higher organizational performance. Figure 1 displays the hypothesized model. It is outlined in the following pages.

Market Orientation

In an attempt to achieve both definitional precision and theoretical integration, Kohli and Jaworski (1990) described market orientation as the organization-wide generation and dissemination of, and responsiveness to, market intelligence. Market intelligence generation includes four distinct notions, including: (1) gathering, monitoring, and analyzing information pertaining to the current and future needs of customers; (2) monitoring and analyzing exogenous factors outside the industry that influence the current and future needs of customers (e.g., government regulations, technology, the general economy, and other environmental forces); (3) monitoring and analyzing competitive actions that influence the current and future needs of customers; and (4) gathering and monitoring market intelligence through both formal and informal means (Day and Wensley, 1983; Houston, 1986; Kohli and Jaworski, 1990). Market intelligence dissemination has two distinct aspects, including: (1) sharing both existing and anticipated information throughout the organization (i.e., ensuring vertical and horizontal flows of information within and between departments) concerning the current and future needs of customers, exogenous factors, and competition; and (2) ensuring effective use of disseminated information by encouraging all departments and personnel to share information concerning the current and future needs of customers, exogenous factors, and competitors (Jaworski and Kohli, 1993; Slater and Narver, 1994).

Market intelligence responsiveness entails three distinct activities, including: (1) developing, designing, implementing, and altering goods and services (tangibles and intangibles) in response to the current and future needs of customers; (2) developing, designing, implementing, and altering systems to promote, distribute, and price goods and services that respond to the current and future needs of customers; and (3) utilizing market segmentation, product differentiation, and other marketing strategies in the development, design, implementation, and alteration of goods and services and their corresponding systems of promotion, distribution, and pricing (Kohli, Jaworski, and Kumar, 1993; Narver and Slater, 1990). The domain and key elements of market orientation are summarized in Figure 2.

Antecedents to Market Orientation

Several theoretical studies have explored possible antecedents to market orientation (e.g., Kohli and Jaworski, 1990; Wood and Bhuian, 1993). As displayed in Figure 1, this study proposes that the degree of market orientation in an organization depends on seven major antecedents: (1) professional commitment of the senior management team; (2) professional education of the senior management team; (3) professional ethics of the senior management team; (4) organizational entrepreneurship; (5) perception of the presence and intensity of the competition; (6) perception of the competition as a threat; and (7) perception of demand as under and/or over the capacity of the organization to serve. In turn, the degree of market orientation directly influences organizational performance. A discussion of the seven major antecedents follows.

The professional commitment of the senior management team is a primary dimension of professionalism (Bartol, 1979; Carbon, 1990; Hall, 1968; Moncrieif and Bush, 1988; Wood and Bhuian, 1993). It refers to the individual's dedication to a career and desire to remain with a particular profession, given opportunities to change professions. Several authors have suggested that professionalism of senior management teams is a key factor in developing a customer orientation and subsequently achieving greater organizational success (Drucker,
Figure 1. Antecedents and consequences of market orientation: Hypothesized model.

Figure 2. The domain and key elements of market orientation.
dedication to career and career aspirations reinforce long-term professional goals (e.g., consistent quality service to customers). In turn, this long-term orientation tends to influence the value senior managers place on information about customers—the essence of a market orientation.

The professional education of the senior management team is another dimension of professionalism that seems to be relevant to market orientation. If refers to the belief that continual professional education is important for high quality management (Hambrick, Fredrickson, Korn, and Ferry, 1989). Senior managers of organizations who strongly identify with their profession tend to emphasize continual skills development for themselves as well as for other members of the management team. They often utilize development programs of their professional societies (Wood and Bhuian, 1993), which provide a variety of educational opportunities to their members, including information dissemination, research, conferences and seminars, and the open exchange of ideas among professionals. These activities are aimed at improving the knowledge and skills of members to ensure consistent, high-quality service to their customers. As suggested above, better service to customers requires information about customers, which is the central tenet of a market orientation.

The professional ethics of the senior management team is a third dimension of professionalism. It refers to a felt responsibility to avoid self-interest in the course of rendering services, as well as a dedication to providing high-quality service. It also includes a strong desire to “do the right thing” when dealing with publics (Bartol, 1979; Carbone, 1990). A strong service ethic of senior management teams is evidenced by a deep concern with using their profession to serve their customers when confronted with a conflict between self-interest and customer interests. Accordingly, a high sense of professional ethics would lead managers to yield their self-interest to customers’ interests when conflicts exist. Therefore, managers with a strong professional ethic tend to be dedicated to high-quality customer service. Again, to better serve customers and to ensure high-quality service, they value information about customers and, thus, tend to be market-oriented (Wood and Bhuian, 1993; Hambrick, 1987).

Each of the three dimensions of professionalism has a single, common theme: how the organization may better serve its customers. Clearly, to provide better service to customers requires gathering, disseminating, and using information about customers—the core of the market orientation.

Traditionally, entrepreneurship has been identified with a dominant organizational personality (Collins and Moore, 1970; Shapero, 1975). However, entrepreneurship also has been conceptualized as distinct from activities of the individual. Organizational entrepreneurship, for example, examines entrepreneurship as an institutional phenomenon (Burgelman, 1984; Morris and Paul, 1987; Jennings and Lumpkin, 1989). As described by Stevenson, Roberts, and Grousbeck (1985), organizational entrepreneurship is an organization’s willingness to encourage and support creativity, flexibility, and calculated risk-taking. Similarly, authors such as Miller (1983) and Burgelman (1984) define organizational entrepreneurship as the willingness to strive for organizational renewal through the pursuit of new ventures and opportunities. More recently, organizational entrepreneurship has been described as taking constructive risk, emphasizing research and development, valuing rapid or steady growth over stability, introducing new products and services at a high rate, and actively seeking unusual or novel solutions to problems (Ginsberg, 1985; Khandwalla, 1977; Mason and Friesen, 1983; Morris and Paul, 1987). A common theme in these definitions is that organizational entrepreneurship has three conceptually related components, namely innovativeness, proactiveness, and constructive risk-taking (Jarillo, 1989; Wood and Bhuian, 1993). Although a variety of definitions exists for these three dimensions of organizational entrepreneurship, this study adopts the definitions previously used by Morris and Paul (1987), Winston (1984-85), and Wood and Bhuian (1993): innovativeness is introducing novel goods, services, or technology and opening new markets; proactiveness is actively seeking unusual or novel ways to achieve organizational objectives; and constructive risk-taking is making reasonable decisions when faced with environmental uncertainties.

High levels of organizational entrepreneurship and high levels of market orientation represent responses to increasingly complex and turbulent environments (Drucker, 1980, 1985; Wood and Bhuian, 1993). Accordingly, this study posits a strong relationship between organizational entrepreneurship and market orientation.

The perception of the presence and intensity of competition encourages organizations to seek out information about those entities that are affected by competition. It supports the view that organizational success and ultimate survival will come to those organizations that best understand the multiple publics that affect them (Kotler and Andreasen, 1991; Steimberg, 1987). The external environment in which organizations operate is complex and constantly changing; a significant characteristic of the external environment is competition. Every firm is competing for the attention, resources, and/or loyalty of customers. However, the degree to which organizations perceive the presence and intensity of competition varies. Organizations that recognize the presence and intensity of competition have a greater tendency to seek out information about customers for the purpose of evaluation and to use such information to their advantage (Slater and Narver, 1994; Wood and Bhuian, 1993).

The organization’s perception of competition as a threat also leads to a greater tendency to evaluate competition and attend to customers (Schwartz, 1989). Recognition of the threat from competition drives organizations to look to their customers for better ways to meet their needs and wants and thereby enhances organizational performance (Kohli and Clarke, 1986; Wood and Bhuian, 1993). Accordingly, when competi-
tion is perceived as a threat by the organization, there is a greater tendency to adopt a market orientation.

The perception of demand faced by the organization as under or over the capacity to serve also influences organizations’ search for information. Demand under the organization’s capacity to serve is a situation where the current demand for the organization’s goods/services is below the desired demand level; demand over the organization’s capacity to serve is a situation where the current demand for the organization’s goods/services is above the desired demand level or, more particularly, above the level that can be served. In theory, organizations faced with either under or over demand situations tend to seek out information about customers and modify their market offerings based on consumer data in order to improve or rectify the situation (Bhuian, 1992; Borkowski, 1994; Kindra and Taylor, 1995; Wood and Bhuian, 1993).

**Method**

**Scale Development**

Measures of the constructs used in the study are discussed in the following paragraphs. All measures and their respective coefficient alphas are listed in Appendix A.

To date, two studies have attempted to develop valid scales for measuring market orientation systematically. Both had shortcomings. Kohli, Jaworski, and Kumar (1993) summarized the limitations of Narver and Slater’s (1990) scale as follows. First, it adopts a focused view of markets emphasizing customers and competition, as compared with a view that emphasizes these two stakeholders and additional factors that drive customer needs and expectation (e.g., technology, regulations). Second, it does not reflect the speed with which market intelligence is generated and disseminated within an organization. Third, it includes a number of items that do not measure specific activities and behaviors that represent a market orientation. On the other hand, Kohli, Jaworski, and Kumar (1993) described the shortcomings of their own scale as: (1) being too long to be pragmatic (32 items); (2) consisting of items related to overly specific activities that may not be generalizable across various types of industries, particularly not-for-profit industries; and (3) only moderately supportive of the validity of market orientation. This study attempted to overcome these limitations of previous scale development.

The authors and five other marketing professionals participated in modifying, reviewing, and revising scale items. A pretest of the revised scale was conducted with a group of potential respondents. The resulting scale of market orientation consisted of 11 items (see Table 1 and Appendix). Four items were used to measure intelligence generation (MO1–MO4), three items were used to measure intelligence dissemination (MO5–MO7), and four items were used to measure intelligence responsiveness (MO8–MO11).

The scale represents the domain and elements of market orientation depicted in Figure 2. Scale items asked respondents how much time and effort the hospital spent performing certain marketing practices/functions (e.g., understanding patients’ needs, ensuring that market information is communicated to all relevant departments in the hospital, developing goods and services based on information concerning patients’ needs) relative to other hospitals in their market area. Responses were recorded on a 5-point Likert scale (where 1 = much more time and effort was spent, 3 = about the same time and effort was spent, and 5 = much less time and effort was spent). With only slight modifications of these items, all are generalizable across different types of industries.

The dimensionality and reliability of the scale were estimated by common factor analysis and coefficient alpha. In the factor analysis, items exhibited an inability to discriminate among the three dimensions (intelligence generation, dissemination, and responsiveness) and resulted in a undimensional market orientation construct. One item, MO2, consistently
Table 1. Market Orientation Scale

<table>
<thead>
<tr>
<th>Factor Matrix (n = 237)</th>
<th>Factor Loading (f)</th>
<th>Communality (h²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO1</td>
<td>0.52</td>
<td>0.27</td>
</tr>
<tr>
<td>MO2*</td>
<td>0.37</td>
<td>0.14</td>
</tr>
<tr>
<td>MO3</td>
<td>0.58</td>
<td>0.34</td>
</tr>
<tr>
<td>MO4</td>
<td>0.71</td>
<td>0.51</td>
</tr>
<tr>
<td>MO5</td>
<td>0.68</td>
<td>0.46</td>
</tr>
<tr>
<td>MO6</td>
<td>0.67</td>
<td>0.45</td>
</tr>
<tr>
<td>MO7</td>
<td>0.57</td>
<td>0.32</td>
</tr>
<tr>
<td>MO8</td>
<td>0.69</td>
<td>0.47</td>
</tr>
<tr>
<td>MO9</td>
<td>0.72</td>
<td>0.52</td>
</tr>
<tr>
<td>MO10</td>
<td>0.79</td>
<td>0.62</td>
</tr>
<tr>
<td>MO11</td>
<td>0.74</td>
<td>0.54</td>
</tr>
</tbody>
</table>

% variance: 0.88
Eigenvalue: 4.65
Coefficient alpha: 0.89

*This item was eliminated based on the scale refinement procedure described in the text.

produced a low loading (.37) and, therefore, was excluded from the final scale. There was a high degree of reliability (internal consistency) for the remaining ten items (coefficient alpha = 0.89).

The professional commitment, professional education, and professional ethics of the senior management team were measured using three scales composed of three, three, and two items, respectively. Existing scales were modified to make them suitable for this study (i.e., items were modified to reflect that respondents were being asked to offer their perceptions in the context of not-for-profit hospitals) (see Bullard and Snizek, 1988; Carbone, 1990; Hall, 1968; Snizek, 1972). The items reflect the extent to which the respondent and other members of the senior management team of the hospital exhibit each of the three types of professionalism. A 5-point scale was used for all items (1 = strongly agree; 5 = strongly disagree). A common factor analysis resulted in three distinct factors. The coefficient alphas were 0.66, 0.84, and 0.84, respectively.

Organizational entrepreneurship was measured using eight items (three, three, and two items to measure innovativeness, proactiveness, and constructive risk taking, respectively). All items were adopted from the literature (Jennings and Lumpkin, 1989; Khandwalla, 1977; Mason and Friessen, 1983; Morris and Paul, 1987) and modified to fit the study. For each of the items, respondents were asked how active their hospital has been in undertaking entrepreneurial functions (such as introducing new goods and services for patients, seeking unique and novel ways to satisfy patients) relative to other hospitals in their market area. All items were scored on a 5-point scale, where 1 = much more active than others and 5 = much less active than others. Factors analysis results indicated a unidimensional factor structure and a high degree of reliability (coefficient alpha = 0.89).

Perception of the presence and intensity of competition and perception of competition as a threat were measured using two scales composed of three and two items, respectively. Both scales were developed from previous work by Downey, Hellriegel, and Slocum (1975) and Negandhi and Reimann (1972). The first scale assesses the degree to which an organization perceives the presence and intensity of competition. A 5-point scale used for all items (1 = strongly agree; 5 = strongly disagree) was used to measure all items. The second scale assesses senior hospital managers’ perceptions of competition in the marketplace. Specifically, respondents were asked to indicate the extent to which senior management personnel perceive competition for patients as threatening their hospitals’ long- and short-term prosperity. The items were scored on a 5-point scale, ranging from “a threat to long- and short-term prosperity” to “not a threat to long- and short-term prosperity.” Factor analysis resulted in two factors with coefficient alphas of 0.86 and 0.70, respectively.

Because no scale existed for measuring the perception of demand faced by the organization as under- or overcapacity to serve, a single-item exploratory measure was developed for...
Table 2. Characteristics of Sample (n = 237)

<table>
<thead>
<tr>
<th>Job title</th>
<th>Education (major)</th>
<th>Age</th>
<th>Sex</th>
<th>Years in senior management</th>
<th>Sex</th>
<th>Years in senior hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>27</td>
<td>61</td>
<td>27</td>
<td>20±30</td>
<td>76</td>
<td>100%</td>
</tr>
<tr>
<td>Chief executive officer</td>
<td>30</td>
<td>19</td>
<td>20</td>
<td>31±40</td>
<td>24</td>
<td>100%</td>
</tr>
<tr>
<td>President</td>
<td>17</td>
<td>10</td>
<td>11</td>
<td>41±50</td>
<td>13</td>
<td>100%</td>
</tr>
<tr>
<td>Vice president</td>
<td>11</td>
<td>3</td>
<td>6</td>
<td>51±60</td>
<td>23</td>
<td>100%</td>
</tr>
<tr>
<td>Marketing director</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>7±10</td>
<td>17</td>
<td>100%</td>
</tr>
<tr>
<td>Director</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>11±15</td>
<td>26</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years working in the health-care industry</th>
<th>Sex</th>
<th>Total number of beds</th>
<th>Number of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–5</td>
<td>100%</td>
<td>0–5</td>
<td>18</td>
</tr>
<tr>
<td>6–10</td>
<td>100%</td>
<td>6–10</td>
<td>24</td>
</tr>
<tr>
<td>11–15</td>
<td>100%</td>
<td>11–15</td>
<td>22</td>
</tr>
<tr>
<td>16–20</td>
<td>100%</td>
<td>16–20</td>
<td>23</td>
</tr>
<tr>
<td>21 and more</td>
<td>100%</td>
<td>21 and more</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of hospital</th>
<th>Sex</th>
<th>Total number of beds</th>
<th>Number of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>100%</td>
<td>1,001–2,000</td>
<td>98</td>
</tr>
<tr>
<td>Public</td>
<td>100%</td>
<td>2,001–3,000</td>
<td>2</td>
</tr>
</tbody>
</table>

Data Collection

Data were collected by means of a self-administered questionnaire mailed to 1,000 chief executives of not-for-profit hospitals in the United States. This represents a systematic random sample of approximately one out of three not-for-profit administrators listed in the Directory of the American Hospital Association. The questionnaire was pretested with senior management personnel of four hospitals located in a southwestern metropolitan area. The goals of the pretest were to assess clarity of questions, determine the length of time required for completion, and examine the appropriateness of both questionnaire format and subject matter for the population of interest. Minor revisions were made to the questionnaire based on pretest results.

The actual mailing included the questionnaire, a letter of endorsement from the past president of the American Hospital Association, and a self-addressed, stamped reply envelope. Following the procedure recommended by Dillman (1978), a follow-up postcard was sent 1 month after the questionnaire, and a second reminder letter sent 4 weeks after the follow-up postcard. A total of 237 usable questionnaires was returned for a response rate of 35% adjusting for the percentage of non-deliverable addresses. (To determine the number of non-deliverable addresses, 37 hospitals were randomly selected...
from the sample. A telephone call was made to each of the 37 hospitals to determine whether or not the addresses were employed with the hospital at that time. Twenty-five were found to be working with their respective hospitals; 12 were no longer with their respective hospitals for various reasons (including the generally high turnover among senior hospital management being experienced in the industry). Therefore, a 32% rate of nondeliverables was calculated. Previous research using hospital administrators as respondents report response rates between 10 and 50% (Zallocco and Joseph, 1991). Nonresponse bias was assessed by comparing the responses of early respondents with those of late respondents (Armstrong and Overton, 1977). Multivariate analyses of variance (MANOVA) tests indicated no significant difference between early and late respondents. Therefore, it is assumed that nonresponse bias was minimal. (To verify that selected study participants actually were the individuals who completed the questionnaires, a random sample of 15 respondents was called. Respondents were asked if they had personally participated in the study. Only 12 of these individuals were reached, but all indicated that they were the respondent of record. Accordingly, it is assumed that the intended study respondents are represented in the sample.)

A profile of the respondents’ personal and hospital characteristics is displayed in Table 2. In summary, 74% of respondents are administrators, chief executive officers, or presidents of hospitals, and have the ultimate legal authority and overall responsibility for organizational decision making within their hospitals. Sixty-one percent of the respondents hold undergraduate degrees in business; 83% have 11 or more years of experience in the health-care industry. Thus, executives included in the sample are assumed to be aware of the different characteristics of hospital management, including the constructs of interest in this study.

Summary statistics for the characteristics of the hospitals represented by respondents show 86% have a senior management team of 10 or fewer members. This implies that respondents are cognizant of the opinions of other members of their top management team. The majority of hospitals (64%) has 200 or fewer beds, indicating that effects attributable to hospital size would be minimal. Similarly, in most of the cases (69%), the total number of beds in the market areas of the respective hospitals is 1,000 or fewer, minimizing any effect caused by size of the market area. These factors suggest that respondents are in environments where they are capable of assessing external factors and other variables of interest in this study. All in all, the sample of respondents and their respective hospitals is highly representative of the population of interest.

Analysis and Results

To test the research hypotheses outlined above, standardized regression analysis (the method of least squares) was employed. Regression results are presented in Table 3; a correlation matrix is shown as Table 4.

Estimates are presented for the three hypothesized dimensions of professionalism of the senior management team (H1-H3) in Equation (1a), organizational entrepreneurship (H4) in Equation (1b), the two dimensions of the perception of competition (H5 and H6) in Equation (1c), the perception of the state of demand (H7) in Equation (1d), the full set of proposed antecedents (H1-H7) in Equation (1e), and organizational performance (H8) in Equation (1f). As displayed in Equation (1a), results support H1, indicating that professional commitment of the senior management team is related to market orientation (b = 0.22, p = 0.0037), fail to support H2, indicating that professional education of the senior management team is unrelated to market orientation, and support H3, indicating that the professional ethics of the senior management team is related to market orientation (b = 0.13, p = 0.0493). Combined, the three dimensions of professionalism explain 8% of the variance market orientation.

Although no previous study has empirically tested the effect of professional commitment of the senior management team on the market orientation of organizations, several studies have implied such a relationship (Badasch, 1988; Byrne, 1990; Kohli and Jaworski, 1990; Narver and Slater, 1990). This first empirical finding, therefore, is consistent with the literature. The second finding, however, is contrary to the hypothesized relationship (and inconsistent with the literature). No relationship was evident between the professional education of the senior management team and market orientation. Again, although no previous study has empirically tested this relationship, several researchers have indicated that the market orientation of an organization could be influenced by the professional education of the senior management team (Birchenall and Streight, 1989; Byrne, 1990; Kohli and Jaworski, 1990). This inconsistent finding may be explained by the concept of “orientation” itself (i.e., the nature of an organization’s adaptation to a specific situation). That is, numerous orientations can evolve as the environment surrounding an organization evolves (Ansoff, 1984; Troye and Wood, 1989). Indeed, Jaworski and Kohli (1993) suggest that market orientation may not be the only orientation that can lead to higher organizational performance. It is likely that the professional education of the senior managers of hospitals emphasize other orientations. For example, cost containment could be a likely orientation of management in the health-care industry, because escalating costs are considered to be a crucial problem faced by hospitals today (Kotler and Andreasen, 1991). Finally, the results of this study suggest that professional ethics is only marginally or unrelated to market orientation. Professional ethics of the senior management team is found to be marginally significant in Equation (1a); in Equation (1e), with all specified variables, this relationship is insignificant (b = 0.04, p = 0.4786). An interpretation of this finding is that in the context of hospitals, emphasis on the interests of all
Table 3. Antecedents and Consequences of Market Orientation: Regression Results

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Relevant Hypotheses</th>
<th>Equation</th>
<th>PC</th>
<th>PE</th>
<th>PH</th>
<th>OE</th>
<th>PR</th>
<th>PT</th>
<th>PD</th>
<th>OP</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market orientation</td>
<td>H1–H3</td>
<td>(1 a)</td>
<td>0.22**</td>
<td>0.00</td>
<td>0.13*</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.08</td>
<td>6.44</td>
</tr>
<tr>
<td></td>
<td>H4</td>
<td>(1 b)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.52***</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>H5, H6</td>
<td>(1 c)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.01</td>
<td>−0.05</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.01</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>H7</td>
<td>(1 d)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>−0.06</td>
<td>—</td>
<td>0.01</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>H1–H7</td>
<td>(1 e)</td>
<td>0.12*</td>
<td>0.04</td>
<td>0.04</td>
<td>0.49***</td>
<td>0.01</td>
<td>−0.01</td>
<td>−0.04</td>
<td>—</td>
<td>0.38</td>
<td>24.17</td>
</tr>
<tr>
<td></td>
<td>H8</td>
<td>(1 f)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.40***</td>
<td>0.10</td>
<td>0.71</td>
<td></td>
</tr>
</tbody>
</table>

*** p < 0.001.
** p < 0.005.
* p < 0.05.

a Professional commitment of the senior management team.
b Professional education of the senior management team.
c Professional ethics of the senior management team.
d Organizational entrepreneurship.
e Perception of the presence and intensity of competition.
f Perception of competition as a threat.
g Perception of demand faced by the organization as under or over the capacity to serve.
h Organizational performance.

Current and potential patients may not be pragmatic. Many not-for-profit hospitals may not have the resources to serve the health-care needs of numerous indigent patients, for example. Consequently, such hospitals may be forced to lower their expectations with respect to meeting the needs of all patients.

The relationship between organizational entrepreneurship and market orientation expressed in H4 is examined in Equation (1b). The regression results show a significant positive relationship as hypothesized (b = 0.52, p = 0.0001), explaining 35% of the variance. This finding is consistent with past empirical research (Morris and Paul, 1987) as well as the theoretical explanations of several authors (Bumm, 1988; Graham, 1990; Lipp, 1991; Wood and Bhuiyan, 1993). Equation (1c) examines the relationships between: (1) the perception of the presence and intensity of competition and a market orientation (H5); and (2) the perception of competition as a threat and a market orientation (H6). Results do not support either hypothesized relationship (b = 0.01, p = 0.7108 and b = 0.05, p = 0.2349, respectively). Paraphrasing Narver and Slater (1990), an explanation for these findings might be that it is better to invest in becoming market oriented while the environment is somewhat munificent than to wait until it has grown hostile.

The final linkage between the seven proposed antecedents...
and market orientation is the hypothesized positive relationship between market orientation and the perception of the demand as under or over the capacity to serve (H7). Equation (1d) displays the results, which do not support the hypothesized relationship ($b = -0.06, p = 0.1401$). Again, a possible explanation for this finding lies with the wisdom provided by Narver and Slater (1990).

Finally, the relationship between market orientation and all the predictor variables combined was investigated in Equation (1e). Two points are of particular interest here. First, it can be seen that the coefficients in the model do not change signs and the majority of statistically significant variables remain. Second, the amount of explained variance in market orientation increases to 0.38.

The proposed linkage between market orientation and organizational performance is reflected in $H8$. Results of Equation (1f) indicate that market orientation is significantly and positively related to organizational performance ($b = 0.40, p = -0.0001$) and explains 10% of the variance. This finding is consistent with results of past studies (Jaworski and Kohli, 1993; Narver and Slater, 1990; Slater and Narver, 1994).

**Conclusions and Implications**

This study is an important first step in validating the relationship between market orientation and hospital performance. Not-for-profit hospital administrators who seek to improve the quality of care the hospital delivers, increase the revenues and financial position of the organization, and enhance overall patient satisfaction are advised to give considerable attention to the findings of this study. These results indicate that upper management’s ability to enhance operational efficiencies of their organization may lie in the focused efforts to develop and embrace an organization-wide commitment to a market orientation. To complement these efforts, special attention and resource allocation must be committed to the over-all professional education opportunities of organizational members, including memberships and participation in professional seminars, workshops, conferences, and other development programs. Organizational entrepreneurship also must be supported by actively encouraging new product idea generation, implementation of new methods and techniques in the delivery of health-care services. A focus on unique and novel approaches to achieving patient satisfaction and the proactive search for, and development of, new markets also are recommended. Once again, the key to success is achieving an organization-wide market orientation.

This research advances a number of variables as significant determinants of market orientation and suggests ways by which managers may enhance the market orientation and performance of their organizations. Specifically, professional commitment of the senior management team seems to play an important role in determining the level of market orientation of an organization. This findings suggests that management should seek out factors that influence the level of professional commitment of the senior management team in pursuit of higher performance (here past research is particularly rich in prescriptive advice, and interested readers are referred to the work of Hunt, Wood, and Chonko, 1989; Morgan and Hunt, 1994). In addition, organizational entrepreneurship seems to facilitate market orientation. This finding indicates that management can influence the level of market orientation by creating an organizational environment where innovativeness, proactiveness, and constructive risk-taking (the essence of organizational entrepreneurship) are encouraged and rewarded. Indeed, the belief that entrepreneurship can be learned has resulted in numerous organizations and universities offering programs in entrepreneurship.

Results of this study suggest areas for further research. First is the examination of the organizational performance measure. To assess the robustness of the relationship between market orientation and organizational performance, future studies should incorporate other organizational performance measures, such as return on investment, sales growth, market share, and customer retention. Because performance measures and accounting treatments differ from organization to organization, care should be taken to control for organizational and accounting effects.

Second, efforts to discover and assess the role of additional factors in determining the level of market orientation in organizations should continue. Although the antecedents in this study explain 38% of the variance in market orientation, previous research has identified several other antecedents of market orientation (e.g., ingratiation acceptance, attitude toward marketing, management training) that need to be tested (Kohli and Jaworski, 1990; Wood and Bhuian, 1993). Likewise, a number of the antecedents in this study deserve further investigation. In addition, some variables hypothesized as antecedents in this study (including organizational entrepreneurship and professional ethics of the senior management team) also could be considered consequences of a market orientation. For example, it would be very useful to undertake research examining the magnitude and direction of the relationship between organizational entrepreneurship and market orientation.

Third, because environmental factors have not been found to have any moderating effect on the relationship between market orientation and organizational performance (Jaworski and Kohli, 1993; Slater and Narver, 1994) nor any direct effect on a market orientation (this study), it would be useful to conduct comparative studies to see the relative effects of various orientations (e.g., market, selling, product) on organizational performance.

Finally, this study is limited by its sample and cross-sectional focus, which suggest additional factors to consider in future research efforts. Regarding the sample used in this research, it is limited by its homogeneity. Although it is desirable to use a homogeneous sample for early theory development and testing (Calder, Phillips, and Tybout, 1981), future studies
should include samples of other health-care institutions and providers, including for-profit organizations. Regarding the study’s cross-sectional focus, the influence of the antecedents on market orientation or the influence of market orientation on organizational performance in this study is primarily restricted to association (i.e., possible causal relationships are not tested). Future efforts should be geared toward the development of longitudinal databases to test the nature of change processes involved in the constructs of interest. The phenomenon of leading and lagging indicators, where operating results witnessed during one quarter may be attributable to actions implemented much earlier in time and even by different management, needs further study (i.e., Does market orientation drive performance or does robust performance induce management to affirm their market orientation? Is a cyclical pattern, where each plays the role of a causal factor driving the other over time, a truer pattern of the influence?) With deference to these suggestions, the present study concludes with one important statement: Market-oriented organizations tend to have higher performance than nonmarket-oriented organizations. Practitioners and academic researchers, alike, should not overlook this significant finding.

References


### Appendix A. Measures of Research Constructs

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Sample Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Orientation</strong></td>
<td>Relative to other hospitals in your market area, how much time and effort is spent by your hospital in... (anchors: much more time than others/about the same time as others/much less time than others)</td>
</tr>
</tbody>
</table>
| 0.89 | 1. understanding patients’ needs.  
2. understanding how environmental factors (e.g., government regulations, technology) influence patients’ needs.  
3. understanding how the marketing programs of competitors influence patients’ expectations and service preferences.  
4. utilizing as many means as possible to generate market information (e.g., interaction with patients, in-house market research, patient satisfaction surveys).  
5. ensuring that market information is communicated to all relevant departments in the hospital.  
6. conducting interdepartmental meetings to discuss market trends and developments.  
7. disseminating data on patient satisfaction to all relevant departments.  
8. developing goods and services based on information concerning patients’ needs.  
9. developing systems to promote, deliver, and price goods and services based on information concerning patients’ needs.  
10. utilizing marketing techniques (e.g., market segmentation, product differentiation, competitive analysis) to develop new goods and services.  
11. utilizing marketing techniques (e.g., market segmentation, product differentiation, competitive analysis) to develop systems to promote, deliver, and price goods and services. |
| **Professional commitment of the senior management team** | Please read the following statements and circle the response that most closely matches your feelings (anchors: strongly agree/strongly disagree). |
| 0.66 | 1. I don’t think of my work as just a job, it is something much more important.  
2. The senior management personnel of my hospital are very dedicated to their careers in the health-care management field.  
3. I would remain in this profession even if I were offered more pay from some other profession (outside the health-care management field). |
| **Professional education of the senior management team** | (anchors: strongly agree/strongly disagree) |
| 0.84 | 1. I strongly believe in the importance of continuing professional education (e.g., attending seminars, workshops, and conferences on various issues concerning professional development).  
2. The senior management personnel of my hospital strongly believe in continuing professional education.  
3. My hospital encourages and supports the involvement of senior management personnel in professional development programs. |
| **Professional ethics of the senior management team** | (anchors: strongly agree/strongly disagree) |
| 0.84 | 1. I always place the interests of my patients before my own self-interest.  
2. The senior management personnel of my hospital always place the interests of our patients before their own self-interests. |
| **Organizational entrepreneurship** | Relative to other hospitals in your market area how active has your hospital been in... (anchors: much more active than others/about the same as others/much less active than others) |
| 0.89 | 1. introducing new goods and services for patients.  
2. opening new markets.  
3. introducing new methods and techniques of delivering services.  
4. seeking unique and novel ways to satisfy patients  
5. performing R&D activities (e.g., new goods/service development, new facility development, new market development, new delivery systems development).  
6. searching for new markets.  
7. taking risks in items of environmental uncertainty.  
8. taking risks in general. |
### Appendix A. continued

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Sample Items</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td></td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Perception of the presence and intensity of competition</strong></td>
<td>Please read the following statements and circle the response that most closely matches your feelings (anchors: strongly agree/strongly disagree).</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>The patients my hospital serves have numerous alternative health-care organizations that provide services similar to ours.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The competition for patients in my hospital’s market area is growing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.70</td>
<td><strong>Perception of competition as a threat</strong></td>
</tr>
<tr>
<td></td>
<td>Most of the senior management personnel of my hospital perceive the competition for . . .</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>patients as . . . (anchors: a threat to long-term prosperity/not a threat to long-term prosperity).</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>patients as . . . (anchors: a threat to short-term prosperity/not a threat to short-term prosperity).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.72</td>
<td><strong>Perception of demand as under or over the capacity to serve</strong></td>
</tr>
<tr>
<td></td>
<td>Please circle the response that most closely matches your feelings (anchors: below that we can serve/about equal to what we can serve/more than what we can serve).</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>The current level of demand for my hospital’s goods and services is . . .</td>
<td></td>
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<tr>
<td></td>
<td><strong>Organizational performance</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over the last 3 years . . . (anchors: strongly agree/strongly disagree).</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>the quality of care offered by my hospital has improved.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>the revenues (e.g., reimbursement from medicare, insurance, etc.) of my hospital have increased.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>the financial position of my hospital has improved.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>the satisfaction of my hospital’s patients has improved.</td>
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