

The Effects of Entrepreneurial Proclivity and Market Orientation on Business Performance

The recent literature suggests a potential tension between market orientation and entrepreneurial proclivity in achieving superior business performance. This is unsettling for marketers, because it could mean that being market oriented is detrimental to a firm that is also trying to be entrepreneurial and successful. To examine this unnerving potential, the authors investigate structural influences (both direct and indirect) of entrepreneurial proclivity and market orientation on business performance. The results indicate that entrepreneurial proclivity has not only a positive and direct relationship on market orientation but also an indirect and positive effect on market orientation through the reduction of departmentalization. The results also suggest that entrepreneurial proclivity's performance influence is positive when mediated by market orientation but negative or nonsignificant when not mediated by market orientation. The authors also provide a discussion and future research implications.

In his book *Innovator's Dilemma*, Christensen (1997) argues that well-managed companies often fail to innovate precisely because they are rightfully preoccupied with the market—existing or potential—they know. The contention is an unnerving one for managers who believe in a market orientation: Know the market, share the market information, and act on it (Jaworski and Kohli 1993; Kohli and Jaworski 1990). It is unsettling because the argument suggests that being market oriented, a good management practice and the foundation of marketing strategy formulation and execution, could be harmful for a firm that is also trying to be entrepreneurial and successful. This potential tension between market orientation and entrepreneurial proclivity (i.e., an organizational predisposition to entrepreneurial management processes, to be discussed in detail subsequently) deserves serious attention because compelling evidence exists that market orientation leads to positive business performance (e.g., Baker and Sinkula 1999; Greenley 1995; Han, Kim, and Srivastava 1998; Jaworski and Kohli 1993; Matsuno and Mentzer 2000; Narver and Slater 1990; Selnes, Jaworski, and Kohli 1996), and entrepreneurial proclivity is also argued to contribute to superior firm performance (Barringer and Bluedorn 1999; Covin and Slevin 1989; Drucker 1998; Lumpkin and Dess 1996; Miller 1983). Although it is well argued that fundamental functions of businesses are the creation of both satisfied customers (i.e., marketing) and entrepreneurial innovation (Deshpandé, Farley, and Webster 1993; Drucker 1954), perhaps companies cannot have both.

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The purpose of this study is to investigate how market orientation and entrepreneurial proclivity affect business performance. To this end, our theoretical model conceives market orientation as a firm's intelligence-related activities and responsiveness (Kohli and Jaworski 1990) and considers market orientation as both a consequent phenomenon of entrepreneurial proclivity and a systematic safeguard against undue risk-taking tendencies. Furthermore, from the purposeful enactment perspective, we consider an organization's entrepreneurial proclivity an antecedent to how an organization is designed and structured (means) to achieve the desired outcome when it faces new business opportunities (Child 1972; Lumpkin and Dess 1996; Van de Ven and Poole 1995; Weick 1979). We also argue that organizational design and structure are derivatives of the organization's predisposition toward external environments (Joyce and Slocum 1990), and the design and structure, shaped by entrepreneurial proclivity, in turn affect the level of market orientation.

By integrating the distinct and yet related bodies of literature of market orientation, strategic management, and entrepreneurship, we investigate the structural relationships among market orientation, organizational structure, entrepreneurial proclivity, and business performance. In the following section, we present the conceptual model and propose the hypotheses.

The Conceptual Model and Hypotheses

Entrepreneurship was originally studied as a market entry problem: "What business shall we enter?" (Miles and Snow 1978). A more recent conceptual domain of entrepreneurship involves entrepreneurial management processes, "the methods, practices, and decision-making styles managers use to act entrepreneurially" (Lumpkin and Dess 1996, p. 136). Reflecting this extension of the conceptual domain to a generalized management process, the literature reveals several different terms, such as entrepreneurial proclivity

(e.g., Pellissier and Van Buer 1996), entrepreneurial orientation (e.g., Lumpkin and Dess 1996), and entrepreneurial management (e.g., Stevenson and Jarillo 1990), that are used interchangeably to describe the equivalent generalized concept. Indeed, the consensus in the strategic management and entrepreneurship literature offers three underlying dimensions of the organizational predisposition to entrepreneurial management processes: innovativeness, risk taking, and proactiveness (Barringer and Bluedorn 1999; Caruana, Morris, and Vella 1998; Covin and Slevin 1989; Jennings and Young 1990; Khandwalla 1977; Miller 1983; Miller and Friesen 1982; Morris, Avila, and Allen 1993). For this study, we use the term *entrepreneurial proclivity* and define it as the organization's predisposition to accept entrepreneurial processes, practices, and decision making, characterized by its preference for innovativeness, risk taking, and proactiveness.

A business can achieve market orientation's full potential when driven by an entrepreneurial proclivity, appropriate organizational design, and structure (Slater and Narver 1995). Furthermore, the recent conceptual and definitional debate on market orientation has recognized that the development of a market orientation should be understood from both organizational and behavioral perspectives, encouraging a holistic approach to the antecedent investigation of market orientation (Deshpandé and Farley 1998a, b; Narver and Slater 1998). To this end, we follow the conceptual approach of market orientation as a set of behaviors and processes related to continuous assessment of external environments (Deshpandé and Farley 1998a; Jaworski and Kohli 1993). Because entrepreneurial proclivity refers to the predisposition to accept entrepreneurial management processes, tapping part of the broader organizational culture, we conceptualize entrepreneurial proclivity and organization structure as the organizational antecedents (or why's) of market orientation, a set of activities and behaviors (Deshpandé and Farley 1998b).

Our conceptual model (Figure 1) specifies the relationships among the four building blocks of our study: entrepreneurial proclivity, organizational structural dimensions, market orientation, and business performance. We model entrepreneurial proclivity and organizational dimensions and individually relate them to market orientation to explain how and why a firm recognizes and acts on market opportu-

nities (Deshpandé and Farley 1998b), which lead to varied levels of business performance. In the following sections, we develop the hypothetical relationships in the model.

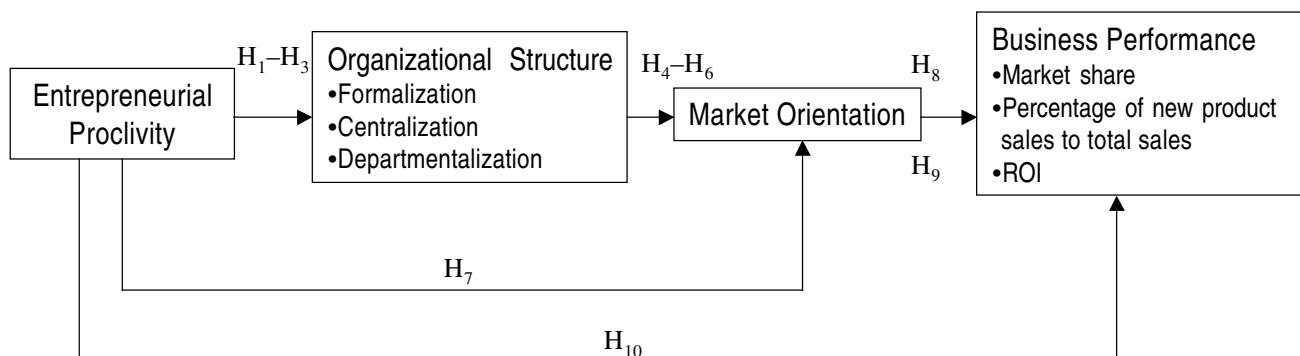
Entrepreneurial Proclivity and Organizational Structure

Although two theoretically related but distinct bodies of literature—strategic management and market orientation—are replete with studies that address these concepts' relationships with organizational structure, relatively little empirical research structurally bridges all three, with one notable exception by Deshpandé, Farley, and Webster (1993).¹ Collectively, the three underlying dimensions of entrepreneurial proclivity (innovativeness, risk taking, and proactiveness) constitute the rationale for firms to renew the organization, destroy the existing order of the market (Schumpeter 1934), and offer an alternative and potentially superior customer value proposition (Deshpandé, Farley, and Webster 1993; Slater and Narver 1995). Entrepreneurial proclivity is suggested to have a direct impact on how an organization is designed and structured to achieve the desired business performance (Drazin and Howard 1984; Govindarajan 1988). Specifically, an organization's three structural dimensions (formalization, centralization, and departmentalization) are of interest in this study.

Formalization is defined as "the emphasis placed within the organization on following specific rules and procedures in performing one's job" (Zaltman, Duncan, and Holbek 1973, p. 138). The degree of *centralization* refers to the amount of responsibility and authority delegated (Flippo 1966). More formally, Zaltman, Duncan, and Holbek (1973, p. 142) define centralization as "the locus of the authority and decision making in the organization." Greater formalization and centralization produce uniformity of policy and action, lessen risks of errors by personnel who lack either information or skill, utilize the skills of central and specialized experts, and enable closer control of operations (Flippo

¹Deshpandé, Farley, and Webster (1993) focus on the relationships among innovativeness, customer orientation, and organizational characteristics. However, they do not explicitly treat innovativeness as a part of the entrepreneurial proclivity construct.

FIGURE 1
The Conceptual Model and Hypothesized Relationships



1966, p. 131). Conversely, less formalization and centralization tend to lead to speedier decisions and actions at any hierarchical level, and such decisions are more likely to be adapted to individual situations (Flippo 1966, p. 131). *Departmentalization* or specialization generally refers to the extent to which a breadth of tasks is confined to a predetermined domain (Kohli and Jaworski 1990; Mintzberg 1979; Ruekert, Walker, and Roering 1985). Although departmentalization is sometimes operationalized as the number of departments into which organizational tasks are partitioned and compartmentalized, perhaps the sheer number of departments in organizations may not be as indicative of departmentalization as the existence (or lack) of departmental interaction—the degree of formal and informal direct contact among employees across departments. Conceptualizing in this manner, we define and operationalize departmentalization as the extent to which members of departments are isolated from interdepartmental interactions.

An argument can be made that entrepreneurs (and their businesses) are often characterized by a centralized vision and strong leadership. Therefore, centralization, formalization, and departmentalization can be instrumental for entrepreneurs to efficiently implement their vision and strategy. However, the generalized concept of entrepreneurship is not equal to “being an entrepreneur” or “driven by an entrepreneur” but rather is an organizational process characterized as entrepreneurial or even “intrapreneurial” (Pinchot 1985). Specifically, an organization’s predisposition to the generalized concept of entrepreneurship (or entrepreneurial proclivity) has been argued to be an antecedent to organizational structure and design (Lumpkin and Dess 1996). Lumpkin and Dess (1996) argue that entrepreneurially predisposed organizations value autonomy and freedom to encourage creativity and champion untested but promising ideas. Autonomy, in an organizational context, refers to action taken free of structural constraints that stifle risk taking, exploration, and out-of-the-box thinking. Thus, a greater degree of formalization, centralization, and departmentalization appears to be neither consistent with the generalized concept of entrepreneurial management processes nor conducive to the pursuit of entrepreneurial opportunities. A limited number of empirical studies support this generally negative relationship (Caruana, Morris, and Vella 1998; Moon 1999).

H₁: Entrepreneurial proclivity is negatively related to formalization.

H₂: Entrepreneurial proclivity is negatively related to centralization.

H₃: Entrepreneurial proclivity is negatively related to departmentalization.

Organization Structure and Market Orientation

Whereas entrepreneurial proclivity is studied as an antecedent to organizational design and structure in the strategic management literature, the structural dimensions are studied predominantly as antecedents or influencers of marketing activities and processes in the marketing literature (e.g., Dwyer, Shurr, and Oh 1987; Moorman, Deshpandé, and Zaltman 1993; Ruekert, Walker, and Roering 1985). Particularly in the past decade, a stream of research has addressed how an organization’s structural dimensions

influence the level of market orientation, because certain levels of organizational dimensions are thought to be more (or less) conducive to a firm becoming market oriented (e.g., Deshpandé, Farley, and Webster 1993; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1991; Ruekert 1992; Selnes, Jaworski, and Kohli 1996; Slater and Narver 1995).

Jaworski and Kohli (1993) hypothesize formalization as negatively related to intelligence generation and dissemination and positively correlated with responsiveness (Kohli and Jaworski 1990; Zaltman, Duncan, and Holbek 1973). Similar to the relationship between formalization and market orientation, centralization may lower intelligence generation and intelligence dissemination and increase responsiveness (Kohli and Jaworski 1990). Empirical results are mixed, however. Jaworski and Kohli (1993) find that centralization is negatively correlated to all three dimensions of market orientation, though statistical significance varies between the two sample sets in their study. Nonetheless, in line with Deshpandé and Zaltman (1982), we expect centralization to inhibit information utilization, particularly limiting intelligence dissemination and responsiveness.

Jaworski and Kohli (1993, p. 59) operationalize *departmentalization* as “a count of the number of departments in the business unit.” The greater number of departments involved, the more difficult it may be for organizations to communicate information and respond quickly. Conceptually, a greater degree of departmentalization seems to be antagonistic to a market orientation, a set of organization-wide intelligence activities. Thus, it appears that the degree of departmentalization reduces the magnitude of market orientation. Although Jaworski and Kohli (1993, p. 56) find that departmentalization is not significantly correlated to any of the three dimensions of market orientation, their study suggests that the sheer number of an organization’s departments may not be as significant as departmental connectedness—the degree of formal and informal direct contact among employees across departments. High interdepartmental connectedness and low interdepartmental conflict are positively related to the level of market orientation (Jaworski and Kohli 1993). Implicit in the number of departments conceptualization is an expectation that a greater number of departments should lead to increased alienation, lower connectedness, and greater interdepartmental conflict. Therefore, we expect a negative relationship between market orientation and departmentalization.

H₄: Formalization is negatively related to market orientation.

H₅: Centralization is negatively related to market orientation.

H₆: Departmentalization is negatively related to market orientation.

Entrepreneurial Proclivity and Market Orientation

In addition to the indirect relationship between entrepreneurial proclivity and market orientation, mediated by organizational structure, we believe that a direct relationship exists between them. Recall that firms with entrepreneurial proclivity are innovative, risk taking, and proactive, and a central theme of the innovation literature is that information gathering and analysis are critical to the successful develop-

ment and execution of innovation strategies (Barringer and Bluedorn 1999; Covin 1991). Furthermore, according to Barringer and Bluedorn (1999) entrepreneurial firms tend to engage in a greater level of information-scanning activities (Hambrick 1982). Menon and Varadarajan (1992) also argue that a proinnovation culture promotes information sharing and utilization (a substantial part of market orientation), and if such a culture is maintained to foster the organization's predisposition toward innovativeness, a positive relationship between entrepreneurial proclivity and market orientation could be enhanced.

In addition, although entrepreneurs recognize that challenging the existing order is inherently risky, they engage in entrepreneurial endeavors. Whether a risk-taking, innovative drive is initially caused by new technology (i.e., technology driven) or by customer needs (i.e., customer driven), the ultimate goal of entrepreneurial efforts (rather than scientific or engineering efforts) lies in business success, which happens only when the offer meets the market needs. Indeed, many high technology start-up firms headed by scientists and engineers engage in risk taking without much assurance of the successful commercialization of the technology. Among them, some may be driven by the desire to prove the technology (i.e., technology for technology's sake), yet others may be motivated by the prospect of meeting market needs (i.e., commercializing the technology). Those with a purely technological obsession may be tempted to truncate or avoid altogether the process of market learning; thus, the risk taking could result in a lower market orientation. However, because challenging the existing business order is inherently risky, we believe that entrepreneurs distinguish themselves from those fixated on the technology and science by attempting to manage the risk through learning the market, executing actions quickly enough to distance themselves from the competition, and maintaining the high reward potential. Therefore, the risk-taking dimension of entrepreneurial proclivity should lead to a higher level of market orientation.

In the context of entrepreneurship, proactiveness refers to a forward-looking perspective, to the tendency of "taking initiative by anticipating and pursuing new opportunities and by participating in emerging markets" (Lumpkin and Dess 1996, p. 146). We believe that the proactiveness dimension of entrepreneurial proclivity promotes identifying new market opportunities (e.g., new product introduction ahead of the competition in an emerging market segment) and acting on those opportunities (Miller and Friesen 1982; Venkatraman 1989), which results in an increased level of both intelligence generation and responsiveness (Kohli and Jaworski 1990).

Therefore, we reasoned that the three dimensions of an organization's entrepreneurial proclivity collectively facilitate organization members' willingness and ability to engage in market learning activities, recognize the need to reduce undue uncertainty, and take a more calculated risk, thus promoting market orientation as defined by Kohli and Jaworski (1990). This position is consistent with the works of Deshpandé and colleagues (Deshpandé and Farley 1998a, b; Deshpandé, Farley, and Webster 1993; Moorman 1995) that strongly suggest the reinforcing effect of the adhocracy culture and organizational innovativeness on customer orientation.

H₇: Entrepreneurship is positively and directly related to market orientation.

Performance Impact of Entrepreneurial Proclivity and Market Orientation

The generally positive performance influence of a market orientation is well documented (Baker and Sinkula 1999; Han, Kim, and Srivastava 1998; Jaworski and Kohli 1993; Narver and Slater 1990; Selnes, Jaworski, and Kohli 1996). The positive performance outcomes, however, should be viewed not only in absolute terms but also in competitive terms (i.e., compared with a firm's relevant competitors), because a market orientation has been posited as one of a firm's competitive capabilities and sources of advantage (Hunt and Morgan 1996). Therefore,

H₈: Market orientation is positively and directly related to the relative measures of (a) market share growth, (b) percentage of new product sales to total sales, and (c) return on investment (ROI).

The performance impact of market orientation (e.g., Baker and Sinkula 1999; Han, Kim, and Srivastava 1998; Jaworski and Kohli 1993; Narver and Slater 1990) and that of entrepreneurial proclivity (e.g., Barringer and Bluedorn 1999; Covin and Slevin 1986, 1989; Zahra 1991, 1993a) have been studied in two separate bodies of literature, but few studies bridge the two. To our knowledge, neither the joint effect of the two constructs nor the separate, individual effect of one construct while the other is controlled has been empirically investigated. This is unfortunate because each of the research streams points to theoretical connections between entrepreneurial proclivity and market orientation.

More important, this gap in the literature points to an unsettling issue: a potential tension between market orientation and entrepreneurial proclivity. Specifically, although both theoretical and empirical literature support the direct and positive relationships between market orientation and performance measures (H₈), when entrepreneurial proclivity enters the picture (Figure 1) the critical question becomes, Given both indirect (H₁–H₆) and direct (H₇) relationships between entrepreneurial proclivity and market orientation, what is the individual contribution of each construct (i.e., entrepreneurial proclivity and market orientation) to business performance?

Although it may be argued that a market orientation is inherently entrepreneurial, we believe that subtle but important distinctions should be made between entrepreneurial proclivity, viewed as an organization's predisposition to the three entrepreneurial dimensions, and market orientation, viewed as organizational behaviors and processes related to the external market environment (Deshpandé and Farley 1998b; Slater and Narver 1995). Because of the external focus on developing information about markets, market-oriented firms are arguably well positioned to anticipate and respond to the emerging needs of their customers (Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990) and may also be more likely to innovate successfully. Therefore, a market-oriented business may appear to have an inherent entrepreneurial proclivity and advantage in its speed and effectiveness in responding to opportunities and

threats. However, we argue that the positive performance impact of market orientation hinges on the level of entrepreneurial proclivity. According to Slater and Narver (1995), a business can achieve market orientation's full performance impact only if the market orientation is driven by an entrepreneurial spirit and appropriate organizational structures, processes, and incentives. Therefore, we argue that entrepreneurial proclivity is an antecedent to business performance, in which the effect is sequentially mediated first by organizational structure and then by market orientation.

H₉: Entrepreneurial proclivity's indirect impact, mediated by organizational structure and market orientation, on the relative measure of (a) market share growth (b) percentage of new product sales to total sales, and (c) ROI is positive.

Having hypothesized the indirect performance contribution of entrepreneurial proclivity (H₉), one remaining question is, What is the direct impact of entrepreneurial proclivity on business performance? In the context of our conceptual model, what is the performance impact of entrepreneurial proclivity when that of market orientation is accounted for?

Researchers seem to agree conceptually that entrepreneurial proclivity should contribute to a firm's superior performance and survival (Barringer and Bluedorn 1999; Drucker 1954, 1998; Lumpkin and Dess 1996; Miller 1983). However, empirical results provide only mixed support (Zahra 1993b). For example, Covin and Slevin (1989) find that entrepreneurial proclivity is not significantly related to a multi-item financial performance scale (sales, sales growth, cash flow, return on equity, profit margin, net profit, ROI), but the same authors find a positive relationship between the same measures in a previous study (Covin and Slevin 1986). Zahra (1991) finds that entrepreneurial proclivity has a positive association with profitability and sales growth.

To make the matter even more complex, a potential trade-off seems to exist between market orientation and entrepreneurial proclivity. It is argued that many well-managed companies fail to become successful innovators precisely because they listen too much to their current customers, invest aggressively in technology, and provide more and better products of the sort the customers say they want (Christensen 1997). This proposition is consistent with the findings of Glazer and Weiss (1993), who report that intensive, formal intelligence-related activities—an important part of market orientation—are negatively related to performance in a fast-moving environment. For example, Procter & Gamble's recent struggles are often attributed to its meticulous attention to extensive (and excessive) research on existing customers, which has resulted only in modest, incremental product improvements and caused the firm to fall behind in developing truly new products and markets (Useem 1999). Conversely, however, Gatignon and Xuereb (1997) report that a customer orientation, also an important part of market orientation, has a positive influence on an innovation's commercial success even in high demand-uncertainty cases. Overall, the direct and independent performance effect of entrepreneurial proclivity, while market orientation is controlled, is not well established in the literature. Therefore, we offer the following hypothesis, based

on a conceptual plausibility that entrepreneurial proclivity contributes to a firm's superior business performance (Barringer and Bluedorn 1999; Drucker 1954, 1998; Lumpkin and Dess 1996; Miller 1983):

H₁₀: There is a positive and direct impact of entrepreneurial proclivity on the relative measures of (a) market share growth, (b) new product sales to total sales, and (c) ROI.

Methods

Data Collection

We collected the data for this study in conjunction with previously published studies (Matsuno and Mentzer 2000; Matsuno, Mentzer, and Rentz 2000). We obtained a master list of 1300 U.S. manufacturing companies that identified one marketing executive (vice president or director level) per company from a well-known, Midwest-based commercial vendor. We randomly chose the 1300 companies from all the listed manufacturing companies (a total of approximately 600,000) in the vendor's quarterly updated master list, which encompassed a wide range of the Standard Industrial Classification codes (2011–3999).² The profiles (employee size and annual sales) of the 300 manufacturing companies in the pretest and the 1000 companies for the final sample are given by Matsuno and Mentzer (2000). In the pretest survey instrument, we included all the measures pertinent to this study (i.e., market orientation, entrepreneurial proclivity, three organizational structure variables, and performance measures) as well as demographic variables for both respondents and strategic business units (SBUs; e.g., number of SBUs responsible, title of respondent, SBU size, industry). Two-wave mailings produced a response rate of 31.3% for this pretest. Purification of items was conducted, on the basis of both substantive (e.g., breadth of theoretical content coverage by the item, consistency of the contents tapped by individual items under a single factor, clarity of the meaning and comprehensibility of the item) and empirical (e.g., descriptive statistics, fit statistics such as modification index and standardized residuals, reliability statistics) criteria. The detailed results of measurement validation, throughout the pretest and final data collection, are provided in the "Measures" section.

For the final data collection, a questionnaire packet, including cover letter, stamped return envelope, and questionnaire, was sent to a random sample of 1000 marketing executives of the 1300 companies in the master list. Three-wave mailings produced an effective response rate of 38.76% (or 364 usable responses) after the number of undeliverable survey packets returned to the authors was subtracted. For nonresponse bias examination, multivariate analysis of variance was applied on the three business performance variables (market share, percentage of new product sales to total sales, and ROI) on the basis of the three

²Included were food; tobacco; textiles; apparel; lumber and woods; furniture; paper; printing; chemical; petroleum; rubber; leather; stone, clay, glass, and concrete; metal; machinery; electronic and electrical equipment; transportation equipment; and measuring instruments, among others.

mailing waves. Because none of the multivariate tests of significance indicated differences in the performance variables, we concluded that nonresponse bias was not a significant problem for the analysis.

Measures

This section explains our measures and their development process. All the final scale items are provided in the Appendix.

The market orientation scale. Our focal research question calls for distinct operationalization, measurement, and modeling of the interrelationships among the four groups of theoretically related variables (entrepreneurial proclivity, market orientation, organizational structure dimensions, and business performance). Because the *cultural* (or broadly held organizational values and belief) market orientation scale (Narver and Slater 1990) could confound with the attitudinal construct of entrepreneurial proclivity through normative bias (Deshpandé and Farley 1998a, b), we capitalized on Kohli and Jaworski's intelligence *behavioral* market orientation scale (Jaworski and Kohli 1993; Kohli, Jaworski, and Kumar 1993).

Although we support the fundamental conceptual position that market orientation consists of intelligence-related activities (Jaworski and Kohli 1993; Kohli and Jaworski

1990), we believed that the MARKOR scale (Kohli, Jaworski, and Kumar 1993) could be improved in two primary areas: breadth of item sampling domain, especially the range of market stakeholders and forces (Jaworski and Kohli 1996; Kohli, Jaworski, and Kumar 1993; Slater and Narver 1995), and factorial structure and fit (Kohli, Jaworski, and Kumar 1993; Siguaw, Simpson, and Baker 1998). Building on the MARKOR scale, we decided to use a modified, 22-item version of market orientation scale (Matsuno and Mentzer 2000; Matsuno, Mentzer, and Rentz 2000) that improved both item domain breadth and psychometric properties of the MARKOR scale. The 22-item market orientation (or MO, for a notational purpose) scale is provided in the Appendix. After conducting a confirmatory factor analysis (CFA) on the measurement model to validate the internal and external consistencies among the factors, we conducted a second-order CFA (MO was the second-order factor with three intelligence-based first-order factors, or IG, ID, and RESP).

We found that the path coefficients between the higher-order construct (MO) and the three dimensions were all significant at the $\alpha = .05$ level (Table 1). The fit statistics ($\chi^2 = 404.666$, degrees of freedom [d.f.] = 206; goodness-of-fit index [GFI] = .913; adjusted goodness-of-fit index [AGFI] = .893; noncentrality parameter [NCP] = 157.623; Tucker–Lewis index [TLI] = .894; normed fit index [NFI] = .809;

TABLE 1
Final LISREL Standardized Estimates and t-Values (Improved Second-Order MO Scale)

Parameter	LISREL Estimate	t-Value	Reliability (Cronbach's α)
MO (22 items)	—	—	.84
IG (8 items): γ (IG–MO)	.790	8.59	.66
λ (IG V1)	.324	4.94	
λ (IG V2)	.312	4.78	
λ (IG V3)	.585	7.86	
λ (IG V4)	.584 ^a	—	
λ (IG V5)	.447	6.47	
λ (IG V6)	.451	6.51	
λ (IG V7)	.429	6.26	
λ (IG V8 ^b)	.503	7.08	
ID (6 items): γ (ID–MO)	.967	11.04	.78
λ (ID V9)	.633	9.95	
λ (ID V10)	.407	6.69	
λ (ID V11)	.669 ^a	—	
λ (ID V12)	.579	9.22	
λ (ID V13)	.674	10.48	
λ (ID V14)	.685	10.62	
RESP (8 items): γ (RESP–MO)	.701	9.91	.74
λ (RESP V15 ^b)	.583	9.85	
λ (RESP V16 ^b)	.646	10.89	
λ (RESP V17 ^b)	.369	6.25	
λ (RESP V18)	.431	7.30	
λ (RESP V19)	.741	12.32	
λ (RESP V20 ^b)	.749 ^a	—	
λ (RESP V21)	.250	4.24	
λ (RESP V22 ^b)	.314	5.32	

^aIndicates a fixed item.

^bIndicates a reversed item.

Notes: For definitions of abbreviations, see the Appendix.

comparative fit index [CFI] = .906) demonstrate significant improvement over the three-component market orientation scale (MOD3) reported by Kohli, Jaworski, and Kumar (1993; fit statistics: $\chi^2 = 1010.05$, d.f. = 464; GFI = .722; AGFI = .675; TLI = .641; NFI = .524). The correlation matrix is supportive of the convergent validity of the improved MO scale with Kohli and Jaworski's (1993) original 32-item market orientation scale and its predictive validity with regard to the performance indicators (see Matsuno and Mentzer 2000). The reliability coefficients (Table 1) were also found acceptable: .84 for the entire new MO scale (22 items). The improvement of psychometric properties (more theoretically consistent dimensionality and factorial structure, fit, and reliability) and convergent validity (MO components versus Kohli and Jaworski's 32-item scale components), all in the context of the broader item domain (market factors and market participants), demonstrate the MO scale's substantial improvement. Therefore, the revised second-order scale of market orientation was deemed adequate for the purpose of this study. For subsequent measurement model evaluation and hypothesis testing, we aggregated the MO scale to have three indicators (i.e., IG, ID, and RESP) by summing of the measurement items at the first-order construct level.³

Entrepreneurial proclivity. We are particularly interested in the relationships among an organization's entrepreneurial proclivity, degree of market orientation, and business performance. An organization's entrepreneurial proclivity, we hypothesize, partly explains its level of market orientation. Miller (1983) uses the three dimensions of innovativeness, risk taking, and proactiveness to characterize the degree of an organization's entrepreneurial proclivity. Several researchers have adopted an approach based on Miller's (1983) original conceptualization to describe the attitudinal predisposition to entrepreneurship, or entrepreneurial proclivity (e.g., Covin and Slevin 1989; Morris and Paul 1987; Naman and Slevin 1993). The literature is not explicit about the within-construct relationships among the three dimensions, given that these dimensions are argued to constitute a broader construct (i.e., entrepreneurial proclivity); however, we conceptualize a second-order factorial structure in which these dimensions represent first-order factors that are the manifestation of the higher-order factor, entrepreneurial proclivity. Each of the three dimensions is distinct, but they collectively constitute the broader, multidimensional higher-order entrepreneurial proclivity construct.

Building on Miller's (1983) and others' works, we developed eight candidate items for the pretest. In the item purification process, based on both substantive and empirical criteria, including iterative CFA, we found that one item was cross-loaded across innovativeness and proactiveness. We subsequently removed the item and obtained a seven-item,

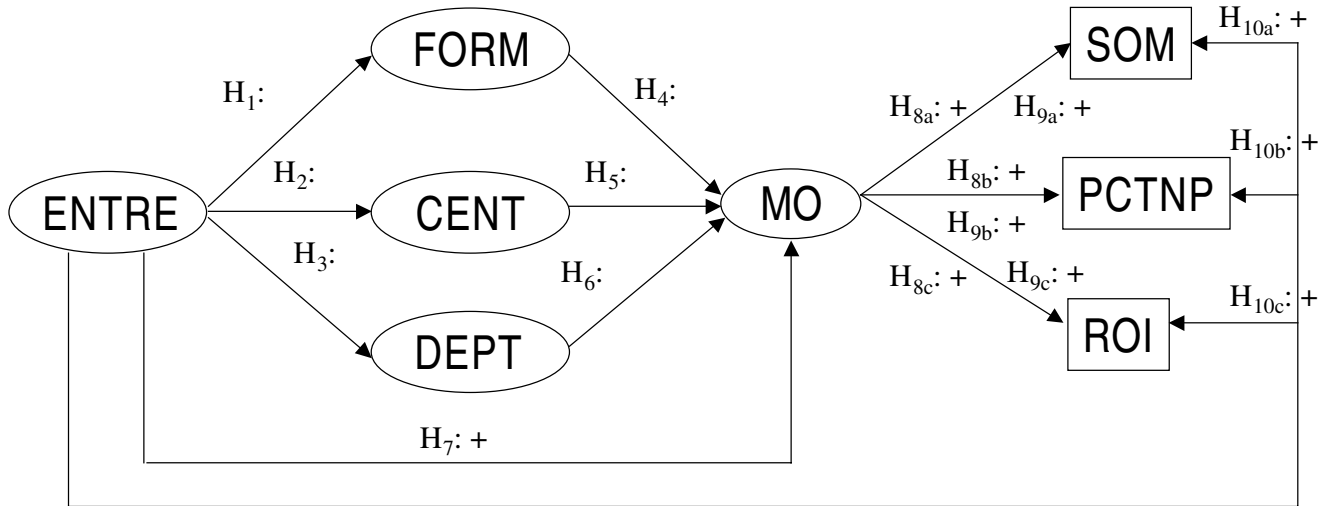
second-order scale of entrepreneurial proclivity (ENTRE in the Appendix) that measures the three first-order dimensions of entrepreneurial proclivity, namely, receptiveness to innovation (INNOV; V23, V24), risk-taking attitude (RISK; V25, V26, V27), and proactiveness toward opportunities (PROACT; V28, V29). We then subjected the seven-item, second-order ENTRE scale to CFA with the final data set. The scale's CFA fit statistics were good ($\chi^2 = 14.535$, d.f. = 11; GFI = .988; AGFI = .970; NFI = .982; CFI = .995), in support of the second-order factorial structure. The reliability coefficient for the entire seven-item ENTRE construct was .83. As in the case of the MO scale, we aggregated the ENTRE scale to have three indicators (i.e., INNOV, RISK, and PROACT) by summing the measurement items at the first-order construct level for subsequent measurement model evaluation and hypothesis testing.

Organizational structure. We measured the three constructs (formalization, centralization, and departmentalization) by multiple-item scales adapted from a previous study by Jaworski and Kohli (1993). Because theory suggests that centralization, formalization, and departmentalization are significantly correlated, we suspected that the items of the three constructs might be highly correlated and cross-loaded. Therefore, we conducted a series of measurement model CFA to purify the three scales. Several rounds of measurement model CFA, after those that were severely cross-loaded were eliminated, resulted in three items for formalization, four items for centralization, and four items for departmentalization. The fit statistics for the three-scale measurement model were adequate ($\chi^2 = 157.365$, d.f. = 41; GFI = .925; AGFI = .880; NFI = .900; CFI = .924), indicating the discriminant and convergent validity of the three scales. The reliabilities of these scales were .63 (formalization), .87 (centralization), and .71 (departmentalization). The scale items for the three constructs (FORM, CENT, and DEPT) are provided in the Appendix.

Business performance. Three self-reported, relative business performance indicators—market share (SOM), percentage of new product sales to total sales (PCTNP), and ROI—were developed (labeled V41–V43 in the Appendix). These performance variables were measured relative to those of the organization's relevant competition, because market orientation is considered to result in competitive (thus, relative) advantage (Hunt and Morgan 1996). Because competitors are the standard of comparison in the performance scale, each outcome item is phrased so that respondents evaluated these aspects of business performance relative to their business unit's primary competitors' (Conant, Mokwa, and Varadarajan 1990). Subjective performance measures were used because (1) objective (i.e., certifiable by a third-party) relative performance measures were virtually impossible to obtain at the business unit level, (2) subjective measures have been shown to be correlated to objective measures of performance (Dess and Robinson 1984; Slater and Narver 1994), and (3) subjective measures have been used in prior market orientation–performance studies (Jaworski and Kohli 1993; Narver and Slater 1990; Slater and Narver 1994).

³This aggregation is justified because (1) the validity of the second-order MO scale with all 22 item measures has been established; (2) given the sample size, it enables us to maximize the degrees of freedom in estimating the path coefficients between MO and performance measures; and (3) it reduces levels of random error while accounting for measurement error and retaining the three-dimensional scale of market orientation.

FIGURE 2
The Structural Equation Model with Hypothesized Relationships



Notes: H_8 refers to direct influence of market orientation, and H_9 refers to indirect influence of entrepreneurial proclivity. For definitions of abbreviations, see the Appendix.

Measurement Model and Structural Equation Model

To assess discriminant and convergent validity of all five latent constructs of interest, we examined a CFA measurement model by allowing each of the five latent constructs (i.e., ENTRE, MO, FORM, CENT, and DEPT) to correlate with the others, while constraining the measurement items and their error terms to be uncorrelated. The CFA fit statistics ($\chi^2 = 334.487$, d.f. = 109; GFI = .897; AGFI = .855; NCP = 225.487; NFI = .872; CFI = .909) indicate an acceptable level of convergent and discriminant validity, leading us to fit the structural equation model (Figure 2) for hypothesis testing.

Results and Discussion

We estimated the structural equation model by LISREL, using the maximum likelihood estimation method. The overall model fit was acceptable. The fit statistics indicate a reasonable model fit ($\chi^2 = 422.127$, d.f. = 156; GFI = .892; AGFI = .854; NFI = .856; CFI = .903; incremental fit index [IFI] = .904). Before accepting this model as an appropriate basis for hypothesis testing, we performed a further analytical step to test the presence of a potential interaction effect between ENTRE and MO on business performance, in addition to the mediation and direct performance effects of ENTRE.⁴ Although we had no a priori theoretical reason to model such an interaction effect, the step serves as an alternative, empirical model verification step because of the possibility of a predictor or antecedent variable operating as a “quasi moderator” (Sharma, Durand, and Gur-Arie 1981). We used a procedure called the indicant product analysis

technique for latent variables (see Ping 1995, 1996) and found the standardized estimates of the interaction effect not statistically significant on both SOM (.036, $t = .733$) and PCTNP (.004, $t = .086$) and only marginally significant on ROI (−.108, $t = -1.999$). In addition, the model fit was substantially worse than that of the proposed model (Figure 2). Therefore, we concluded that the originally proposed model is an appropriate basis for hypothesis testing. The results, with selected standardized path coefficients and t-values, are provided in Table 2.

H_1 – H_3 predict negative relationships between entrepreneurial proclivity and the three organizational structure variables. The path coefficients between ENTRE and FORM, CENT, and DEPT were found to be significant and negative (Table 2). Thus, all three hypotheses (H_1 – H_3) were supported. In contrast, H_4 , H_5 , and H_6 pertain to the antecedent status of the three organizational structure variables to a market orientation. We expected all three variables to be negatively related to the level of market orientation. Among the three organizational structure variables, however, only the path between departmentalization and market orientation was found to be negative and significant.⁵ Therefore, the data were not supportive of H_4 and H_5 but rendered support for H_6 . Taking H_1 – H_6 together, our data suggest that organizations with a high level of entrepreneurial proclivity generally avoid high levels of organizational formalization, centralization, and departmentalization (Caruana, Morris, and Vella 1998; Moon 1999) and achieve a greater degree of market orientation through a low level of departmentalization in particular.

H_7 proposes that entrepreneurial proclivity is positively and directly related to the level of market orientation. We

⁴We are grateful to a *JM* reviewer for this suggestion.

⁵Departmentalization, operationalized differently, was found to be not significant by Jaworski and Kohli (1993).

TABLE 2
Selected Total and Indirect Effects (Completely Standardized)

Total Effects of	On	LISREL Estimates	t-Value
ENTRE	FORM	-.595	-7.614
	CENT	-.599	-9.027
	DEPT	-.709	-9.734
	MO	.740	7.451
	SOM	.330	5.630
	PCTNP	.330	5.634
	ROI	.259	4.383
FORM	MO	.342	.647 ^a
CENT	MO	-.264	-.505 ^a
DEPT	MO	-.449	-3.698
MO	SOM	.460	4.187
	PCTNP	.379	3.559
	ROI	.724	5.518
Indirect Effects of	On	LISREL Estimates	t-Value
ENTRE	MO	.273	3.210
	SOM	.340	4.168
	PCTNP	.281	3.560
	ROI	.536	5.323
Direct Effects of	On	LISREL Estimates	t-Value
ENTRE	MO	.468	4.179
	SOM	-.010	-.105 ^a
	PCTNP	.049	.497 ^a
	ROI	-.277	-2.527

^aIndicates not significant at $\alpha = .05$ (or $t = 1.96$).

Notes: Model fit: $\chi^2 = 422.127$, d.f. = 156; GFI = .892; AGFI = .854; NFI = .856; CFI = .903; IFI = .904. For definitions of abbreviations, see the Appendix.

found the direct path coefficient from entrepreneurial proclivity to market orientation to be significant and positive (.468)—the greater the level of entrepreneurial proclivity, the greater is the level of market orientation. Thus, H_7 was supported.

With regard to the direct performance implications of a market orientation, we predicted that market orientation is positively related to the three performance indicators (H_8). The path coefficients (SOM, PCTNP, and ROI) were all found to be significant and positive (.460, .379, and .724, respectively), in support of all three subhypotheses. In addition, in our model, entrepreneurial proclivity was hypothesized to influence business performance, mediated by organizational structures and market orientation (H_9). The results for these indirect-effect hypotheses (Table 2) demonstrate that entrepreneurial proclivity has a significant, indirect effect on the three business performance measures (.340 on SOM, .281 on PCTNP, and .536 on ROI) through market orientation. Therefore, H_9 was supported. Notably, these indirect effects of entrepreneurial proclivity on the three performance indicators represent a substantial portion of market orientation's total effect on the same performance measures (i.e., .460 on SOM, .379 on PCTNP, and .724 on ROI; see Table 2). This suggests that entrepreneurial proclivity is a significant and positive antecedent for market orientation to have a positive performance impact.

Finally, we examined the direct effect of entrepreneurial proclivity on the performance measures (i.e., the effect of

entrepreneurial proclivity without mediation by organizational structures and market orientation). We found that two of the paths (i.e., ENTRE \rightarrow SOM, ENTRE \rightarrow PCTNP) were not significant and only one path (i.e., ENTRE \rightarrow ROI) was negative and statistically significant (Table 2). Subsequently, we modified this original model by setting the two nonsignificant paths to be zero (i.e., no direct effect from ENTRE to either SOM or PCTNP) while keeping the ENTRE \rightarrow ROI path free. All the parameter estimates for the modified model remained consistent (i.e., no changes in hypothesis testing results), and the ENTRE \rightarrow ROI direct path was negative and significant. The nested-model comparison confirmed that the model fit for the modified model ($\chi^2 = 422.441$, d.f. = 158; GFI = .892; AGFI = .856; NFI = .856; CFI = .904; IFI = .905) over the original model (Figure 2) was not significant at the $\alpha = .05$ level ($\Delta\chi^2 = 422.441 - 422.127 = .314$; Δ d.f. = $158 - 156 = 2$), which led us to retain the original model as the appropriate basis for the hypothesis testing results.

Overall, our finding of the direct performance influence of entrepreneurial proclivity is consistent with that of Covin and Slevin (1989). In summary, the results from H_8 – H_{10} suggest that (1) entrepreneurial proclivity's positive effect on the performance measures is not a direct one but is only achieved through a market orientation and (2) its direct performance effect is only negative on ROI. They indicate that entrepreneurial proclivity's impact is positive overall (i.e., positive total effect), but it is so because of the mediated

path through low departmentalization and high market orientation (i.e., positive indirect effect), not because of its direct effect on business performance.

Notwithstanding the interesting results, several limitations need to be acknowledged, as the validity of the results depends on several key research design- and method-related issues. First, the study relies on single-informant, cross-sectional, and subjective measures. Using multiple informants (e.g., Deshpandé, Farley, and Webster 1993) and obtaining objective performance measures at the SBU level are desirable in further research, which should render proper qualifications to our results. Longitudinal data are particularly desirable for testing a structural model like ours, because the model conceptually assumes a sequential, temporal order of causality, whereas our cross-sectional data set does not. Second, although our market orientation measure demonstrated a modest but important improvement (in its domain specification, operationalization, and psychometric properties), the validity of the scale can be established only through retest and refinement (Churchill 1979). Particularly toward this end, using different types of samples (e.g., industry, competitive environment, nationality) and testing the discriminant validity with other market orientation scales would be particularly useful.

Implications and Future Research Issues

The purpose of our study was to investigate how market orientation and entrepreneurial proclivity are related and affect business performance. From both theoretical and empirical standpoints, we attempted to bridge the gap between the two distinct but related research streams of market orientation and entrepreneurial proclivity. Consequently, several integrative implications and future research opportunities have emerged from the study.

Managerial Implications

Taken together, the results lead to a twofold question: Does entrepreneurial proclivity require a market orientation to have a positive performance impact, and does a market orientation greatly benefit from (or even need) entrepreneurial proclivity to have a substantial performance impact? Some scholars have suggested that this is so and that a market orientation alone may not necessarily bring about sufficient willingness on the part of the organization to take risks and successfully capture market opportunities. If a market orientation is narrowly construed and practiced within the existing boundaries of market opportunity, it could merely reinforce current beliefs about existing customers, competitors, and market environments (Jaworski, Kohli, and Sahay 2000; Slater and Narver 1995). Such an emphasis on existing constituencies and market contingencies may result in the company ignoring or overlooking emerging market opportunities (Christensen 1997). Therefore, it seems reasonable that market intelligence activities and responsiveness are driven by and predicated on entrepreneurial proclivity that encourages proactiveness, innovativeness, and risk taking that takes nothing for granted even in good times. The results of

this study seem consistent with this advice to be both entrepreneurial and market oriented. By itself, entrepreneurial proclivity negatively influences performance, and the idea of a non-market-oriented, successful entrepreneur seems to be an oxymoron. For businesses that already possess a high entrepreneurial proclivity, it is highly advisable to promote a market orientation while maintaining their level of entrepreneurial proclivity.

For example, the developers and marketers of the original Palm Pilot (a personal digital assistant, or PDA) resisted the seeming attractiveness of the idea to develop an ultra-small personal computer and instead probed usage situations for potential users from scratch. They began the product design first by learning about the tasks that potential users would most likely perform with the hand-held electronic products (primarily appointment and address book tasks), translated the user tasks into a limited set of functions and attributes, and customized an entirely new system of hardware and software for the function. This model contrasts strongly with Microsoft's Windows CE (now called Pocket PC) and Apple's ill-fated Newton NotePad (an early innovator of the PDA). Microsoft essentially attempted to scale down the desktop/notebook personal computer tasks and functions without a wholesale effort to think outside the box. This less successful model may have resulted from a lack of entrepreneurial proclivity (innovativeness, risk taking, proactiveness) and a preoccupation with the existing business order and market knowledge (i.e., a myopic application of a market orientation). But it is worth noting that entrepreneurial proclivity alone is not enough; the failure to study market needs and match them with an appropriate technology (e.g., handwriting recognition technology) led to the downfall of Apple's Newton NotePad.

In addition, our results suggest that a low degree of departmentalization is related to a high degree of market orientation, which goes to the heart of market orientation implementation—organization-wide involvement in intelligence-related activities (Maltz and Kohli 1996). Thus, managers face an important issue in understanding how to promote entrepreneurial proclivity and reduce departmentalization. For example, top management's expressed commitment to entrepreneurial risk taking, its continuous encouragement of risk-taking initiatives across different functional departments, and appropriate reward systems to support them seem particularly helpful. These initiatives are consistent with the goal of increasing the market orientation that requires organization-wide, continuous learning about the market (Jaworski and Kohli 1993).

Future Research Issues

In terms of future direction, several fruitful research areas can be offered. First is the continued inquiry into the ways market orientation and entrepreneurial proclivity influence organizational structure and process and different measures of business performance. Our results indicate that entrepreneurial proclivity exerts a positive influence only through the path mediated by a market orientation. This finding is consistent with our theoretical argument for the sequence of events: Entrepreneurial proclivity promotes a lower degree of departmentalization, which in turn promotes market ori-

entation, which leads to positive performance. Would this model hold for other performance measures and different environments (e.g., competitive intensity, uncertainty)? For example, consider a true pioneer with a disruptive, future technology (Christensen 1997) venturing into uncharted territory with no comparable competition. Such an entrepreneurial business might be in the innovation efforts for the long haul—say, for five years. For this sort of innovator, other criterion variables—such as the track record of “first to the market,” product innovativeness, and the ability to create a new product category—might be more appropriate performance measures. Consequently, the direct and indirect performance effects of entrepreneurial proclivity and the mediating effect of market orientation are important issues to study in grasping the roles of both constructs in the context of different organizational settings and strategies. Further research therefore needs to incorporate an additional, diverse set of business performance measures and longitudinal research designs.

Second, detailed inquiry into the process by which both market orientation and entrepreneurial proclivity are imple-

mented would be productive. Particularly promising is the investigation of the type of learning that occurs when both market orientation and entrepreneurial proclivity are present. Previous research (Baker and Sinkula 1999; Miller 1993; Slater and Narver 1995) suggests that entrepreneurial proclivity leads to more generative learning (learning from exploration and experimentation), whereas market orientation leads to more adaptive learning (learning from exploitation of expressed customer needs and existing competitor strengths). This type of research would greatly benefit from qualitative methods, such as case study, historical analysis, and participant observation. Given the high level of interest among practitioners and academics in the learning organization, research efforts that integrate the types of organizational learning, entrepreneurial proclivity, and market orientation would be extremely valuable. Because the marketing strategy literature has devoted a relatively small amount of volume to empirical research related to entrepreneurial proclivity, we hope our study has opened a window of research opportunities.

APPENDIX Measures

Construct	Item No.	Item	Source
Intelligence generation (IG)	V1	We poll end users at least once a year to assess the quality of our products and services.	Jaworski and Kohli (1993)
	V2	In our business unit, intelligence on our competitors is generated independently by several departments.	Jaworski and Kohli (1993)
	V3	We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.	Jaworski and Kohli (1993)
	V4	In this business unit, we frequently collect and evaluate general macroeconomic information (e.g., interest rate, exchange rate, gross domestic product, industry growth rate, inflation rate).	Newly developed
	V5	In this business unit, we maintain contacts with officials of government and regulatory bodies (e.g., Department of Agriculture, Food and Drug Administration, Federal Trade Commission, Congress) in order to collect and evaluate pertinent information.	Newly developed
	V6	In this business unit, we collect and evaluate information concerning general social trends (e.g., environmental consciousness, emerging lifestyles) that might affect our business.	Newly developed
	V7	In this business unit, we spend time with our suppliers to learn more about various aspects of their business (e.g., manufacturing process, industry practices, clientele).	Newly developed
	V8a	In our business unit, only a few people are collecting competitor information.	Newly developed
Intelligence dissemination (ID)	V9	Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.	Jaworski and Kohli (1993)
	V10	Our business unit periodically circulates documents (e.g., reports, newsletters) that provide information on our customers.	Jaworski and Kohli (1993)

APPENDIX
Continued

Construct	Item No.	Item	Source
Responsiveness (RESP)	V11	We have cross-functional meetings very often to discuss market trends and developments (e.g., customers, competition, suppliers).	Newly developed
	V12	We regularly have interdepartmental meetings to update our knowledge of regulatory requirements.	Newly developed
	V13	Technical people in this business unit spend a lot of time sharing information about technology for new products with other departments.	Newly developed
	V14	Market information spreads quickly through all levels in this business unit.	Newly developed
	V15 ^a	For one reason or another, we tend to ignore changes in our customers' product or service needs.	Jaworski and Kohli (1993)
	V16 ^a	The product lines we sell depend more on internal politics than real market needs.	Jaworski and Kohli (1993)
	V17 ^a	We are slow to start business with new suppliers even though we think they are better than existing ones.	Newly developed
	V18	If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.	Jaworski and Kohli (1993)
	V19	The activities of the different departments in this business unit are well coordinated.	Jaworski and Kohli (1993)
	V20 ^a	Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.	Jaworski and Kohli (1993)
Entrepreneurial proclivity (ENTRE)— innovativeness (INNOV)	V21	If a special interest group (e.g., consumer group, environmental group) were to publicly accuse us of harmful business practices, we would respond to the criticism immediately.	Newly developed
	V22 ^a	We tend to take longer than our competitors to respond to a change in regulatory policy.	Newly developed
	V23	When it comes to problem solving, we value creative new solutions more than the solutions of conventional wisdom.	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)
	V24	Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail.	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)
ENTRE—risk taking (RISK)	V25 ^a	We value the orderly and risk-reducing management process much more highly than leadership initiatives for change.	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)

APPENDIX
Continued

Construct	Item No.	Item	Source
ENTRE- proactiveness (PROACT)	V26 ^a	Top managers in this business unit like to "play it safe."	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)
	V27 ^a	Top managers around here like to implement plans only if they are very certain that they will work.	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)
	V28	We firmly believe that a change in market creates a positive opportunity for us.	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)
	V29	Members of this business unit tend to talk more about opportunities rather than problems.	Adapted from Covin and Slevin (1989); Morris and Paul (1987); Naman and Slevin (1993)
Formalization (FORM)	V30 ^a	I feel that I am my own boss in most matters.	Jaworski and Kohli (1993)
	V31 ^a	A person can make his own decisions without checking with anybody else.	Jaworski and Kohli (1993)
	V32	The employees are constantly being checked for rule violations.	Jaworski and Kohli (1993)
Centralization (CENT)	V33	There can be little action taken here until a supervisor approves a decision.	Jaworski and Kohli (1993)
	V34	A person who wants to make his own decision would be quickly discouraged here.	Jaworski and Kohli (1993)
	V35	Even small matters have to be referred to someone higher up for a final answer.	Jaworski and Kohli (1993)
	V36	I have to ask my boss before I do almost anything.	Jaworski and Kohli (1993)
Departmentaliza- tion (DEPT)	V37 ^a	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	Adapted from Jaworski and Kohli (1993)
	V38	Protecting one's departmental turf is considered to be a way of life in this business unit.	Adapted from Jaworski and Kohli (1993)
	V39 ^a	There is little or no interdepartmental conflict in this business unit.	Adapted from Jaworski and Kohli (1993)
	V40 ^a	There is ample opportunity for informal "hall talk" among individuals from different departments in this business unit.	Adapted from Jaworski and Kohli (1993)

APPENDIX Continued

Construct	Item No.	Item	Source
Performance— market share growth (SOM)	V41	Our business unit's market share growth in our primary market last year.	Newly developed
Performance— percentage of new product sales (PCTNP)	V42	Percentage of sales generated by new products last year relative to major competitors.	Newly developed
Performance— ROI	V43	Our business unit's return on investment (ROI) relative to major competitors last year.	Newly developed

^aIndicates a reversed item.

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