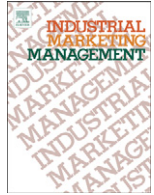




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## Industrial Marketing Management



## The role of a firm's strategic orientation dimensions in determining market orientation

Jean L. Johnson<sup>a,1</sup>, Kelly D. Martin<sup>b,2</sup>, Amit Saini<sup>c,\*</sup>

<sup>a</sup> The Gardner O Hart Distinguished Professor of Marketing, Washington State University, Pullman, WA 99164-4730, United States

<sup>b</sup> Colorado State University, Fort Collins, Colorado 80523-1278, United States

<sup>c</sup> University of Nebraska-Lincoln, PO Box 88049, Lincoln, Nebraska 68588-0492, United States

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### ABSTRACT

Little is known about how various strategic orientation dimensions determine market orientation. The authors identify four key dimensions of a firm's strategic orientation as critical antecedents to market orientation: the firm's aggressiveness, its future orientation, the extent of marketing formalization, and risk proclivity. Moderating effects of two environmental forces, competitive intensity and technology turbulence, are also considered in light of their relationship with various dimensions of strategic orientation and market orientation. Using a survey with firms spanning multiple industries, the proposed effects are tested with latent class analysis with multiple regimes. The results, based on an optimal two-regime solution, show that although market orientation is significantly impacted by these strategic orientation dimensions, the pattern of influence differs based on a firm's membership in one of two regimes.

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### 1. Introduction

Market orientation has been, and will no doubt continue to be, central to a firm's ability to compete and garner superior rewards in business markets as well as consumer markets. Whether cast as a culture focused on understanding and satisfying customer needs (e.g., Slater & Narver, 1994) or as the support mechanism for collecting, disseminating, and responding to market intelligence on customer needs (e.g., Kohli & Jaworski, 1990), the study and understanding of market orientation have been substantial and far reaching. To date, market orientation has been the focus of hundreds of studies, excellent meta-analyses, and review articles (Cano, Carrillat, & Jaramillo, 2004; Kirca, Jayachandran, & Bearden, 2005; Liao, Chang, Wu, & Katrichis, 2010) that highlight findings emerging from the body of works.

The extant literature informs extensively on the outcomes of market orientation. Although some controversy exists regarding its influence in certain situations, evidence suggests that market orientation generates benefits in various direct and indirect patterns involving for example, innovativeness, customer loyalty, product quality, and ultimately firm performance (Grinstein, 2008; Jimenez-Jimenez & Ceggarra-Navarro, 2007; Kirca et al., 2005). Interestingly, literature on the antecedents of

market orientation, though also informative, is substantially less expansive; for instance, little is known about key drivers of market orientation from the firm's broader strategic orientation comprised of elements such as risk proclivity, aggressiveness, future orientation, for example (e.g., Morgan & Strong, 2003; Venkatraman, 1989). While market orientation has been itself cast as a strategic orientation (e.g., Zhou, Yim, & Tse, 2005), and has been juxtaposed with other strategic orientation dimensions to understand its performance implications (e.g., Hult & Ketchen, 2001; Noble, Sinha, & Kumar, 2002), little is known about how other various strategic orientation dimensions impact or determine market orientation. Given that desirable outcomes and performance advantages most often derive from market orientation, such gaps in knowledge regarding these key determinants are troubling.

To augment understanding and to address compelling questions regarding the role of elements in a firm's strategic orientation in driving market orientation, we look to the extant literature (e.g., Morgan & Strong, 2003; Venkatraman, 1989) and identify several dimensions of the strategic culture as particularly key. Specifically, we argue that 1) the firm's *aggressiveness*, its strategic intent with regard to dominance and winning competitively (e.g., Hamel & Prahalad, 1989; Johnson & Sohi, 2001); 2) *future orientation*, the firm's orientation with regard to an emphasis on long-term strategic considerations rather than immediate short-term immediate concerns, 3) the extent of *formalization* with which the firm approaches marketing (c.f., Kirca et al., 2005; Slater, Olson, & Hult, 2006; Slotegraaf & Dickson, 2004); and 4) a firm's *risk proclivity*, its tendency to avoid risk taking or engage in greater risk taking (e.g., March & Shapira, 1987; Morgan & Strong, 2003) will

\* Corresponding author. Tel.: +1 402 472 2344; fax: +1 402 472 9777.

E-mail addresses: johnsonjl@wsu.edu (J.L. Johnson),

kelly.martin@business.colostate.edu (K.D. Martin), asaini2@unl.edu (A. Saini).

<sup>1</sup> Tel.: +1 509 335 1877; fax: +1 509 335 3685.

<sup>2</sup> Tel.: +1 970 491 7269; fax: +1 970 491 5956.

influence market orientation. Additionally, because the literature indicates the importance of a firm's context in understanding market orientation (e.g., Kirca et al., 2005), we examine the moderating effects of competitive intensity and technology turbulence (e.g., Zhou et al., 2005) on other strategic orientation dimensions' relationship with market orientation.

We organize the remainder of the paper as follows. We continue with theoretical background that provides foundation to conceptualize the four strategic orientation dimensions. We then develop relationships regarding the dimensions' influence on market orientation, and also consider the moderating role of technology turbulence and competitive intensity. Following hypotheses development, we present our research methodology where we describe a multi-industry study of 186 firms and the data analytic approach. The literature generally suggests that unobserved heterogeneity across firms is problematic in uncovering effects of key strategic variables (e.g., Jacobson, 1990). Essentially, heterogeneity means that firms are unique in all aspects for example, resource endowments, culture, and decision-making processes (e.g., Wernerfelt, 1984), suggesting that researchers should account for heterogeneity to understand the effects of strategic orientation dimensions. Accordingly, we use latent class regression analysis to account for unobserved heterogeneity and to accommodate the existence of multiple latent regimes in the relationships specified (e.g., Hutchinson, Kamakura, & Lynch, 2000; Lee & Johnson, 2010; Wedel & Kamakura, 2000). We discuss findings based on the optimal two-latent regime solution. We conclude with a discussion of implications for theory and practice.

## 2. Market orientation as determined by other strategic orientations

Conceptualized as implementing the marketing concept (Kohli & Jaworski, 1990), market orientation involves knowing and understanding customers and competitors (e.g., Deshpandé, Farley, & Webster, 1993; Narver & Slater, 1990). It fosters behaviors that result in superior value for customers; thus, market orientation essentially provides the underpinnings for planning and executing strategies that aim to deliver customer satisfaction, and accomplish and sustain competitive advantage (e.g., Day, 1999; Martin & Grbac, 2003; Zhao & Cavusgil, 2006). Given its criticality, understanding genesis of market orientation is key (e.g., Gebhardt, Carpenter, & Sherry, 2006). Interestingly, researchers have spent relatively less effort on understanding its determinants. For example, it is not likely a coincidence that a recent meta-analysis focused exclusively on the performance outcomes of market orientation (Cano et al., 2004). In terms of the number of overall effects, another meta-analysis found only 63 for the antecedents while 355 were reported for the consequences of market orientation (Kirca et al., 2005). Further, a preponderance of the literature on market orientation antecedents focuses on organizational structure, design, or process issues (e.g., Kirca et al., 2005), leaving substantial gaps in our understanding of other important factors that give rise, or even suppress market orientation in the firm.

One potentially powerful influence on market orientation involves other elements of a firm's strategic orientation. Although the topic of a fairly extensive literature, some vagaries surround the concept of strategic orientation (e.g., Noble et al., 2002). It has been cast in terms of strategic thrust, choice, or predisposition, for example (e.g., Morgan & Strong, 1998). Regardless, generally strategic orientations involve the broad outlines for strategic action (Slater et al., 2006) or strategic directions taken by a firm (Gatingon & Xuereb, 1997). Strategic orientation involves the philosophy or postures that guide a firm's business conduct. It is a deeply rooted set of values and beliefs that underpins activities and efforts to garner competitive advantage (Gatingon & Xuereb, 1997; Zhou et al., 2005).

Various dimensions of strategic orientation have been treated in the literature, sometimes in conjunction with market orientation to understand performance outcomes. For instance, researchers have

coupled market orientation with entrepreneurial orientation, technology orientation, and innovativeness (e.g., Atuahene-Gima & Ko, 2001; Augusto & Coelho, 2009; Hult & Ketchen, 2001; Zhou et al., 2005). Likewise, it has been linked to production orientation and selling orientation (e.g., Noble et al., 2002). In several of these treatments, it could be argued that the strategic orientation dimensions are domain specific or focused on broad organizational functions such as selling, production, innovation, customers, and competitors. While clearly critical, these strategic orientations have a limited strategic bandwidth.

Other treatments cast strategic orientation in terms of what could be described as higher order dimensions where the orientation pervades and guides all aspects of the firm's activities and is not domain specific and limited to selling or production, for example. In a broad-based systematic treatment, Venkatraman (1989) and Morgan and Strong (2003) specify six dimensions of strategic orientation, aggressiveness, analysis, defensiveness, future orientation, proactiveness, and riskiness. These dimensions pervade the firm in all aspects and transcend a focus on any specific domains or functional elements such as those in a firm's output sector (e.g., selling, production, innovation). Thus, like capabilities, strategic dimensions can involve sets of higher order organizing principles (e.g., Kogut & Zander, 1992; Venkatraman, 1989; Winter, 2003). As with capabilities, these higher order dimensions influence other more focused dimensions such as the market orientation.

With Venkatraman's (1989) conceptualization and its subsequent treatments (e.g., Morgan & Strong, 2003) as our guiding theoretical frameworks we investigate the strategic orientation dimensions of aggressiveness, future orientation, marketing formalization, and risk proclivity. We focus on these four as determinants of market orientation because consistent with the seminal conceptualization, recent research suggests that they influence a firm's strategic action and frameworks (e.g., Johnson & Sohi, 2001; Miller & Chen, 2004; Slotegraaf & Dickson, 2004; Tellis, Prabhu, & Chandy, 2009). This research builds on preliminary extant evidence suggesting that market orientation and other strategic orientation dimensions are related (Morgan & Strong, 1998) by explicitly casting and investigating the strategic orientation dimensions as determinants of market orientation. Importantly, we advance the literature by considering how the influence of strategic orientation dimensions on market orientation varies in industry environments that are turbulent and competitively intense.

### 2.1. Aggressiveness

Consistent with the extant literature (e.g., Johnson & Sohi, 2001; Morgan & Strong, 2003), we conceptualize aggressiveness in terms of the firm's strategic intent, that is the extent to which the firm is focused on achieving competitive dominance (e.g., Hamel & Prahalad, 1989; Johnson & Sohi, 2001). An aggressive firm is incessant in its efforts to stay ahead and win competitively with heavy emphasis on seeking market share (Morgan & Strong, 2003; Venkatraman, 1989), and a willingness to forcefully challenge competitors for performance gains (Ferrier, 2001). Aggressiveness means that the firm is ambitious with regard to growth and supremacy in its markets, devoting all possible resources and working in all possible ways in pursuit of these objectives (Hamel & Prahalad, 1989). Further, wherever possible, the strategically aggressive firm garners and builds resources and assets that can be leveraged toward competitive advantage (Johnson & Sohi, 2001).

The more aggressive the firm, the more avenues it will find and use to gain competitive advantage. One of the most promising avenues to competitive advantage involves customers and the strategically aggressive firm will readily recognize this. A strong, well served customer base and strong customer franchise are powerful strategic assets in the press for competitive advantage (e.g., Day, 1994). In addition, a deep understanding and knowledge of customers and competitors underpins the ability to relate effectively at the market interface and thus is critical towards

creating strategic advantage. Since aggressive firms are driven by a need for competitive dominance, they are also likely to enhance observing and analyzing competitive actions through institutionalizing market orientation. On the other hand, a firm that is not aggressive could take a lackadaisical attitude toward market orientation. Thus, we hypothesize:

**H1.** Greater aggressiveness results in greater levels of market orientation.

The literature indicates that market orientation is influenced by a firm's context (e.g., Kirca et al., 2005). Consistent with the dearth of treatments with regard to antecedents of market orientation in general, the role of contextual moderation with regard to antecedents also has been relatively unexplored. Given that the emergence and development of market orientation (like its consequences) take place within the firm's competitive and technological context, we examine how the impact of the determinants vary across two critical market forces faced by the firm, that is, competitive intensity and technology turbulence (e.g., Zhou et al., 2005). Competitive intensity refers to the degree of competition and extent of competitive activities that a firm faces, while technology turbulence involves the rate of technological change and churn.

When the firm faces technology turbulence, aggression will result in strategic frameworks that reflect a focus on winning in such turbulence; likewise with activities and processes. Both the philosophies and values will be more consistent with responding to that turbulence and finding ways to win, such as through accommodating emergent technologies and acting on opportunities presented by technology churn (e.g., Jaworski & Kohli, 1993; Narver & Slater, 1990). The path to market and competitive dominance will still involve customers as a strategic asset to be leveraged; however, the firm's aggressiveness will manifest as attention on other matters, such as intellectual property and technology development goals and objectives; activities and processes will necessarily be devoted to such considerations (Porter, 1985; Zhou et al., 2005). In essence, in the presence of aggressiveness, technology turbulence will divert managerial attention and focus toward capitalizing on the opportunities it presents while hedging against the threats it presents. As such, we expect that perhaps not quite as much attention and focus will be devoted to tracking and understanding customer satisfaction. Thus, the shifting sands of technology turbulence will dilute the positive influence of aggression on market orientation.

**H1a.** The positive influence of aggressiveness on market orientation decreases (becomes less positive) as technology turbulence increases.

In contrast to technology turbulence, when the firm faces competitive intensity, it serves to amplify the effects of aggression on market orientation. This is because many avenues and routes to competitive advantage come into play in the market interface with customer interactions (e.g., D'Áveni, 1994). The firm responds and copes with the competitive intensity in activities, programs, and processes focused on satisfying customers more effectively than competitors, thereby hoping to neutralize competitive activities and gain traction for advantage. Market knowledge and strong customer bonds become even more important as strategic resources. Additionally, frequent and intense competitor moves will propel an aggressive firm to build routines to monitor and respond to the competitor moves consistently. Thus, as competitive intensity increases, aggressiveness will result in stronger market orientation.

**H1b.** The positive influence of aggressiveness on market orientation increases (becomes more positive) as competitive intensity increases.

## 2.2. Future orientation

Future orientation refers to a firm's temporal view. It essentially means that the future matters more than the immediate, and concern

for long-term initiatives predominates focus on short-term gains (e.g., Venkatraman, 1989). Firms with a future orientation focus on building sustainable competitive advantage over a period of time rather than just exceeding quarterly financial expectations. By implication, future orientation involves persistence and patience and the commitment of dedicated resource investments over a longer time horizon (George, Wiklund, & Zahra, 2005). Indeed, Tellis et al. (2009) identify future orientation as key, suggesting that firms are cognizant of current asset and resource limitations and realize that they must look beyond the immediate and into the future to remain viable.

Future orientation suggests that firms look beyond existing markets as they realize that gains from those markets are finite and will at some point be exhausted. Owing to the evolution of customer needs coupled with a saturation of offerings, markets often become exhausted and diminish. In some cases, markets simply disappear as consumer trends morph. Thus, although delivering customer satisfaction in the present may be a good thing, future orientation suggests that the firm looks beyond at a larger picture (e.g., Hooley, Piercy, & Nicoulaud, 2008; Morgan & Strong, 2003). Additionally, a future oriented firm may be less inclined to be heavily competitor oriented in the short-term, focusing instead on products and markets that bring competitive advantage over the years. On the other hand, a short-term oriented firm is likely to inject resources into monitoring every competitive move and engage competition through immediate response mechanisms. As such, future orientation will not necessarily be consistent with market orientation and may serve to diminish it.

**H2.** Greater future orientation results in a lower level of market orientation.

Technology turbulence suggests that opportunities are created at a relatively fast pace and that as new technologies constantly emerge and flow, they bring along constant availability of new product and market opportunities (Kohli & Jaworski, 1990; Porter, 1985; Zhou et al., 2005). Because the firm sees the constant and sustained flow of opportunities from technology churn, a future strategic orientation may mean that firms will look to markets for ways to realize gains from the opportunities. Understanding and learning about customers and developing effective market linkages will enable a firm to harvest the opportunities derived from sustained technology churn. In this case, the larger perspective in future orientation means that firms see building market connections as important for a viable extended future. In markets with lower technology turbulence, future oriented firms may see no immediate reason to engage and learn from the market. Thus, in technology turbulent contexts, rather than being inconsistent with market orientation, future orientation may be quite consistent with it; in fact owing to the role of market understanding in capitalizing on opportunities from technology churn, market orientation is enhanced.

**H2a.** The negative influence of future orientation on market orientation decreases (becomes less negative) as technology turbulence increases.

We expect that competitive intensity will exacerbate the negative effects of future orientation on market orientation. Competitive intensity will amplify the sense that markets are finite. Markets will become saturated and run their course even more rapidly (e.g., Porter, 1985). Frenetic competitive activity will accelerate the inevitable market diminishment, with even short-term gains, fleeting and illusive (e.g., D'Áveni, 1994; D'Áveni, Dagnino, & Smith, 2010; Zhou et al., 2005). Future oriented firms are not likely to invest in customer and competitor linking mechanisms in competitively intense markets, since returns on such investments will potentially be unsustainable. Instead, as competitive intensity in the environment increases, future oriented firms are likely to shift focus away from being presently market oriented and toward creating future assets that provide more sustainable rents. This suggests that in competitive intensity, future orientation again

will be inconsistent with market orientation and its focus on understanding current wants and needs of customers, thus its diminishing effects will be exacerbated.

**H2b.** The negative influence of future orientation on market orientation increases (becomes more negative) as competitive intensity increases.

### 2.3. Marketing formalization

In contrast to formalization at the organization level, which involves an orientation toward systematic policies and the extent to which rules and regulations dominate organization structure (e.g., Kohli & Jaworski, 1993), marketing formalization involves the extent to which the marketing function receives systematic and explicit attention and purposive treatment in the firm (e.g., Slater et al., 2006; Slotegraaf & Dickson, 2004). Marketing formalization characterizes the firm's orientation toward a deep and purposive approach to marketing strategy and marketing activities. Thus, even if marketing does not exist in the firm as a stand alone functional area, marketing activities and strategizing are still systematic and definitive, and marketing is approached mindfully and deliberately in the firm. In the absence of formalization, marketing strategizing in a firm would be left to chance and haphazardly approached. Marketing activities and strategy would play out in unsystematic ways. Marketing formalization is consistent with logic underpinning the analysis strategic dimension (e.g., Morgan & Strong, 2003; Venkatraman, 1989) in that it involves mindful search or problem solving postures and alignment of resources toward a specific objective. However, in contrast to the more general analysis dimension, marketing formalization involves managerial attention focus in a more directed way (e.g., Nadkarni & Barr, 2008).

When a firm is oriented toward marketing formalization it suggests that a systematic approach to marketing is highly valued. It also suggests that marketing planning in the firm proceeds in a methodical fashion, with a focus on performance metrics for goals such as customer satisfaction (e.g., Slater et al., 2006). In a firm where marketing is less formalized, decisions on customers and competitors likely are approached on a more ad-hoc basis and lack a structured routine. This in turn suggests that marketing formalization as a strategic orientation will encourage an orientation toward satisfying customers as well as knowing and understanding the market generally, that is, market orientation. Thus, an orientation toward marketing formalization will feed into and enhance market orientation.

**H3.** Greater marketing formalization results in greater levels of market orientation.

Because a firm must adapt to the churn in technology turbulence, the influence of marketing formalization in building market orientation may become more muted and suppressed. As a firm struggles to cope with environmental pressures of technological changes, focus necessarily diverts toward accommodating opportunities and threats from the technology churn (e.g., Porter, 1985; Tushman & Anderson, 1986) and thus necessarily the focus on customers and competitors is diminished. Rather than emphasizing market understanding and market linking, a firm oriented toward more marketing formalization may attend more to the accelerated product life cycles that typify technology turbulence (e.g., Porter, 1985; Tushman & Anderson, 1986) and emphasize new product development based on technology advances, as well as other technology development processes and activities that are less overtly consistent with a market orientation (e.g., Christensen & Bower, 1996).

**H3a.** The positive influence of marketing formalization on market orientation decreases (becomes less positive) as technology turbulence increases.

Because it plays out at the market interface, competitive intensity exaggerates the extent to which marketing formalization impacts

market orientation. Systematic attention and focus on marketing strategizing will generate a greater focus on understanding markets and satisfying customers in intensely competitive contexts because protecting market strongholds becomes more compelling under constant frenetic competitive attack as the firm works to offset competition and gain advantage (D'Áveni, 1994). Likewise, in intensely competitive contexts, firms with a formalized orientation in marketing strategy will be more market oriented because they will be compelled to attempt invasion and claiming of additional market shares; again to hedge frenetic competition (e.g., D'Áveni, 1994). In competitive intensity, the problem solving, analysis, and attention focus that typify marketing formalization will result in greater efforts to understand markets and satisfy customers as it will inform maneuvers to expand markets and claim more shares.

**H3b.** The positive influence of marketing formalization on market orientation increases (becomes more positive) as competitive intensity increases.

### 2.4. Risk proclivity

Risk proclivity involves firm-level tendencies and predispositions toward risk taking in strategic activities and approaches (e.g., March & Shapira, 1987; Miller & Chen, 2004; Venkatraman, 1989). Risk entails the uncertainty attached to potentially positive or potentially damaging outcomes of decisions or activities (Morgan & Strong, 2003; Sitkin & Pablo, 1992; Sitkin & Weingart, 1995). It implies a lack of knowledge and control, and the inability to develop expectations for outcomes. The firm's general risk proclivity involves a consistent and stable pattern in taking or avoiding risk. Thus, with regard to risk taking behaviors, firm risk proclivity describes the general likelihood to behave in certain ways (March & Shapira, 1987; Miller & Chen, 2004; Sitkin & Weingart, 1995). Here, specifically, we focus on a firm's proclivity to avoid risk – that is its risk aversion.

Jaworski and Kohli (1993) found no association between top management risk aversion and market orientation. However, because both market orientation and firm-level risk aversion permeate the firm at numerous levels and, particularly, will play out at the market interface, we expect that these two forces will relate. Specifically, a risk averse strategic orientation suggests relatively conservative strategic approaches resulting in tendencies to build strong reliable relationships in existing markets through strong customer interactions. The firm would keep in close touch with its customer base so that uncertainties can be avoided (e.g., Christensen & Bower, 1996; Hult & Ketchen, 2001). Cultivating strong understanding of customers and market knowledge would be viewed as insurance against costly mistakes. Accordingly, all of these factors should result in a stronger market orientation.

**H4.** Risk aversion results in greater levels of market orientation.

We expect that technology turbulence and competitive intensity will both increase the positive effects of risk aversion on market orientation. Under high technology turbulence, the risk averse firm will more likely conserve, protect, and maintain focus on what is known and understood, that is serving existing markets and satisfying customers (e.g., Christensen & Bower, 1996). Likewise, in competitively intense conditions the risk averse firm will regroup and focus on understanding customers and effectively linking to them. In both cases, the influence of a risk avoiding strategic orientation on market orientation will be reinforced and amplified.

**H4a.** The positive influence of risk aversion on market orientation increases (becomes more positive) as technology turbulence decreases.

**H4b.** The positive influence of risk aversion on market orientation increases (becomes more positive) as competitive intensity increases.

### 3. Methodology

#### 3.1. Preliminary fieldwork

Our preliminary field research focused on four issues. First, it was designed and conducted to verify the relevance of the question and validate the nomological net. Second, it verified the appropriate key informant. Third, it provided the basis for measure development and aided questionnaire refinement. Fourth, it provided the means for questionnaire pretesting. As such, we interviewed seven managers from firms located in a large metropolitan area in the Midwestern U.S. The managers indicated that they were concerned with market orientation and its determinants. They also indicated that the strategic orientation dimensions we identified were salient and relevant in their firms and in relation to market orientation. The interviews did not evoke other strategic dimensions in relation to market orientation. In addition the interviews revealed that the executives most knowledgeable about strategic cultures and most aware of the influences on strategic planning were senior level managers. Three managers reviewed the construct definitions and provided input to refinement of operationalizations which was then incorporated in the questionnaire. For pretesting, we administered the questionnaire to the other four respondents and observed first-hand the completion time, possible obstacles in the questionnaire flow, and comprehension problems in items or instructions. Following completion of the questionnaire, we debriefed the respondents to refine the questionnaire further.

#### 3.2. Study design and data collection

For the cross-sectional quantitative study, we began with a sampling frame of 800 firms from a commercial list provider. To increase generalizability, the sample spanned multiple industries including electrical and electronics, transportation equipment, measurement and control equipment, rubber and plastics, computers and industrial equipment, metal fabrication, extraction, and durables. Given that senior level executives were identified as the most appropriate the key informant (Campbell, 1955), the mailing list included their names and contact details accordingly. Survey packets were mailed to all key informants and included a cover letter describing the project and guaranteeing confidentiality with a one-dollar bill attached as incentive, a copy of the questionnaire, and a postage paid self-addressed return envelope. Follow-up involved an identical survey package mailed three weeks later to non-respondents. The cover letter also offered an option to participate in the study via a website.

The data collection yielded 186 usable responses. Excluding 12 undeliverable packages, the response rate was 23.6%, which compares favorably to other studies on related issues (e.g., Johnson, Sohi, & Grewal, 2004). To evaluate the potential for non-response bias we performed t-tests comparing early respondents with late respondents across firmographics as available and the theoretical constructs (Armstrong & Overton, 1977). None of the t-tests was significant, indicating that non-response bias was not a concern. In line with the recommendations of Kumar, Stern, and Anderson (1993) we evaluated key informant competency with general and specific approaches. For the general measures, the characteristics of respondents were in line with our expectations of key informants. Among the respondents 43% were Vice Presidents, 16% were Directors, 8% were Presidents and the remainder were executives such as CMOs. On average, respondents had 6.82 years in their position, and 12.41 years with the firm. In terms of the specific measures of informant competency, we inserted questions on awareness and involvement in firm's strategies and orientations. The respondents' knowledge of firm strategies was 6.55 (on a seven point scale) and their level of involvement with strategy was 6.16 (on a seven point scale).

Given that our data derive from a single key informant, common methods bias is a concern (e.g., Podsakoff, MacKenzie, Lee, & Podsakoff,

2003). To address this, we employed two iterations of the Harman's single factor test. First, we ran a principal components factor analysis. The unrotated solution factor produced seven distinct factors with eigenvalues greater than 1.0. The seven factors account for more than 70% of the total variance. Furthermore, the first factor accounted for just 12% of the variance suggesting that a common factor did not explain a substantial amount of variance in the data. Second, as a more rigorous test of the common method hypothesis (Podsakoff et al., 2003), we used confirmatory factor analysis (CFA) to compare our model to a constrained single factor model. In the presence of common method variance, the single latent factor would account for all the manifest variables. A poor fit exhibited by the single factor model evidences an absence of common method bias. Thus, we linked all explanatory variables to a single factor, which produced a  $\chi^2 = 5553$ , d.f. = 880. The measurement model, in contrast, produced a  $\chi^2$  value of 1327, d.f. = 681, demonstrating significantly improved fit ( $p < .001$ ) and alleviating concerns of common methods bias.

#### 3.3. Instrument development and measures

Our measures derived from a review of the extant literature and our interviews with executives. We measured all constructs with multiple item scales as shown in Table 1. The scales involved one to seven Likert-type response options with various anchors as appropriate. Specifically, for *market orientation* we drew on measures from Narver and Slater (1990) focused on executives' assessments of the role and understanding of customer needs and customer satisfaction, as well as competitor information, strengths, and response. For *aggressiveness*, we relied on the scale developed by Johnson and Sohi (2001) which consisted of eight items focused on the extent to which the firm seeks market leadership, dominance, and competitive advantage. For *risk proclivity*, the pattern of risk taking in strategic activities, we relied on Das and Teng (2001) and used five items to assess the firm's tolerance for risk and the willingness to take risk. We based our measure for *technological turbulence*, the extent of technology change and churn in a firm's environment, and *competitive intensity*, the extent to which the firm's context was characterized by heavy and frenetic competitive activity on the work of Jaworski and Kohli (1993).

*Future orientation* involves the temporal orientation of the firm with regard to strategizing (e.g., Tellis et al., 2009; Venkatraman, 1989). Based on the extant literature (Morgan & Strong, 2003; Venkatraman, 1989), we developed a five-item scale honing in on the extent to which a firm focuses on long-term considerations and prioritizes long-term perspectives. In contrast to formalization as an organizational structure dimension, *marketing formalization* involves the explicit and purposive attention to marketing planning. As such, based our preliminary field interviews as well as on related research (Menon, Bharadwaj, Adidam, & Edison, 1999; Menon, Bharadwaj, & Howell, 1996; Slotegraaf & Dickson, 2004), we developed a seven-item measure for marketing formalization. On a one to seven scale, respondents indicated the extent to which marketing activities and approaches were formalized, systematic, detailed, structured, rigid, precise, and specific.

### 4. Results

#### 4.1. Construct validation

We conducted confirmatory factor analysis (CFA) for measure validation. Individual item loadings as well as construct composite reliabilities and average variance extracted (AVE) statistics appear in Table 1. The items loaded significantly and substantively on their respective constructs ( $p < .001$ ). We calculated composite reliabilities for each construct (Fornell & Larcker, 1981), and found that each construct demonstrates acceptable internal consistency, with each reliability value greater than .70 (Nunnally & Bernstein, 1994). In addition, we calculated the average variance extracted (AVE) statistics for each

**Table 1**  
Measures and CFA measure validation.

Constructs/measures	Factor loadings	Construct reliability	AVE
<i>Market orientation</i>		.90	.69
Salespeople should regularly share information concerning competitors' strategies.	.84		
Firms should rapidly respond to competitive actions that threaten them.	.90		
Top management should regularly discuss competitors' strengths and strategies.	.94		
Firms should target where they have an opportunity for competitive advantage.	1.00		
Firms should constantly monitor levels of commitment and orientation to serving customers' needs.	.77		
Firm strategy for competitive advantage should be based on understanding customer needs.	.72		
Firm strategies should be driven by beliefs about how to create greater customer value.	.65		
Firms should measure customer satisfaction systematically and frequently.	.68		
Firms should give close attention to after-sales service.	.63		
<i>Aggressiveness</i>		.94	.70
Firm is strategically aggressive.	.70		
Firm seeks competitive dominance.	.82		
Firm seeks market leadership.	.82		
Firm systematically builds toward strategic advantage.	1.00		
Firm heavily focuses on strategic targets and goals.	.98		
Firm stretches or reconfigures resources into new competitive advantage.	.96		
Firm focuses everyone's attention on the essence of winning in the marketplace.	.93		
Firm sets targets that require everyone's effort and commitment.	.82		
<i>Future orientation</i>		.90	.71
Strategies are planned with a focus on long-term success.	.80		
Long-term goals are prioritized over short-term gains.	.88		
It is generally believed that it is the long-term success that matters more.	.91		
It is considered important to create a company that remains competitive for a long, long time.	.75		
Ensuring long-term performance is more critical than meeting this quarter's financial goals.	1.00		
<i>Marketing formalization</i> (Stem: our firms marketing strategy process is...)		.93	.70
Formalized	.98		
Rigid	.54		
Systematic	.86		
Precise	.79		
Detailed	.99		
Structured	1.00		
Specific	.90		
<i>Risk proclivity</i> (recoded)		.90	.72
Our company is generally more risk taking than most.	.93		
The top management team in our firm is daring.	1.00		
In our firm, the culture rewards taking chances.	.99		
In our company, when the situation calls for it, we are willing to take risks.	.93		
Our firm is willing to risk negative outcomes in making major strategic decisions.	.93		
<i>Competitive intensity</i>		.76	.52
Competition in our industry is cutthroat	.88		
There are many promotions wars in our industry	.95		
Anything that one competitor offers is readily matched by others	.84		
Price competition is a hallmark of our industry	.94		
In our industry, you hear of a new competitive move almost every day	1.00		

**Table 1** (continued)

Constructs/measures	Factor loadings	Construct reliability	AVE
<i>Technological turbulence</i>		.90	.69
The technology in our industry is changing rapidly.	.96		
Technological changes provide big opportunities in our industry.	.81		
It is very difficult to forecast where the technology in our industry will be in 2 to 3 years.	.55		
Large numbers of new products are possible through technological breakthroughs in our industry.	.87		
Technological developments in the industry are substantial	1.00		

Model Fit Index, Chi-square = 1327; d.f. = 681; RMSEA = .07; NNFI = .87; CFI = .91.

construct. The recommended AVE benchmark of .50 (Fornell & Larcker, 1981) was exceeded for each construct.

Although the correlations in Table 2 do not indicate concerns for construct discrimination, we explicitly evaluated it by comparing the square root of the AVEs to the relevant inter-construct correlations (Fornell & Larcker, 1981). The largest correlation between constructs was between aggressiveness and marketing formalization ( $r = .50$ ) which is less than the square root of AVE for aggressiveness and for marketing formalization, as both AVE values equal  $.70$  ( $\sqrt{.70} = .84$ ), in evidence of discriminant validity.

4.2. Model selection

To account for unobserved heterogeneity, we use latent class regression analysis (e.g., Grewal, Lilien, & Mallapragada, 2006; Kamakura, Wedel, & Agrawal, 1994; Wedel & Kamakura, 2000). Latent class regression analysis essentially involves simultaneous estimation of several regression models (i.e., regimes) determining which regression model applies to which firm (e.g., Hutchinson et al., 2000; Lee & Johnson, 2010). We estimated models with one to three regimes. The models, with market orientation as the dependent variable, included aggressiveness, future orientation, marketing formalization, and risk proclivity along with the product terms relevant for testing the moderated relationships we posited. Based on the BIC and log-likelihood in conjunction with the number of parameters in the respective models, we found a two-regime solution to be optimal. Specifically, log-likelihood value improved as we introduced more regimes ( $-222.15$ ,  $-156.58$ , and  $-110.13$  respectively for the three regimes), but so did the number of

**Table 2**  
Descriptive statistics: mean, standard deviation, and correlations<sup>a</sup>.

Variable name	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Market orientation (1)	1.00								
Aggressiveness (2)	.25	1.00							
Future orientation (3)	.19	.48	1.00						
Marketing formalization (4)	.05	.51	.33	1.00					
Risk proclivity (5)	-.13	-.56	-.44	-.21	1.00				
Competitive intensity (6)	.24	-.12	-.17	-.14	.08	1.00			
Technology turbulence (7)	.04	-.00	.00	.00	.06	.20	1.00		
Firm size (categorical) (8)	-.05	.00	-.06	.20	.04	.15	.10	1.00	
Firm age (9)	.05	-.00	.15	-.02	.08	-.07	-.18	-.05	1.00
Mean	5.80	4.86	4.91	3.82	4.47	4.36	4.70	1.77	47.36
Standard deviation	.89	1.22	1.32	1.21	1.15	1.17	1.42	1.44	26.34

<sup>a</sup> Correlations greater than .15 significant at  $p < .05$ ; correlations greater than .19 significant at  $p < .01$ .

**Table 3**  
Two-regime and aggregate solution results from latent class regression analysis<sup>a</sup>.

	Two-regime solution parameter estimates		Wald tests for differences across regimes <sup>b</sup>	Aggregate (one regime) solution	Aggregate solution with profiling variables as controls
	Regime 1	Regime 2			
Constant	−0.17	−8.74	10.24	1.93	1.98
Aggressiveness	0.81**	−2.91**	90.16	0.74*	0.73*
Future orientation	0.08	−2.23**	36.59	−0.03	−0.04
Marketing formalization	0.03	4.30**	62.61	−0.23	−0.24
Risk proclivity	0.18	2.78**	58.69	0.09	0.08
Competitive intensity	0.86**	2.11**	4.94	0.55	0.63
Technology turbulence	0.29	0.63	0.17	−0.06	−0.13
Aggressiveness × competitive intensity	−0.08*	0.34**	26.27	−0.05	−0.07
Future orientation × competitive intensity	−0.02	−0.29**	18.12	−0.03	−0.04
Marketing formalization × competitive intensity	−0.02	0.09	2.00	0.04	0.05
Risk proclivity × competitive intensity	−0.01	0.08**	17.37	−0.02	−0.02
Aggressiveness × technology turbulence	−0.07*	0.07**	9.99	−0.06	−0.05
Future orientation × technology turbulence	0.01	0.70**	65.26	0.06	0.06
Marketing formalization × technology turbulence	0.02	0.09*	90.70	0.00	0.00
Risk proclivity × technology turbulence	−0.01	0.08*	5.70	0.02	0.02
Profiling variables					
Constant					
Firm size	−0.21**	0.21**	–	–	−0.07
Firm age	0.01	−0.01	–	–	0.01
Manufacturing vs. services	0.19	−0.19	–	–	0.16*
Consumer vs. business customers	0.03	0.03	–	–	−0.07
Regime size	151	35	–	186	186

<sup>a</sup> Reported one-tailed test results where \*\*  $p < .01$ , \*  $p < .05$ .

<sup>b</sup> With the exception of technology turbulence and the marketing formalization by competitive intensity product term, all differences are significant at  $p < .05$ .

parameters (16, 36, and 58 respectively for the three regimes). After accounting for model complexity (i.e., number of parameters), the BIC was the least for the two-regime solution (the BIC values were 527.90, 506.52 and 523.35 respectively for the three regimes). Thus, based on these criteria, we use this two-regime solution to test the hypotheses. The two-regime solution explained 74% of the variance.

### 4.3. Hypotheses testing

We report the results for the two-regime solution in Table 3. In this table, we also report results for two configurations of the aggregate (single regime) model, one without profiling variables and one with profiling variables as control variables. As we noted, given that it provides the better fit for our data, for hypotheses testing we rely the two-regime solution. The results evidence considerable heterogeneity in the effects of the explanatory variables between the two regimes. Wald tests show the significant differences between the two regimes for all variables except technology turbulence and the technology turbulence-risk proclivity product term.

With regard to hypotheses testing, in Regime 1, we find support for  $H_1$ , that aggressiveness positively influences market orientation ( $b = .81$ ,  $p < .01$ ). Interestingly, Regime 2 shows the opposite effect where aggressiveness suppresses market orientation for that set of firms ( $b = -2.91$ ,  $p < .01$ ). Consistent with  $H_{1a}$  that technology turbulence would quash the positive influence of aggressiveness on market

orientation, in Regime 1 the effect is negative and significant ( $b = -.07$ ,  $p < .05$ ). In Regime 2, counter to  $H_{1a}$ , the effect is positive and significant ( $b = .07$ ,  $p < .01$ ). Apparently for those firms in Regime 2, aggressiveness in technologically turbulent markets builds market orientation. Consistent with our prediction that competitive intensity would amplify the effects of aggressiveness on market orientation, the results in Regime 2 show a positive effect ( $b = .34$ ,  $p < .01$ ). However, counter to  $H_{1b}$ , in Regime 1 the results show a significant negative effect ( $b = -.08$ ,  $p < .05$ ).

For  $H_2$  which suggested that future orientation would negatively influence market orientation, we see support in Regime 2 but not in Regime 1. The parameter estimate in Regime 1 is not significant and in Regime 2, the estimate is negative and significant ( $b = -2.23$ ,  $p < .01$ ) consistent with our expectations. For the interaction effects of technology turbulence with future orientation, Regime 1 shows no effect and Regime 2 shows significant positive moderation ( $b = .70$ ,  $p < .01$ ). This is consistent with our expectation that technology turbulence would dampen the negative influence of future orientation on market orientation. In  $H_{2b}$  we expected that competitive intensity would amplify the negative effects of future orientation on market orientation. We see support for that relationship in Regime 2 but not Regime 1. The parameter estimate in Regime 1 is not significant and the negative parameter estimate in Regime 2 is significant ( $b = -.29$ ,  $p < .01$ ) and consistent with our hypothesis.

In  $H_3$  we expected that market formalization would positively impact market orientation. For that relationship we find support in Regime 2 ( $b = 4.30$ ,  $p < .01$ ); however the results show no effect of market formalization on market orientation in Regime 1. Regarding the moderating effects of technology turbulence, we find no support for our expectation that technology turbulence would dampen the positive influence of marketing formalization on market orientation ( $H_{3a}$ ). Regime 1 results show no effects and the significant effect in Regime 2 ( $b = .09$ ,  $p < .05$ ) is in the opposite direction hypothesized. For  $H_{3b}$ , that effects of market formalization would be greater in competitive intensity, we also find no support. Parameter estimates were not significant in either regime.

For  $H_4$ , that risk proclivity, that is, risk aversion, would increase market orientation, we find support in Regime 2 ( $b = 2.78$ ,  $p < .01$ ), however, in Regime 1 the results show no effect. In  $H_{4a}$  and  $H_{4b}$  we

**Table 4**  
Key constructs and post-hoc profile variables of the regimes.

Variables	Regime 1		Regime 2		t-tests
	Mean	Standard deviation	Mean	Standard deviation	
Market orientation	5.98	.56	4.32	1.55	$p < .05$
Aggressiveness	4.97	1.33	3.98	1.58	$p < .05$
Future orientation	4.97	1.28	4.46	1.61	$p = .10$
Marketing formalization	3.85	1.21	3.54	1.22	ns
Risk proclivity	4.47	1.15	4.50	1.15	ns
Competitive intensity	4.45	1.13	3.59	1.14	$p < .05$
Technology turbulence	4.66	1.44	4.97	1.23	ns

expected that both technology turbulence and competitive intensity would positively moderate the effect of risk proclivity on market orientation. We find support for the technology turbulence moderation ( $b = .08, p < .05$ ) and support for competitive intensity ( $b = .08, p < .01$ ) in Regime 2. The results for Regime 1 show no effects for either moderator.

#### 4.4. Post-hoc profile of the regimes

To better understand the two regimes, we relied on post-hoc profiling of the regimes (e.g., Kamakura et al., 1994; Lee & Johnson, 2010) with firm age, firm size, and service versus manufacturing as well as consumer versus business markets served. As shown in the lower section of Table 3, firm size was significant indicating that Regime 2 comprised significantly larger firms relative to those in Regime 1. Our measure of size involved categorical ranges of number of employees which generally correlates with size in terms of revenue. While this data limitation precludes a fine grained interpretation, generally the Regime 1 firms tended toward less than 5000 employees, while the Regime 2 firms ranged toward 10,000 employees or greater. In Table 4 we show independent sample t-tests comparing firms in Regime 1 with firms in Regime 2. The t-tests indicate statistically significant differences in the means between the two regimes for market orientation, aggressiveness, future orientation, and competitive intensity.

## 5. Discussion

In this research, we address a significant gap in understanding of market orientation antecedents and demonstrate that various elements in the firm's strategic orientation influence market orientation. Drawing on strategic orientation theoretical frameworks (Morgan & Strong, 2003; Venkatraman, 1989), we argue that manifestations of aggressiveness, future orientation, marketing formalization, and risk proclivity feed into market orientation by building and strengthening it, or sometimes by diminishing it. Our latent class analysis indicates that heterogeneity exists between firms such that the pattern of effects differs between the two solutions identified in our sample. Generally this suggests that for a given set of firms, market orientation is influenced in certain ways by the strategic orientation dimensions, while for other firms, the pattern of influence differs.

Our results indicate that aggressiveness exhibited strong influence on market orientation for both regimes, albeit in different directions. For the firms in Regime 1, aggressiveness enhanced market orientation. Consistent with the notions of strategic intent, apparently the firms in this group see satisfied, well served customers as a powerful means to competitive dominance. Likewise, the building of market knowledge and understanding of customer wants and needs inherent in market orientation may be cultivated as a key strategic resource to be leveraged by the strategically intent firm. It is important to note that our concomitant profiling shows the firms in Regime 1 were smaller. Thus, aggressive smaller firms possessing fewer resources than larger firms, are likely to place considerable emphasis on building market based assets (Srivastava, Shervani, & Fahey, 1998) via market orientation because market orientation clears the path for organic growth (a key goal for smaller firms). Interestingly, for the set of firms in Regime 2 (that profiling shows was larger in size), the relationship was opposite suggesting that aggressiveness may actually suppress market orientation. This could mean that aggressive larger firms may not place as much an emphasis on building market based assets via market orientation. For larger firms, significantly more effort and investment is required to move the needle on organic growth and, therefore, they may commit resources to avenues that promise higher returns; perhaps acquisition of new product technologies, vertical integration of supply chains, or acquisition of fast growing businesses, for example.

We found that for the firms in Regime 2, future orientation suppressed market orientation. Firms focused on maintaining long-term viability and health apparently may see activities in existing markets as a more immediate issue, providing short-term performance benefits but not necessarily sustaining the firm over time. Served markets, either due to inherent changes in customer wants and needs or due to the technologies available to serve them, evolve and change, sometimes disappearing altogether. Thus, future orientation, perhaps for larger firms, apparently manifests as a strategic orientation dimension that is less consistent with a market orientation and even may detract from it.

Risk proclivity and marketing formalization both enhance market orientation in Regime 2 where the firms are slightly larger. Larger firms are likely to have an established customer base providing a consistent revenue stream that allows them to stay large; hence risk averse large firms tend to build strong reliable relationships in their existing markets by firmly institutionalizing market orientation. Marketing formalization or the extent to which marketing strategy has a formalized place in the firm and is purposefully addressed, apparently manifests as a strategic orientation in ways that reinforce and build market orientation. Larger and more established firms may be more cognizant of marketing strategy formulation in general and of the need to treat it with a deliberate focus. Smaller firms may treat marketing strategy as a set of ad-hoc activities that could be executed by several divisions and actors in the organization, deducing that marketing strategy need not merit a formalized process.

Although the literature and theory offers some insight about environmental/market uncertainty moderation in the building and growing of market orientation (Kirca et al., 2005), little guidance regarding moderation through technology turbulence and competitive intensity on market orientation antecedents is available. Our study offers needed information in this regard. Specifically, for the firms in Regime 1, which constituted the relatively smaller firms in our sample, both technology turbulence and competitive intensity suppressed the positive influence of aggressiveness on market orientation. In both cases, contextual effects perhaps pressured the firms to look to other resources and assets in their search for competitive dominance (e.g., Zhou et al., 2005), in turn resulting in strategic orientations less consistent with and reinforcing of market orientation.

For the moderation relationships in Regime 2 we see a different pattern. Both market forces muted the negative effects of aggressiveness. In the face of technology turbulence and competitive intensity, aggressiveness as a strategic orientation apparently was less consistent with market orientation and did not serve to enhance it as much as when these market forces were not present. Both competitive intensity and technology turbulence further enhanced the effects of risk proclivity on market orientation suggesting that when under pressure, the risk averse firm retrenches and maintains focus on what it understands and knows. Technology turbulence enhanced the effect of formalization suggesting that firms may look to their markets for ways to capitalize on opportunities emerging from technology churn, thus strategic orientations geared toward formalization of the marketing function in these conditions may reinforce market orientation.

For future orientation, competitive intensity amplified the negative influence on market orientation, and technology turbulence suppressed the negative influence. This indicates that long-term oriented firms in Regime 2 may perceive the benefits in current markets served as even more fleeting when competitors press the situation. They may see current markets as becoming exhausted to an even greater extent and perhaps more quickly in conditions of frenetic competition. Thus, in their orientation of looking beyond the present, these firms were even more likely to manifest their orientation in ways not consistent with a market orientation. In contrast, in technologically turbulent contexts, long-term oriented firms may seek to build understanding of customers' needs and wants, market



knowledge, and strong market linking capabilities so that opportunities emerging from the technology churn may be better realized. The press to connect technology to markets so that it can be harvested over the long-term could soften the manifestation of future orientation in the firm's strategic orientation, promoting consistency with a market orientation.

### 5.1. Implications for theory

The complexities of strategic orientations are well known and widely acknowledged as evidenced by the many studies focus on indentifying them, understanding them, building, limiting, or controlling them, as well as their effects on an array of outcomes (e.g., Gatingon & Xuereb, 1997). A key contribution of this study is that we advance the notion that market orientation is not cultivated in a vacuum and is influenced by various other dimensions of a firm's strategic orientation. The notion that some firms are more aggressive in their orientation than others, that is, have greater strategic intent (Hamel & Prahalad, 1989) is readily observable, likewise with temporal orientation, risk taking, and approaches to marketing strategy. It seems logical that these more general, higher-order orientations would influence market orientation. Such novel notions provide a rich backdrop for future research on how various elements of strategic orientation coexist, complement, reinforce, or perhaps are at odds with one another. Another contribution involves the role of the firm's context in the developing, or even in the sustaining or maintenance of market orientation. Considering the influential role of contextual effects in consequences of market orientation, our examination of moderation with antecedents is an important contribution.

### 5.2. Implications for managers

Market orientation in many, if not most, situations lead to positive outcomes for the firm (e.g. Cano et al., 2004; Kirca et al., 2005). It is no surprise, then, that managers have been inclined to cultivate and grow a market orientation (e.g., Gebhardt et al., 2006). Our work shows that to do so effectively, managers must understand other critical elements in the firm's strategic orientation and the likely effects of those elements on market orientation. The study findings reveal that some elements of the strategic orientation can support market orientation, whereas other elements may inhibit it. For example, depending on the situation (such as larger versus smaller firms), greater aggression may actually suppress market orientation. Conventional wisdom, however, stipulates that a tough, aggressive competitive orientation should be a good thing. The same contrast applies to a firm's future orientation. Good business practice suggests that to remain viable, the firm must look beyond the immediate to big-picture, future concerns. Yet, our results illustrate situations where such a perspective could have negative implications in terms of market orientation.

An important takeaway from this research, as revealed in the two regime solution and the varying pattern of relationships in our results, is that understanding the role of the various dimensions of firm strategic culture and the influence on market orientation is a complex proposition. For managers in larger firms, the impact of strategic orientation dimensions is different than for relatively smaller firms as suggested by generally stronger influences on market orientation. Likewise, when managers face intensely competitive and technologically turbulent contexts, the influence on market orientation becomes even more complex. In general, if managers wish to develop a specific dimension of the firm's strategic orientation, it would behoove them to think about how it would impact the firm's market orientation.

### 5.3. Limitations and future research

Though we believe them to be novel and useful, the findings and implications of this study must be considered in terms of limitations

as well as strengths. First, we relied on single key informants in our survey research. Although we took measures to ensure informant appropriateness through our preliminary field work and further validated informants' ability to report on the concepts, future research may consider the use of multiple informants. In addition, our research design involved single source data suggesting that common methods variance could be a factor. Again, we took multiple precautions to guard against common methods bias. Specifically, we varied the arrangement and order of the measures, and we varied the reporting tasks so as to minimize common methods concerns. Further, multiple tests for common methods bias did not indicate a problem. Nonetheless, future studies would be strengthened by collecting information from multiple firm data sources. Perhaps archival records could be analyzed to develop measures for aggressiveness, for example. Finally, our study is cross-sectional in nature and thus does not capture dynamic firm aspects. Future research should consider the use of longitudinal designs to further probe these issues and extend understanding of the firm's multidimensional strategic orientation.

### References

- Armstrong, S. J., & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14, 396–402.
- Atuahene-Gima, K., & Ko, A. (2001). An empirical investigation of the effect of market orientation and entrepreneurship orientation alignment on product innovation. *Organization Science*, 12(1), 54–74.
- Augusto, M., & Coelho, F. (2009). Market orientation and new-to-the-world products: Exploring the moderating effects of innovativeness, competitive strength, and environmental forces. *Industrial Marketing Management*, 38(1), 94–108.
- Campbell, D. T. (1955). The informant in quantitative research. *The American Journal of Sociology*, 60(4), 339–342.
- Cano, C. R., Carrillat, F. A., & Jaramillo, F. (2004). A meta-analysis of the relationship between market orientation and business performance: Evidence from five continents. *International Journal of Research in Marketing*, 21(2), 179–200.
- Christensen, C. M., & Bower, J. L. (1996). Customer power, strategic investments, and the failure of leading firms. *Strategic Management Journal*, 17(3), 197–218.
- Das, T. K., & Teng, B. S. (2001). Strategic risk behaviour and its temporalities: Between risk propensity and decision context. *Journal of Management Studies*, 38(4), 515–534.
- D'Áveni, R. (1994). *Hypercompetition*. New York, NY: Free Press.
- D'Áveni, R., Dagnino, G. G., & Smith, K. G. (2010). The age of temporary advantage. *Strategic Management Journal*, 31, 1371–1385.
- Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37–52.
- Day, G. S. (1999). *The market driven organization: Understanding, attracting, and keeping valuable customers*. New York, NY: Free Press.
- Deshpandé, R., Farley, J. U., & Webster, F. E., Jr. (1993). Corporate culture customer orientation, and innovativeness in Japanese firms: A quadrad analysis. *Journal of Marketing*, 57(1), 23–37.
- Ferrier, W. J. (2001). Navigating the competitive landscape: The drivers and consequences of competitive aggressiveness. *Academy of Management Journal*, 44(4), 858–877.
- Fornell, C. D., & Larcker, D. F. (1981). Evaluating structural equation models with unobserved variables and measurement errors. *Journal of Marketing Research*, 18(1), 39–50.
- Gatingon, H., & Xuereb, J. M. (1997). Strategic orientation of the firm and new product performance. *Journal of Marketing Research*, 34(1), 77–90.
- Gebhardt, G. F., Carpenter, G. S., & Sherry, J. F. (2006). Creating a market orientation: A longitudinal, multifirm, grounded analysis of cultural transformation. *Journal of Marketing*, 70(4), 37–55.
- George, G., Wiklund, J., & Zahra, S. A. (2005). Ownership and the internationalization of small firms. *Journal of Management*, 31(2), 210–233.
- Grewal, R., Lilien, G., & Mallapragada, G. (2006). Location, location, location: How network embeddedness affects project success in open source systems. *Management Science*, 52(7), 1043–1056.
- Grinstein, A. (2008). The relationships between market orientation and alternative strategic orientations: A meta-analysis. *European Journal of Marketing*, 42(1/2), 115–134.
- Hamel, G., & Prahalad, C. K. (1989). Strategic intent. *Harvard Business Review*, 67(3), 63–78.
- Hooley, G., Piercy, N., & Nicoulaud, B. (2008). *Marketing strategy and competitive positioning*. Harlow, UK: Prentice Hall.
- Hult, G. T. M., & Ketchen, D. J., Jr. (2001). Does market orientation matter?: A test of the relationship between positional advantage and performance. *Strategic Management Journal*, 22(9), 899–906.
- Hutchinson, J. W., Kamakura, W. A., & Lynch, J. G. (2000). Unobserved heterogeneity as an alternative explanation for 'reversal' effects in behavioral research. *Journal of Consumer Research*, 27(3), 323–344.
- Jacobson, R. (1990). Unobservable effects and business performance. *Marketing Science*, 9(1), 74–85.
- Jaworski, B. J., & Kohli, A. (1993). Market orientation, antecedents and consequences. *Journal of Marketing*, 57, 53–70 (July).

- Jimenez-Jimenez, D., & Ceggarra-Navarro, J. G. (2007). The performance effect of organizational learning and market orientation. *Industrial Marketing Management*, 36(6), 694–708.
- Johnson, J. L., & Sohi, R. (2001). The influence of firm dispositions on interfirm relationship formation in business markets. *International Journal of Research in Marketing*, 18(4), 299–318.
- Johnson, J. L., Sohi, R., & Grewal, R. (2004). The role of relational knowledge stores in interfirm partnering. *Journal of Marketing*, 68(3), 21–36.
- Kamakura, W. A., Wedel, M., & Agrawal, J. (1994). Concomitant variable latent class models for conjoint analysis. *International Journal of Research in Marketing*, 11(5), 451–464.
- Kirca, A., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing*, 69(2), 24–41.
- Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383–397.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing*, 54(2), 1–18.
- Kohli, A. K., & Jaworski, B. J. (1993). MARKOR: A measure of market orientation. *Journal of Marketing Research*, 54(2), 1–18.
- Kumar, N., Stern, L., & Anderson, J. (1993). Conducting interorganizational research using key informants. *Academy of Management Journal*, 36(6), 1633–1651.
- Lee, R., & Johnson, J. L. (2010). Managing the multiple facets for risk in new product alliances. *Decision Science*, 41(2), 271–300.
- Liao, S., Chang, W., Wu, C., & Katrichis, J. M. (2010). A survey of market orientation research (1995–2008). *Industrial Marketing Management*, 40(2), 301–310.
- March, J. G., & Shapira, Z. (1987). Managerial perspectives on risk and risk taking. *Management Science*, 33(11), 1404–1418.
- Martin, J. H., & Grbac, B. (2003). Using supply chain management to leverage a firm's market orientation. *Industrial Marketing Management*, 32(1), 25–38.
- Menon, A., Bharadwaj, S. G., Adidam, P. T., & Edison, S. W. (1999). Antecedents and consequences of marketing strategy making: A model and a test. *Journal of Marketing*, 63(2), 18–40.
- Menon, A., Bharadwaj, S. G., & Howell, R. (1996). The quality and effectiveness of marketing strategy: Effects of functional and dysfunctional conflict in intraorganizational relationships. *Journal of the Academy of Marketing Science*, 24(4), 299–313.
- Miller, K. D., & Chen, W. -R. (2004). Variable organizational risk preferences: A test of the March–Shapira model. *Academy of Management Journal*, 47(1), 105–115.
- Morgan, R. E., & Strong, C. A. (1998). Market orientation and dimensions of strategic orientation. *European Journal of Marketing*, 32, 1051–1073.
- Morgan, R. E., & Strong, C. A. (2003). Business performance and dimensions of strategic orientation. *Journal of Business Research*, 56, 163–176.
- Nadkarni, S., & Barr, P. S. (2008). Environmental context, managerial cognition, and strategic action: An integrated view. *Strategic Management Journal*, 29, 1395–1427.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20–35.
- Noble, C., Sinha, R. K., & Kumar, A. (2002). Market orientation and alternative strategic orientations: A longitudinal assessment of performance implications. *Journal of Marketing*, 66(3), 25–39.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York, NY: McGraw-Hill.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. -Y., & Podsakoff, N. P. (2003). Common method biases in behavior research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Porter, M. E. (1985). *Competitive advantage*. New York, NY: The Free Press.
- Sitkin, S. B., & Pablo, A. L. (1992). Reconceptualizing the determinants of risk behavior. *Academy of Management Review*, 17(1), 9–38.
- Sitkin, S. B., & Weingart, L. R. (1995). Determinants of risky decision-making behavior: A test of the mediating role of risk perceptions and propensity. *Academy of Management Journal*, 38(6), 1573–1592.
- Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation–performance relationship? *Journal of Marketing*, 58(1), 46–55.
- Slater, S. F., Olson, E. M., & Hult, G. T. (2006). The moderating influence of strategic orientation on the strategy formation capability–performance relationship. *Strategic Management Journal*, 27, 1221–1231.
- Slotegraaf, R. J., & Dickson, P. R. (2004). The paradox of a marketing planning capability. *Journal of the Academy of Marketing Science*, 32(3), 371–385.
- Srivastava, R. K., Shervani, T. A., & Fahey, L. (1998). Market-based assets and shareholder value: A framework for analysis. *Journal of Marketing*, 62(1), 2–18.
- Tellis, G. J., Prabhu, J. C., & Chandy, R. K. (2009). Radical innovation across nations: The preeminence of corporate culture. *Journal of Marketing*, 73(1), 3–23.
- Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31(3), 439–465.
- Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35(8), 942–962.
- Wedel, M., & Kamakura, W. A. (2000). *Market segmentation, conceptual and methodological foundations*. Boston, MA: Kluwer.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5, 171–180 (April–June).
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24, 991–995.
- Zhao, Y., & Cavusgil, S. T. (2006). The effect of supplier's market orientation on manufacturer's trust. *Industrial Marketing Management*, 35(4), 405–414.
- Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The effects of strategic orientations on technology and market based breakthrough innovations. *Journal of Marketing*, 69(2), 42–60.

**Jean L. Johnson** is The Gardner O Hart Distinguished Professor of Marketing at the Washington State University. Her research interests include interfirm marketing relationships, firm culture as relating to marketing strategy, interfirm learning, new products and innovation, and international strategic alliances. She has published in the *Journal of Marketing*, *Academy of Management Journal*, *Decision Science*, *Industrial Marketing Management*, *Journal of Retailing*, and *Journal of the Academy of Marketing Science*, among others.

**Kelly D. Martin** is an Assistant Professor of Marketing at Colorado State University in Fort Collins. Her research interests involve marketing ethics and firm strategy, consumer welfare, and the role of social institutions and culture in corruption. Her work has appeared in journals such as the *Academy of Management Journal*, *Journal of Consumer Research*, *Journal of Public Policy & Marketing*, and *Business Ethics Quarterly* among others.

**Amit Saini** is an Associate Professor of Marketing at University of Nebraska-Lincoln. He conducts research in the area of marketing strategy, technology and marketing, and marketing ethics. He has presented papers at major conferences, and his research appears in the *Journal of Marketing*, *Marketing Letters*, *Journal of the Academy of Marketing Science*, *Journal of Business Ethics*, and *Business Ethics Quarterly*. His industry experience includes sales management and quantitative market research.