

## Business performance and dimensions of strategic orientation

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### Abstract

Despite the conceptual, empirical, and theoretical advances in strategy–performance research, there is little consensus regarding the nature and form of this association. As a result, several critical reviews and meta-analyses have been reported which highlight notable limitations in extant studies. In addressing certain of these, this study presents an empirical investigation of medium and large, high technology, industrial manufacturing firms. Business strategy is conceptualized as a comparative construct with six dimensions and an attempt is made to relate these characteristics of strategic orientation with firms' business performance. The results indicate that firms' emphasis upon analysis, defensiveness, and futurity in strategic orientation are related to business performance. Discussion is given to these findings and implications are drawn for business executives and future research.

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### 1. Introduction

The management literature is replete with conceptual propositions grounded in empirical accounts of studies that have investigated the relationship between strategy and aspects of firm performance. However, it is ironic that despite this volume of research attention, consensus concerning this relationship at the business level has been slow to develop (Parnell, 1997). The principal reasons underlying this relate to: conflicting theoretical perspectives; anomalies in empirical context; contrasting bases for operationalization, measurement, and associated methodological considerations; and, differing modes of explanation. Beyond the intrinsic nature of debate underlying the strategy–performance relationship, the issue remains an area of fertile interest for both academic and executive communities. Nonetheless, a review of the extant literature reveals three notable limitations. First, the vast majority of studies have adopted a classificatory approach in their

conceptualization and measurement of business strategy and pursued either: the Porter (1980) low cost, differentiation, or focus typology (e.g., Parker and Helms, 1992; Schul et al., 1995); the Miles and Snow (1978) prospector, analyzer, reactor, or defender typology (e.g., Golden, 1992; James and Hatten, 1994; Ramaswamy et al., 1994); or, derived classifications such as those of Hurst et al. (1984) and Wright et al. (1995). An inherent limitation in this type of approach is the assumption of mutual exclusivity (Speed, 1993). Any effort to capture the complexity of strategy content requires a more sophisticated calibration that gages the properties of strategy rather than attempts to generate a unitary indicant for each type of strategy.

Second, firm performance has traditionally been considered purely in accounting terms (Conant et al., 1990; Jennings and Seaman, 1994). Although accounting performance can be considered a theoretical construct in its own right (Capon et al., 1990), the business performance construct is truly multifaceted which might explain the increased interest in frameworks such as: the “balanced scorecard” (Kaplan and Norton, 1992, p. 71) approach to performance assessment; the evolving market-based assets paradigm (Srivastava et al., 1998); and, emerging approaches from the accounting literature that

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question the “reliance on accounting performance measures (RAPM)” (Otley and Fakiolas, 2000, p. 497) in favor of approaches that shift the focus away from strictly accounting considerations to the more generic issues of business performance evaluation.

Third, most studies have tended to investigate firms specifically in mature and stable industries which is likely to explain departures in research findings from a small number of studies that have considered deregulated (Reger et al., 1992), transition (Golden et al., 1995), and volatile (Tan and Litschert, 1994) contexts.

In attempting to address these limitations, this paper presents an empirical investigation of medium and large, high technology, industrial manufacturing firms. The specific interests of the study were to examine the relationships between business performance and six dimensions of firms’ strategic orientation (aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness). The paper is organized respectively with a review of the strategic orientation and business performance literature, which is followed by an account of the theoretical premises and conceptual framework underlying the study. An explanation of the research method is then specified which precedes a description of the analytical approach and empirical findings. These results are then interpreted in the light of existing knowledge where a number of conclusions and implications are derived for executive audiences and future research directions.

## 2. Literature review

### 2.1. Strategic orientation

Business strategy has been characterized as the manner in which a firm decides to compete (Walker and Ruekert, 1987), which encompasses the pursuit, achievement, and maintenance of competitive advantage in an industry (Varadarajan and Clark, 1994). Given its position as a focal issue in organizational decision making, it is not surprising that the concept of strategy has been linked to performance outcomes. Indeed, it is a key postulate that many management researchers devote attention toward, in at least some respect, because without doubt “the notion that superior performance requires a business to gain and hold an advantage over competitors is central to contemporary strategic thinking” (Day and Wensley, 1988, p. 1).

Normative theory in strategy has tended to adopt process, content, or context perspectives (Ketchen et al., 1996). While process-research examines the management and administrative activities resulting in strategic decisions (Mintzberg and Lampel, 1998), content-research addresses the properties of the strategic decision and the business strategy per se (Veliyath and Shortell, 1993), and context-research focuses upon the conditions under which each of these takes place (Hartman et al., 1995).

The latter research stream is considered, at least to some extent, in most strategy studies by way of internal and external phenomena that are either controlled for or measured as explicit influences upon performance (Rajagopalan, 1996). However, an established literature base has been documented which is devoted to both understanding the nature of strategy processes (Van de Ven, 1992) and the assessment of the process–performance relationship (Hart and Banbury, 1994). Many aspects of this relationship have been examined from individual, group, and organizational viewpoints with no clear or consistent evidence having been reached (Rogers et al., 1999). A consequence of this lack of consensus has been that strategy content research has more recently played a greater role in explaining variations in business performance both when considered in combination with strategy process issues (Ketchen et al., 1996) as well as a construct in its own right (Voss and Voss, 2000).

Strategy content primarily focuses upon the outcome of strategic decisions and the manner in which business strategy content is manifest in a firm has been variously described as strategic fit, strategic predisposition, strategic thrust, strategic choice, and more commonly strategic orientation (Manu and Sriram, 1996). The literature has considered strategic orientation from three viewpoints: the narrative approach, the classificatory approach, and the comparative approach. The narrative approach endeavors to describe verbally the holistic nature of strategy which is unique to the event, situation, and organization (Czarniawska, 1998). The emphasis tends to be placed on qualitative methodologies where the aim is to pursue fine-grained research using case study analyses. Although notable in organizational research, this approach is constrained in its use for theory testing purposes on the basis that the conversation of narrative descriptions does not sufficiently measure variables that can be assessed using finely calibrated scales (Ginsberg and Venkatraman, 1985) and comparison is restricted across units of analysis because of the uniqueness of strategy to the organization, environment, and temporal circumstance (Harrigan, 1983).

An alternative, the classificatory approach, overcomes many of the constraints inherent in the narrative stance and has been regarded as the convention when attempting to investigate business strategy (Rajagopalan, 1996). This approach attempts to classify firms’ strategy according to either ex ante conceptual arguments or ex post empirically derived groupings. These classifications are respectively known as typologies (Miles and Snow, 1978; Porter, 1980) and taxonomies (Wright et al., 1995). This form of methodology is well grounded in the management literature but it must be acknowledged that schemata such as these are restricted solely to intergroup comparison, which prevents any investigation of intragroup analysis (Speed, 1993). Therefore, to suggest, for example, that a firm may be pursuing either a prospector, defender, analyzer, or reactor strategy (Miles and Snow, 1978) is interesting but, nevertheless, crude because important dimensions

may be excluded from the typology and subtle nuances that compose a strategy and explain behaviors and actions may be undetected.

The third approach to business strategy assessment is comparative and seeks to evaluate strategy by way of multiple traits or dimensions common to all firms. Therefore, strategy is considered in terms of the relative emphasis made by the firm along each strategic orientation dimension. This approach, consequently, overcomes the empirical limitations of the classificatory method in that strategic orientation is viewed not across strict strategy classifications but, alternatively, along specific dimensions. Extant conceptualizations for comparative strategy are limited but Venkatraman (1989) has proposed six dimensions of strategic orientation: aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness. This theoretical framework will be used as the basis for the following conceptualization, which will respectively describe the hypothesized relationships between each strategic orientation dimension and firms' business performance.

## 2.2. Business performance

Agency theory has developed as an adjunct to economic risk research (Holmstrom, 1979, 1987; Jensen and Meckling, 1976; Ross, 1973) in which the relationship between a principal (the owner of resources) and the agent (those who perform the work) is the focus of interest. In this respect, the principal is the shareholder while the agent is the strategic decision-making unit within the firm. Consequently, it can be claimed that, "... because executive-level managers are agents for shareholders, maximizing the present value of the firm is the appropriate motivating principle for management" (Quinn and Jones, 1995, p. 22). This view of the strategic decision-making unit as the economic agent to the shareholder is commonly referred to as the Principal-Agent Model of the Firm.

Agency theory postulates that principal-agent problems can arise from interest nonalignment and principals' inability to monitor agents (Baker, 1992). However, this was not of direct concern in this study because: "managers/agents ... stay focused on the need for profitable operations to the extent that they own company stock and/or have part of their compensation contingent on strong financial performance (interest alignment)"; and, "... the interests of shareholders/principals are kept in mind in major corporate decisions by a vigilant board of directors (monitoring)" (Frankforter et al., 2000, p. 322). These factors play an important role in the determination of strategic orientation within the firm and commonly explain differences in the manifest strategies firms pursue in their main marketplace. For instance, where the agent exercises significant managerial discretion the autonomy created can allow the firm to pursue courses of action that satisfy their self-interest to develop a certain composition of strategic orientation (Shaw et al., 2000, p. 612). That is, one agent may decide to emphasize

particularly the traits of aggressiveness, proactiveness, and riskiness in its strategy while another may stress the defensive, analytical, and futurity elements of their strategy. Nonetheless, both of these forms of strategic orientation will be conditional upon the nature of the particular principal-agent relationship. In the context of this study, this issue is particularly salient in that high technology firms are characterized as highly innovative types of firm in product technology terms but often their strategies employed in the marketplace may differ widely.

Business performance has been extolled as the ultimate dependent variable in empirical terms (Chakravarthy, 1986), advanced as a confused construct theoretically (Goodman et al., 1983), and a constant moving target in a managerial sense (Aggarwal (2001), Durand and Coeurderoy (2001)). Although many business performance models are well documented with established theoretical foundations, the model that has attracted most research attention is the High Performing Systems Model (Porter, 1991). Within this model, firms are considered high performers where their business performance is superior to that of directly comparable organizations: "superior implies that firms seek a level of ... performance that exceeds that of [their] referents, often its closest competitors" (Hunt and Morgan, 1995, p. 6). However, controversy exists in circumscribing what is meant and understood by the term business performance: "Although problems of a conceptual nature continue to underlie much of the discussion on organizational performance, its use as a key construct in strategy research studies has continued unabated. Strategic management researchers in their quest for establishing performance implications of strategic conduct of businesses, continue to measure business performance using a wide array of operationalizing schemes" (Venkatraman and Ramanujam, 1986, p. 813).

The conventional approach to business performance assessment has been to emphasize profitability, most frequently measured by return on investment, which is widely regarded as the ultimate "bottom line" (Reese and Cool, 1978, p. 28) test of success. However, Jacobsen (1987), among others, have heavily criticized the validity of return on investment as the sole indicator of business performance. While alternative financial indices and ratios have been used as indicants of business performance, many studies have adopted single-item measures, which can only serve as a proxy for the underlying phenomenon. Business performance is multidimensional in nature and accounting measures may be misleading because of "their (1) inadequate handling of intangibles and (2) improper valuation of sources of competitive advantage" (Bharadwaj et al., 1993, p. 87). Contemporary knowledge suggests that accounting-based issues need to be combined with market-based assets in order to generate a more composite assessment of business performance attributes (Srivastava et al., 1998; Otley and Pollanen, 2000). Although there is an inherent likelihood that accounting- and market-based performance aims may conflict (Barwise et al., 1989), the incorporation of issues

both on and off the balance sheet facilitates a more generic view of business performance (Kaplan and Norton, 1996). In consequence, there has been a recent tendency toward suggesting that financial performance is at the core of the business performance domain. Beyond this core lie operational performance measures, “such as . . . market share, that define a broader conceptualization of business performance by focussing on factors that ultimately lead to financial performance” (Murphy et al., 1996, p. 16).

Many reasons account for this multidimensional interest in business performance evaluation. First, after a significant period of global downsizing in many industries, organizations are experiencing diminishing returns on increasing profits from reductions in staff numbers and increasing operational efficiency. This has led to emerging interest on the drivers of future growth (e.g., sales) with market-based performance being seen as central to such development (Clark, 1999). Second, there has been a call from analysts and investors for more information to better understand the subtle but compelling features underlying accounting-based performance, so commonly under reported or poorly emphasized within annual reports and financial statements (Mavrinac and Siesfeld, 1997). Third, ever-improving modes of competitive behavior and innovative maneuvers by firms demand that the role of the customer in organizational decision making is moving up the boardroom agenda thus demanding a rounded articulation of business performance incorporating market-based issues (a leading research priority for the Marketing Science Institute, 2000).

### 3. Theoretical premises and conceptual framework

#### 3.1. Aggressiveness

In product-markets characterized by turbulence and competitive intensity, normative studies recommend aggressive strategic behavior which generates performance payoffs in sales growth and profitability (Covin and Slevin, 1991; Zahra, 1993). Also, the popular business media imbue executives with a clear sense that aggressive commercial activity is key to business success where upbeat remarks prevail such as: “Market leadership changes when the top sellers fail to match the progress of the aggressive newcomers. Among word processing programs, witness the decline of Word-star and Multimate and the rise of Wordperfect and Microsoft Word” (Howard and Kunkel, 1988, pp. 94–95).

The aggressiveness trait of strategic orientation is primarily concerned with exploiting and developing resources more rapidly than competitors (Clark and Montgomery, 1996a). Differential aggressiveness, which demands substantial investment, has been found to explain why certain firms create niche market positions and derive sustained benefits from such market development. Although this

strategy dimension does facilitate a favorable competitive posture (Fombrun and Ginsberg, 1990), aggressiveness typically involves a clear sales orientation (Lumpkin and Dess (2001)), which underscores the emphasis on market share development for improved performance (Buzzell et al., 1975; Wissema et al., 1980). Davidson (1987, p. 161) regards this approach as offensive where firms endeavor to mobilize, “direct frontal attacks to drive or overwhelm a competitor” in order to craft successful strategic performance. Originally, Levitt’s (1960) seminal work on marketing myopia established this theme in claiming that to influence business performance, a firm must adopt a pivotal aggressive orientation within all strategic processes. Hence, the aggressive behaviors employed in determining a firm’s strategic orientation are likely to be indicative of high business performance.

**Hypothesis 1:** Aggressiveness in firms’ strategic orientation is positively related to business performance.

#### 3.2. Analysis

The analysis dimension of strategic orientation reflects a firm’s knowledge building capacity (Bourgeois, 1980) and enabling processes for organizational learning (Cohen and Sproull, 1996). This trait represents specifically the firm’s approach to problem solving, which is secured by an understanding of both internal and external environmental contexts (Miller and Friesen, 1984). Furthermore, the analysis dimension includes the internal systems and procedures that facilitate the foundation and execution of competitive strategy to achieve firm objectives (Grant and King, 1982).

Closely aligned to the notion of rational comprehensive processes (Fredrickson and Mitchell, 1984), it has been observed that analytical activities and systems are positively related to performance in both stable industry environments (Fredrickson and Iaquinto, 1989) and volatile situations (Eisenhardt, 1989b). Indeed, in turbulent scenarios such as high technology environments, it has been found that successful decision-makers are those that, “use more information, consider more alternatives and seek a greater amount of advice. Instead of departing from the analytical requirements of comprehensive decision making, they accelerate their cognitive processes. The quick decisions resulting from comprehensive decision processes lead to better performance” (Goll and Rasheed, 1997, p. 584). Empirical evidence in support of this has also been found by Judge and Miller (1991) and Priem et al. (1995).

**Hypothesis 2:** Analysis in firms’ strategic orientation is positively related to business performance.

#### 3.3. Defensiveness

A firm’s level of business performance can be dependent upon the extent to which the organization is able to maintain



prominence within its domain (Chaganti and Sambharya, 1987) with little regard for development outside this specified zone of attention (Miles and Snow, 1978). Referred to as defensiveness, this dimension is noted for a high degree of strategy specialization (Child, 1974), a focus on existing domain defence rather than new product/market development (Miles and Cameron, 1982), and a belief that expert knowledge of a specialized area leads to high levels of business performance (Venkatraman, 1989).

McKee et al. (1989) contend that a narrow market focus generates high business performance levels based on the premise that efficiency gains derive from a narrow scope of activities with little variation in standard practices and procedures which, in turn, results in a low-cost advantage, ingrained marketplace knowledge, and strategic expertise in the specific product-market domain. Such themes have been echoed elsewhere with a defensive stance improving the efficiency of existing operations and strategies (Speed, 1993), excelling in production and cost control (Wright et al., 1995), and encouraging the continuity of relationships with suppliers and customers (Heide and Stump, 1995). Therefore, given benefits of defensiveness, it is reasonable to suggest that in attempting to secure high levels of business performance, “the firm seeks a position in an attractive market that it can defend against competitors. Although management’s task is then to identify and develop the requisite capabilities, what really matters is achieving a defensible cost ... position in an attractive market and keeping their rivals off balance” (Day, 1994, p. 38). Firms demonstrating the characteristics of defensiveness are able to accumulate selected capabilities and skills, and develop composite strategies to outperform less domain-focused firms (Hart and Banbury, 1994).

**Hypothesis 3:** Defensiveness in firms’ strategic orientation is positively related to business performance.

### 3.4. Futurity

Strategic management prescriptions stress the conceptual association between envisioning and business performance (Mintzberg, 1994). Notwithstanding the constraints of bounded instability, nonlinear planning, and chaotic environments, organizational preparedness maintains a role in not only reducing corporate anxiety about competitive futures but also providing a foothold to understanding the pattern, form, and extent of potential change in competitive, industry, market, and allied influences (Courtney et al., 1997). In the face of significant environmental change, it has been purported that a long-term vision is a strategic imperative for securing a competitive edge in the marketplace (Ganesan, 1994). Indeed, consistent commercial payoffs have been found to be apparent for the ‘long-term’ firm, in contrast to, both the ‘short-term’ firm and ‘transitory’ firm, across multiple accounting- and market-based measures of business

performance (Doyle and Hooley, 1992). A similar parallel can be drawn with Boyd (1991) who observed that long-term planning enables firms to outperform their counterparts that do not exhibit the traits of futurity.

**Hypothesis 4:** Futurity in firms’ strategic orientation is positively related to business performance.

### 3.5. Proactiveness

Proactiveness is central to innovative behavior and reflects a firm’s inertia for exploiting emerging opportunities, experimenting with change, and mobilizing first-mover actions (Dess et al., 1997; Lynn et al., 1996). Characterized as wandering between and within product-market domains, this trait is an enabler for competitive advantage because of its proactive pursuit of new products and new markets.

Grounded in action orientation, proactiveness has been associated with competitive superiority due to the ‘step-ahead’ tactics pursued and market leadership characteristics exhibited by firms with this strategic behavior (Gatignon and Xuereb, 1997). Also, high performance returns have been reported for such firms because of their responsiveness to market signals, access to scarce resources, customer loyalty gained when switching costs are high, proprietary experience effects, and high commitment to innovative improvements in business (Day and Wensley, 1988; Green et al., 1995; Wright et al., 1995). Consequently, proactiveness enables the firm to shape the nature and direction of competition to its advantage.

**Hypothesis 5:** Proactiveness in firms’ strategic orientation is positively related to business performance.

### 3.6. Riskiness

The riskiness trait of strategic orientation can be described as the possible losses or gains that are derived from an action (Clark and Montgomery, 1996a). Therefore, riskiness is important in resource allocation situations and can act as a key parameter in determining the decision processes involved in competitive strategy (Dickson and Giglierano, 1986). The riskiness trait is intuitive rather than analytical requiring risk oriented decision making and a significant financial and human resource investment (Miller, 1989).

Risk-oriented firms are purported to combine the entrepreneurial skills of constructive risk taking with opportunistic venture seeking (Baird and Thomas, 1990). In order to engage in such behavior, the firm must aspire to a mode of generative learning and develop a sense of exploration within the organization (March, 1991). Only by engendering a flexible spirit of creativity and traditional rule breaking can riskiness provide the firm with potential improvements in business performance. Thus, where traits of riskiness are evident within a firm’s strategic orientation, business per-

formance levels may be notably high (Bettis and Hall, 1982; Bromiley, 1991).

**Hypothesis 6:** Riskiness in firms' strategic orientation is positively related to business performance.

#### 4. Research method

##### 4.1. Data generation

Data were generated from a mail survey of medium and large, high technology, industrial manufacturing firms. Small firms were excluded from the investigation due to their limited scope in strategic analysis, heavy reliance upon ad hoc strategic design, and preoccupation with operational decision making (Lyles et al., 1993; Dodge et al., 1994). Furthermore, this control for firm size both accommodates the fact that the large firms dominate the high technology sector (Hughes, 1999) and reduces the effect of spurious results attributed to type of firm (cf. Murphy et al., 1996).

Despite the interest in high technology firms exhibited by multiple constituencies from academicians to public policy-makers, and stock market analysts and investors, there is little clarity in the definition of high technology. Although there are various formal approaches to characterizing high technology sectors such as the OECD's criterion of an R&D to sales ratio of more than 4%, there are many exceptions to this where, for instance, diapers (hardly a typical high technology product) are one of the most heavily patented products with new designs being introduced approximately every 6 months (Parker-Pope, 1999). In practice, the main proxy indicator used by governments and industry tends to be Standard Industry Classification (SIC) codes. For purposes of this study, a liberal interpretation of high technology was applied which typically involved firms characterized by: rapid product innovation; exploitation of frequent new technologies in production processes; a high level of technical and scientific expertise necessary for operations; and, R&D being a key driver underlying the future growth of the industry. The Kompass directory of registered UK enterprises was selected as the sampling frame. Following a systematic random selection procedure, 1000 units were compiled from a list of firms primarily affiliated to the following sectors each satisfying the high technology criteria established above: instrument engineering and precision equipment; electrical, electronic, data processing, and nucleonic equipment; advanced mechanical engineering; chemical and oil-related; and, selected heavy industry and high technology transportation plant and equipment.

The identification and selection of sampling unit informants was considered with attention being paid to the locus of knowledge within the firm concerning the data generation requirements of the survey. So as to limit measurement error, it was determined that the Head of Marketing in each sampling unit could be accepted as the key informant in that

this individual would possess understanding of the firm's dimensions of strategic orientation from marketplace, channel, and organizational constituencies, and be in a position to offer judgement on both accounting-based performance measures and market-based indicators requested in the survey instrument. Thus, drawing upon the informascope of this executive should provide reliable data on the issues under investigation. The reasons for this are that: the Head of Marketing typically assumes boundary spanning responsibilities and has to inform the strategic apex of a host of pertinent external influences affecting and likely to affect strategy (Workman et al., 1998), and marketing executives' views typically correspond with other functional executives' attitudes and beliefs regarding key strategic issues in interrater reliability tests (Hughes and Garrett, 1990; Morgan and Piercy, 1998). The informant selection does not suggest that marketing was a dominant function in the firms surveyed (Workman et al., 1998), nor that this function was implicitly more powerful in strategic terms than other functional entities (Salancik and Pfeffer, 1977), but that the Head of Marketing was best placed, more than any other functional head or the CEO, to comment upon the array of issues required to complete the survey instrument.

##### 4.2. Respondents

The survey was administered pursuant with Dillman's (1978) guidelines for the Total Design Method. Prenotification letters, questionnaire package, and a series of reminder correspondence were respectively despatched to informants. A total of 181 responses were received, of which 32 were ineligible because: company policy prevented involvement in external studies, firms had moved principal location, respondent organizations fell below the minimum medium size threshold of 100 full-time personnel, or, the research instrument was inadequately completed. Although the response rate yielded may prima facie appear low, the rate is comparable with other studies adopting a similar research design (Piercy and Morgan, 1994). Furthermore beyond Dillman's protocols, recommended practice concerning advance notice, follow-ups, questionnaire salience and length, return postage, anonymity guarantee, and university sponsorship were all incorporated in order to bolster the potential response (Jobber and O'Reilly, 1998; Roth and BeVier, 1998).

Respondent firms ranged across the industrial sectors surveyed. Firm size was similarly distributed with number of employee bands scoring the following proportion of the respondent set: 100–250 employees = 45%; 251–500 employees = 34%; 501–1000 employees = 8%; and, 1001 employees or more = 13%. This was also respectively the case for sales turnover: less than US\$10 million = 17%; US\$10 million–less than US\$20 million = 52%; US\$20 million–less than US\$30 million = 8%; US\$30 million–less than US\$40 million = 7%; and, US\$40 million or more = 16%. Analyses of individual respondent character-

istics revealed that the majority were Marketing Directors (55%), while the remainder were Marketing/Business Development Managers (42%), or other executive personnel appointed at the strategic apex of the firm (3%). In addition, the mean tenure of individual respondents was 11 years indicating that informants were familiar and experienced with the strategic priorities and organizational routines of their firms. Nonresponse bias was examined using the Armstrong and Overton (1977) extrapolation method. Statistical comparison between groups of early and late respondents revealed no significant differences, at conventional levels, between the variables of interest in the study.

#### 4.3. Operationalization and measurement

Business performance variable selection was made using a combination of traditional accounting-based items (return on investment and sales growth), market-based items (market share, customer satisfaction, competitive position, and customer retention) and a single generic item of “overall firm performance.” This synthesized measure was used, consistent with the conceptualisation (cf. Bhargava et al., 1994), because it has been suggested that high market-based performance predisposes the firm to improved financial performance by altering customer buying behavior in a favorable manner (Kerin et al., 1990; Szymanski et al., 1993; Anderson et al., 1994).

Given the limitations of data availability and accessibility to generating objective performance assessments of these measures, perceptual performance judgements were used. Studies indicate that there is validity in this approach where a high correlation has been found between objective and perceptual indicators (Dess and Robinson, 1984; Venkatraman and Ramanujam, 1986). Performance assessment is relative in nature and suitable specification must be made to indicate the referents used for comparison (Lewin and Minton, 1986). Consistent with the high-performing systems model and strategic group analysis on competitive space, referents were determined to be those major, direct competitors of respondent firms (Dess and Robinson, 1984; Dess et al., 1997; Jaworski and Kohli, 1993; Robinson and Pearce, 1988; Tan and Litschert, 1994). The investigation of competitor identification and analysis has become more apparent in the recent literature (Clark and Montgomery, 1999) and the strand of this research that was drawn upon here was that of cognitive oligopoly (Porac and Thomas, 1990). This theoretical standpoint views competitor identification as a process of categorization: “. . . in which the manager of a particular firm, which we call the focal firm, is observing other firms, which we call target firms, to determine which of the target firms are competitors of the focal firm” (Clark and Montgomery, 1999, p. 68).

The evidence suggests that firms do not identify competitors individually but they rather associate themselves

with a particular competitive category and thereby analyze such target firms as their major, direct competitors (de Chernatony et al., 1993; Porac et al., 1995). To endorse this point further, Porac and Thomas (1994, p. 55) declare that: “Defining a business essentially entails matching a [focal] firm’s characteristics to a category feature list and then using this match as a reference point around which competitive boundaries are cognitively constructed . . . This inferred similarity would then be the basis for subjective competition.”

Such subjective competition is perceptually grounded and as such, forms the basis of business performance assessment here. To respect the turbulent nature of the high technology environment in which firms operated, the time horizon adopted was 1 year prior to the investigation (Lubatkin and Shrieves, 1986). For the purposes of business performance measurement, therefore, respondents were asked: “With regard to your firm’s main marketplace, how would you score your business performance, over the last one year, relative to your major, direct competitors in terms of . . .” the seven relevant items (Table 1). Responses were gauged on a scale anchored by  $-3$  (*much worse*) to  $3$  (*much better*) with a midpoint of  $0$  (*about the same*).

Although multiple measures of strategic orientation have been reported, the interests of this study were to gage the nature of competitive strategy from a comparative standpoint. The most suitable measurement approach was, consequently, Venkatraman’s (1989) dimensions of strategic orientation designed to specifically capture the ingredients of competitive strategy that underlie hypothesis testing here. The battery of six sets of statements advanced by Venkatraman was used to measure respondents’ emphasis upon aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness in strategic orientation. A seven-point scale anchored by  $1$  (*strongly disagree*) to  $7$  (*strongly agree*) was employed for respondents to check (Table 1).

## 5. Analysis and results

### 5.1. Scale construction

Mean summated scores were computed from the relevant items to derive aggregate scales of business performance, aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness (Table 1). Scale reliability was evaluated using the composite method advanced by Hair et al. (1998). All reliability coefficients were acceptably high indicating that items were found to meaningfully contribute to the respective dimensions. The internal validity of each scale was assessed on the basis of item-total correlation analysis, which revealed significant positive coefficients between .59 and .87. As a result of this scale construction procedure, the business performance index and six strategic orientation indices were considered appropriate for hypothesis testing.

Table 1  
Scale construction: business performance and dimensions of strategic orientation

Scale	Scale reliability/ item-total scale correlation <sup>a</sup>
Business Performance	.91
Market share	.77
Customer satisfaction	.70
Competitive position	.76
Customer retention	.80
Sales growth	.78
Return on investment	.73
Overall firm performance	.86
Aggressiveness	.90
We often sacrifice profitability to gain market share	.87
We often cut prices to increase market share	.88
We often set prices below competition	.78
We often seek market share position at the expense of cash flow and profitability	.83
Analysis	.88
We emphasize effective coordination among different functional areas	.71
Our information systems provide support for decision making	.75
When confronted with a major decision, we usually try to develop thorough analysis	.79
We use several planning techniques	.74
We use the outputs of management information and control systems	.85
We commonly use manpower planning and performance appraisal of senior managers	.64
Defensiveness	.83
We occasionally conduct significant modifications to manufacturing technology	.74
We often use cost control systems for monitoring performance	.72
We often use production management techniques	.86
We often emphasize product quality through the use of quality circles	.70
Futurity	.87
We emphasize basic research to provide us with future competitive edge	.71
Forecasting key indicators of operations is common	.84
Formal tracking of significant general trends is common	.85
We often conduct “what if” analyses of critical issues	.75
Proactiveness	.71
We are constantly seeking new opportunities related to present operations	.64
We are usually the first ones to introduce new brands or products in the market	.61
We are constantly on the look out for businesses that can be acquired	.66
Operations in later stages of the life cycle are strategically eliminated	.54
Riskiness	.74
We seem to adopt a rather conservative view when making major decisions <sup>b</sup>	.64
New projects are approved on a “stage by stage” basis rather than with “blanket” approval <sup>b</sup>	.66
We have a tendency to support projects where the expected returns are certain <sup>b</sup>	.59
Our operations have generally followed the “tried and true” paths <sup>b</sup>	.72

<sup>a</sup> Product–moment correlation coefficients. All coefficients are significant where  $P \leq .001$ .

<sup>b</sup> Items reverse-scored for analysis purposes.

## 5.2. Strategic orientation and business performance relationships

The nature of the strategic orientation and business performance relationships were first examined on a bivariate basis. Pearson correlation coefficients were calculated for each of the six hypothesized relationships and Table 2 illustrates three significant associations between each of the analysis, defensiveness, and futurity dimensions and business performance ( $P < .01$ ). Furthermore, for each of these correlations, the hypothesized positive direction of association was specified supporting Hypotheses 2, 3, and 4. However, no such associations were found for aggressive-

ness, proactiveness, and riskiness meaning that Hypotheses 1, 5, and 6) were unsupported.

Venkatraman (1989) suggests that firms' strategic orientation simultaneously comprise the characteristics of all six dimensions, although each may be emphasized differently in overall business strategy. Therefore, multiple linear regression was used to model the collective relationship between the independent (strategic orientation) variables and the dependent (business performance) variable.

The goodness-of-fit ( $F = 4.48$ ) and explanatory power (adjusted  $R^2 = .11$ ) of the regression model was acceptable. The independence assumption was respected and inspection of the variance inflation factors attributed to each dimension



Table 2  
Bivariate and multivariate relationships with business performance

Strategic orientation dimensions	Mean (S.D.)	Correlation coefficient	Regression coefficient	Standardized regression coefficient	<i>t</i> value	Variance inflation factor	Condition index
Intercept			3.70		8.31**		
Aggressiveness	3.28 (1.38)	-.04	5.20	-0.76	-1.02	1.03	6.49
Analysis	4.39 (1.15)	.34**	0.26	0.32	3.22**	1.80	8.42
Defensiveness	4.33 (1.22)	.29**	0.15	0.19	2.13*	1.45	12.42
Futurity	4.11 (1.35)	.21**	-5.70	-0.08	-0.79	1.94	13.08
Proactiveness	4.21 (1.02)	.13	-2.60	-0.03	-0.33	1.34	15.22
Riskiness	3.39 (1.01)	.01	4.45	0.05	0.64	1.03	19.01

$R^2=.14$ ;  
Adjusted  $R^2=.11$ ;  
 $F=4.48$  \*\*

\*  $P < .01$ .

\*\*  $P < .05$ .

found values well below the threshold of 10 for problematic multicollinearity (Neter et al., 1989). This is mirrored in the condition indices extracted which reflect the fact the relative amount of variance associated with each eigenvalue was sufficiently low ( $< 30$ ) so as to eliminate concerns regarding a lack of independence among the strategic orientation variables (Hair et al., 1998).

The regression procedure calculated analysis and defensiveness as statistically significant ( $P < .05$ ) in the business performance model extracted (Table 2). This was consistent with the bivariate analysis, although following the multivariate approach, futurity was no longer specified as a significant parameter in its relationship with business performance. Such a nonsignificant relationship was also found to be the case for aggressiveness, proactiveness, and riskiness as indicated in the correlation analysis. Interestingly, analysis and defensiveness were ranked highest of all six dimensions in terms of the emphasis placed by firms upon these properties of strategic orientation. This suggests that while all firms necessarily pay close attention to analytical skills and capabilities as well as defensive tactics, those firms achieving high levels of business performance focus even greater attention upon these discrete characteristics than firms enjoying less fortuitous circumstances.

Therefore, while evidence was found to uphold the hypotheses concerned with analysis, defensiveness, and futurity (in part) (Hypotheses 2, 3, and 4, respectively), no such support was evident for the remaining hypotheses related to aggressiveness, proactiveness, and riskiness (Hypotheses 1, 5, and 6), respectively).

## 6. Conclusions and implications

The results from this investigation are notable and are distinguished from certain other studies by a single generalization: Firms that emphasize the traits of defensiveness, analysis, and futurity in strategic orientation typically exhibit high levels of business performance. These strategy

dimensions are conservative in nature, relative to the non-associative scales of proactiveness, riskiness, and aggressiveness, and reveal that high performing businesses are distinctly cautious, prudent, and make judicious use of their defensive skills, analytical capabilities, and future-oriented management. Although the traits of proactiveness, riskiness, and aggressiveness are typical of entrepreneurial intensity, the extent to which they relate to business performance among this sample of high technology industrial manufacturers appears to be limited.

Despite the intuitively appealing notion that corporate entrepreneurship may positively affect performance outcomes (Morris and Sexton, 1996), “surprisingly little systematic empirical evidence is available to support the belief” (Covin and Slevin, 1991, p. 16). While this largely remains the case, the findings from this study imply that although entrepreneurial traits such as proactiveness, riskiness, and aggressiveness have their place in the complement of strategic orientation, the relative commercial rewards available appear less clear (Dess et al., 1997; Hart, 1992). A comparison may elaborate on this: while neither conservatism nor entrepreneurialism are inherently ‘good’ or ‘bad’ (Miller and Friesen, 1982), so too can the same be claimed for Miles and Snow’s (1978) prospector, defender, and analyzer types of firm. For the latter group, it can be suggested that although prospector firms exhibit entrepreneurial characteristics, a large number of studies have found that their business performance will be the same as defender and analyzer firms (Conant et al., 1990) that are generally described as conservative.

An interesting framework for interpretation of these findings is offered by theories of competitive analysis and conjectural variations (Amit et al., 1988). This literature is concerned with the explication of competitor interactions in the marketplace. The significant investment and inertia needed to sustain entrepreneurial intensity demands that a firm’s energy must be deployed toward securing constant improvement, innovation, and the development of products, technologies, and markets. However, these efforts can often

be expressed as first-mover disadvantages (Mueller, 1997). In theories of competitive reactions, it has been demonstrated that the lagged effect of cannibalization and late-mover actions by firms employing conservative strategies can produce improved overall performance (Shankar et al., 1998). Also, evidence illustrates that the more a firm experiences competitive reactions, the lower is its overall performance (Clark and Montgomery, 1996b). Furthermore, Clark and Montgomery (1996b, p. 117) argue, “competitive reactions may hurt a firm regardless of the accuracy with which the reactions are perceived; indeed, one of the practical implications of much of the research on competitive reactions is to better understand how a competitor can best react to hurt a firm.” Additional support can be found to consolidate this position in the work of Bryman (1997), Golder and Tellis (1993), and Mitchell (1991), among others.

Population ecology theory has also been allied to this debate by researchers investigating pioneers or entrepreneurial firms and late-entrants, followers, or conservative firms (e.g., Lambkin, 1988): Population ecology theory suggests that the latter outperforms the former. This conclusion is drawn from the effect of liability of newness which postulates that mortality is more evident among ‘new’ organizations (Freeman et al., 1983) and the lack of established legitimacy in the environment is a constraint that induces such an effect (Singh et al., 1986). However, it should be recognized that business performance improvement among conservative firms over entrepreneurial firms could be overstated. Robinson et al. (1994) warn that for followers that do not achieve competitive scale, the performance effects of later entry may be exaggerated. For this study though, this was not of direct concern because business performance did not significantly correlate with employee numbers or sales turnover indicating similarity in competitive scale. In addition, while effective business performance has been aligned with conservative strategies above, all firms did also exhibit aspects of entrepreneurialism although these dimensions were not significantly related to business performance.

Important executive implications can be derived from this study. For instance, priorities need to be established to appreciate the benefits of defensive competitive traits, analytical capabilities, and future-oriented planning. Although these characteristics do not readily align themselves with offensive strategic maneuvers, they do provide firms with grounding for business performance competitiveness. Consequently, emphasizing these dimensions of strategic orientation is not so much ‘managing on the back foot’ as demonstrating caution and timeliness in executing aggressive, proactive, and risk-seeking behaviors.

Alternatively, firms emphasizing aggressiveness, proactiveness, and riskiness in strategic orientation need to examine the costs of maintaining competitive strategy vis à vis the payoff in short-term, intermediate, and long-term performance attributes. This should form a key ingredient in corporate review tasks and performance

diagnoses. Identified performance gaps between organizational goals and realized outcomes will need to be addressed by executives concerning competitive posture, marketplace opportunity, and importantly, the composition of optimal strategic orientation to ensure business performance improvement.

Finally, executives must recognize the multiple, and possibly conflicting, performance aims that confront them. It is vital that they generate a composite view of business performance assessment, management, and aspiration. In this regard, Kaplan and Norton (1996) present an interesting analogy between the myopic firm focussing on a single performance goal and an aircraft pilot charged with flying an airplane using only one technical instrument. Naturally, the confidence a passenger might have in a pilot using a single instrument to, for example, measure airspeed while ignoring altitude, fuel, and other fundamentals to a successful flight, does parallel with the executive focussing on a single objective during a certain time period, and an alternative objective during the next time period. Nowadays, navigating a firm successfully through the minefield of marketplace turbulence and uncertainty does demand a balance between accounting- and market-based performance criteria and strategic orientation.

Our research findings suggest fertile directions for future research. First, further investigation might be directed toward the nature of association between path dependencies in strategic orientation and business performance. Complimentary studies involving longitudinal methodologies and data envelopment analysis may help to track the form of a lagged performance relationship regarding both aggressive, proactive, and risk-averse entrepreneurial types of firm and more analytical, defensive, and future-oriented conservative types of firm. This line of inquiry is related to two widespread strategic practices but associated with emerging literatures: (i) competitor imitation, or so-called lemmus lemmus strategies (Saunders et al., 2001), and (ii) strategic preemption (Mason and Phillips, 2000). Regarding the former, important questions need to be raised here regarding the relationship between innovative and imitative strategies and their trade-off in performance terms. Phelan (1997), and Wensley (2000) have all made interesting contributions here worthy of further exploration. The latter avenue of research tests the preemptive actions of dominant (high-performing) firms in attempting to increase their market power over potential new entrants or rival incumbents. Industrial organization theory has examined related issues using game theoretic approaches (Mason and Nowell, 1998) and simulation methodologies addressing the dynamics among strategy dimensions may reveal notable exceptions to extant knowledge in this area.

Second, prospect theory (Kahneman and Tversky, 1979) presents researchers with a suitable workbench upon which to examine the strategy–performance relationship. This theory is built upon the argument that strategists are risk-seeking when recent performance has been unsat-

isfactory and risk-averse when recent performance levels have been attained or surpassed (Bowman, 1980; Bromiley, 1991) — this notion has been explored by Jayachandran (2000) in the form of a ‘complacency effect’ where past business performance was found to be positively related to a firm’s ability to respond to competitors but negatively related to its motivation to do so. These tenets contrast with conventional financial theory that declares a positive risk-seeking and business return relationship. However, prospect theory does facilitate an interesting explanation for riskiness and future developments may build upon both this study and work by Wright et al. (1995) in exploring the same for the proactiveness and aggressiveness dimensions of strategic orientation. Linked to this consideration is of working strictly within agency theory to develop an improved understanding of the interaction between shareholder interests and the determination of strategic orientation. This follows from Eisenhardt’s (1989a) recommendation to expand principal–agency considerations to rich organizational contexts in order to better understand the agency problems that arise in managing this relationship — especially between shareholders and executives. Naturally, such consideration will need to overcome the research design challenges and measurement problems cited in prior research (Bergen et al., 1992; Austin and Larkey, 2000).

Third, in order to provide more conclusive results, tests need to be performed to understand the relationship between strategy and business performance at multiple levels of analysis (McGahan and Porter, 1997). Further, incorporating measures of organizational capabilities and competition in such a framework, and examining the endogeneity between these constructs, would allow insights to move beyond what is currently considered to be “a rudimentary stage” (Henderson and Mitchell, 1997, p. 6) of understanding.

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