

# **INTEGRATION OF MARKET AND ENTREPRENEURIAL ORIENTATIONS**

By

Di Zhang

A Dissertation submitted to the Faculty of Graduate Studies of

The University of Manitoba

In partial fulfillment of the requirements of the degree of

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Department of Management

Asper School of Business

University of Manitoba

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**DOCTOR OF PHILOSOPHY**

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## ABSTRACT

Market orientation (MO), which primarily focuses on knowing the customers and competitors, has been a dominant theme in marketing strategy research for the last two decades. Theories and empirical evidence generally support that MO has a robust positive influence on firm performance. However, MO has its limitations. It has been argued that MO may be necessary, but not sufficient, to provide sustainable competitive advantages.

Recent research indicates that other strategic orientations, such as entrepreneurial orientation (EO), which emphasizes innovativeness, pro-activeness, and risk-taking, may potentially serve as a complementary route to superior performance. However, the integration of the two strategic orientations has not been fully investigated.

The purpose of this dissertation is to explicate how these two strategic orientations differ – MO responds to external environments, and EO resorts to internal visioning. It is argued that firms can adopt either one of these two orientations, or a combination thereof, to achieve performance goals. From a resource-based view, this dissertation will also explore how industry environment and organizational factors provide a context, where management emphasis is steered towards a certain combination of these strategic orientations.

Using data from a Canadian national survey of business owners and managers of manufacturing companies, this dissertation demonstrates that MO leads to improved customer satisfaction and loyalty (CSL), which ultimately leads to financial performance. In contrast, EO bypasses CSL, and has a direct impact on financial performance. The benefits of these two strategic orientations are unique and complementary.

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## DEDICATION

This dissertation is dedicated to my late mother, whose tireless energy has been,  
and will always be, my motivation and inspiration.

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## CHAPTER 1: INTRODUCTION

Are there different pathways for entrepreneurs and managers of organizations to achieve superior performance? Should they follow exclusively the signals dictated by the external environment in seeking a strategy-environment fit? Should they depend on other players in the market, such as customers and competitors, to decide their courses of actions? Or should they follow their internal instincts and be innovative, pro-active, and willing to take risks? Could they balance these potentially conflicting perspectives? Under what circumstances would entrepreneurs and managers place more emphasis on one or the other perspective? Is one strategic orientation better than the other? This dissertation attempts to investigate these topics.

Market orientation (MO) has been a dominant theme in marketing strategy research for the last two decades. It refers to the kind of organizational culture where a firm focuses on getting to know its customers and competitors well, and being able to internally coordinate responding actions (Narver and Slater 1990). Behaviourally, market-oriented firms place a high priority on the generation and dissemination of, and responsiveness to, market intelligence (i.e., knowledge of the customers' current and future needs) (Kohli and Jaworski 1990). Recent meta-analyses on MO literature report that there have been over 200 published studies on this subject, and that theories and empirical evidence generally support the argument that MO has a robust and positive influence on firm performance (Cano, Carrillat, and Jaramillo 2004; Kirca, Jayachandran, and Bearden 2005). By robust, it is meant that MO's benefits are universal, no matter the type of industry, the kind of industry conditions, or even the nation in which the business is based. Baker and Sinkula (1999), while recognizing the universality of MO's benefits,

argue that MO is only one of many aspects of management practices, and market-oriented firms need to go through a learning process to fully understand MO's relationships with other aspects of management to realize its full potentials.

Scholars have invested considerable effort in connecting MO with other related management constructs. It can be considered the central construct of a network of inter-related organizational variables that work together in the pursuit of superior organizational performance. First, it has been argued, for example, that MO cannot automatically bring about its positive influence by itself. Intelligence accumulated through market-oriented activities needs to be properly managed. Delbaere, Sivaramakrishnan, and Bruning (2003) demonstrate that firms with superior capabilities in managing knowledge of their customers and competitors could better capitalize the benefits of MO. Second, it has also been argued that firm-level constructs such as MO do not exist in a vacuum. MO involves the motivation and participation of real people. Kohli and Jaworski (1990) posit that MO would lead to heightened employee commitment, while Zhang, Delbare, Sivaramakrishnan, and Bruning (2004) argue that this relationship is dynamic. The data of Zhang et al (2004) show that organizations with committed employees and market-based reward systems are more likely to adopt a market-oriented organizational culture. Third, market-oriented organizational culture is deeper than just superficial hypes and cheers. Delbare, Zhang, Sivaramakrishnan, and Bruning (2005) reveal that in order to maximize the benefits of MO, firms must make real investments in developing analytical capabilities that interpret the meanings of data and information and translate it into knowledge. Furthermore, MO regulates learning-oriented organizations and helps them focus on what to learn, thereby maximizing the reward for learning

(Zhang et al. 2007). Therefore, MO works in conjunction with committed employees, analytical capabilities, knowledge management, and a host of other related variables, such as organizational learning (Baker and Sinkula 1999; Slater and Narver 1995) or innovation (Deshpande and Farley 2004; Han, Kim, and Srivastava 1998), to name just a few. Together, these organizational variables would make positive contribution towards organizational performance.

Several potential limitations of MO have been noted (Zhang 2006). For example, Kirca et al. (2005) note that empirical support for a direct link between MO and objective firm performance has been weak. Narver, Slater, and MacLachlan (2004) observe that MO, in its traditional form of conceptualization, fails to predict successful commercialization of innovations that result in the creation of new markets. Christensen (2003) argues that a strong commitment to current markets leaves firms beholden to customers who typically have neither the foresight nor interest for radical innovations. As a consequence, firms may overlook emerging markets. Hence, scholars argue that MO is necessary, but is not sufficient to facilitate the type of innovations that breed long-term competitive advantages (Baker and Sinkula 2002; Dickson 1996).

What other strategic orientations would be a good complement to MO? Several alternatives and extensions have been proposed in the literature. For example, marketing scholars have proposed market-driving strategies (Kumar, Scheer, and Kotler 2000). Key characteristics of market-driving strategies include pro-actively changing the external market structure, redrawing industry boundaries, redefining the market space, or re-conceiving products and services (Hills and Sarin 2003), as opposed to being led by the market. Typical behaviours prescribed by scholars to influence market preference or



market structure include becoming the cognitive referent in the market by developing an identity that becomes synonymous with the market (Santos and Eisenhardt 2005) or eliminating competitors through joint ventures, partnerships, mergers, or acquisitions (Jaworski, Kohli, and Sahay 2000). Anecdotally, Google would be a good example of an organization with a market-driving strategy because it sets a new standard for the industry and has become synonymous with online searching. Microsoft also drives the market by buying its competitors if it fails to eliminate them through competition. However, such powerful changes of the market seem to be unreachable for most companies as little is known about how to achieve such powerful end states.

What could average managers of average companies do? Narver, Slater, and MacLachlan (2004) propose a proactive MO that focuses on discovering and satisfying customers' latent, often unaware, needs. This is also sometimes referred to as market visioning. With a proactive MO, they argue, an organization anticipates future developments in the market and extrapolates trends of what customers in a current market will need in the future. For example, customers were not aware that they needed a portable cassette player before Sony introduced the Walkman, nor were they aware that they needed an iPod before Apple introduced it. It appears that, post hoc, researchers and practitioners can easily attribute successful commercialization of innovation to having proactively discovered latent needs. However, proactive MO has not been able to prescribe, *ex ante*, how to identify emerging markets and successfully exploit them. Furthermore, as Narver et al. (2004) note, when markets are extremely dynamic, even anticipating the future needs of current customers may not be enough; something else needs to be done.

Other scholars have suggested incorporating intuition into strategy making (Campbell 1991) and extending the utilization of tacit knowledge. This refers to the kind of knowledge that is embedded in organizational procedures (Mooradian 2005) and emphasizes the important processes of socialization, such as passing unwritten knowledge from one individual to another within the organization (Dyck et al. 2005). These arguments represent a significant departure from a planning and designing school of strategy-making. Indeed, there are circumstances where entrepreneurs and managers simply have to *do*, foregoing the luxury of time to carry out formal and analytical designing and planning processes. There is no doubt that value exists in understanding the tacit knowledge of managers' know-how for doing things. However, there are also many kinds of tacit knowledge demonstrated within each organization on a day-to-day basis. There has been a lack of concrete conceptualization, operationalization, and empirical evidence, however, for linking tacit knowledge to performance. There has been a lack of research in identifying the patterns of how successful management teams perform so that others can learn from their example.

During the exploratory stage of this dissertation, I interviewed several managers from a local telecom company, which had successfully launched an over-the-internet television program. Several managers described one of their valued internal concepts, GEMO, which stands for "good enough, move on". These managers almost unanimously claimed that their organization was very much market-oriented. They argued that the company had placed a high priority on collecting information about what customers want, and attempted to design products and services to meet those needs—the typical manifestation of a high level MO. However, they also argued that one could always

incrementally improve the understanding of customers by collecting more information. Eventually, the marginal utilities of additional customer surveys would diminish. At some point, managers would have to make decisions and say whether their knowledge was “good enough” and that they could “move on” to taking actions. No matter how much information they gathered, they would always have to operate with incomplete information and cope with some ambiguity. If they waited too long, they believed that their opportunity would be lost. Their approach suggested that they did not exclusively rely on MO. Instead, they appear to have adopted a combination strategic orientation that is both market-oriented and entrepreneurial-oriented.

Zhou, Yim, and Tse (2005) indicate that an entrepreneurial orientation (EO), which emphasizes innovativeness, pro-activeness, and risk-taking (Covin and Slevin 1991), can potentially serve as a different path to superior performance and, therefore, an alternative and complement to MO. Entrepreneurial orientation embodies a perspective that allows organizations an opportunity to define and exploit emerging markets. Atuahene-Gima and Ko (2001) show that aligning MO and EO would result in superior performance in terms of successful commercialization of new product innovation. They further indicate that there is no difference between MO firms, EO firms, or MO-EO aligned firms in terms of managerial perceptions of industry environment hostility and competitive intensity. Hence, they argue that the benefit of combining MO and EO is robustness across all environments. This approach of integrating multiple strategic orientations offers tremendous potential for enriching the MO framework.

This integrative approach, however, can be enhanced in a number of ways. First, Atuahene-Gima and Ko (2001) tested their model of MO-EO alignment in the context of

commercialization of new product development. Could the benefits of aligning MO and EO be generalized to a firm's overall performance? In the stream of MO literature, scholars have taken a holistic approach and examined the benefits of MO on a multitude of dimensions, including innovation-related performance, financial-related performance, customer-related performance, and employee-related performance (Kirca et al. 2005). Accordingly, the first objective of this dissertation is to test the generalizability of MO-EO alignment by testing its benefits by contrasting firms' overall financial-related performance and customer-related performance. In doing so, we can achieve a better understanding of how MO-EO integrated firms perform differently in relation to strictly market-oriented or strictly entrepreneurial-oriented firms.

Second, the extant literature posits that integrating MO and EO is better than adopting either one alone. However, little is known about the mechanisms through which MO and EO assert their influences on performance. Are their influences unique? Do they overlap? Do they interact? In order to understand how MO and EO differ, this dissertation attempts to delineate the paths through which MO and EO work. More specifically, prior research has identified that market-oriented firms achieve superior financial performance via a high degree of customer satisfaction and loyalty (CSL) (Gray et al. 1998; Singh and Ranchod 2004; Webb, Webster, and Kreppa 2000). In contrast, the relationship between EO and CSL has not received the same level of attention in prior studies. This dissertation will also test several alternative models to investigate whether entrepreneurial-oriented firms also achieve financial success by pleasing their customers.

Third, Atuahene-Gima and Ko's (2001) claim about the robustness of combining MO and EO has a normative implication—it implies that firms ought to integrate MO and

EO. But is it always better to have both? As MO and EO sometimes conflict and compete for organizational resources, how would managers choose where to place emphasis? Are there circumstances where firms should focus on one perspective rather than integrate? This dissertation explores how industry environmental factors and organizational factors co-influence the organizational decision-making processes, and how these factors steer the top management team's emphasis on these two very different and potentially conflicting strategic orientations.

In the next chapter, I will conduct a review of the extant literature on MO and EO. This will be followed by a discussion of the benefits of MO and EO separately, and then an examination of their potential synergetic effect. Several potential contextual antecedent variables will be proposed. I will then report and discuss the results of empirical data gathered in a regional pilot study and a national survey of Canadian managers. This study will conclude with a discussion of the implications for future research and managerial practice.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Market Orientation**

#### **2.1.1 Origin of the Construct**

The fundamentals in marketing theories and beliefs have evolved over time. As Kotler, Armstrong, and Cunningham (2005) summarize, there have been five major concepts in marketing—production concept, product concept, selling concept, marketing concept, and social marketing concept. The production concept posits that consumers will always prefer products that are available and at a low cost. Hence, the production concept emphasizes production efficiency, which manifests itself in Taylorism-Fordism mass production and, more recently, the Just-In-Time (JIT) style of management. The product concept presumes that, rather than solely considering cost, consumers are concerned with product quality. Accordingly, new product development and total quality management (TQM) have been the focal interests. The selling concept places its emphasis on post-production advertising and promotion. However, good quality products, lower costs, or creative advertising campaigns are all firm-centric, inside-out approaches, and are not enough for firms to achieve sustained success. The marketing concept stipulates that effective competition should start with an intimate understanding of customers' needs and wants. Firms need to satisfy their customers more effectively than their competitors. In other words, firms should take an outside-in perspective. Jaworski and Kohli (1993) refer to the marketing concept as “the philosophical foundation of a market orientation” (p. 54). The social marketing concept expands this external consideration to include not only the direct customers of the firm, but also the well-being of the entire society and the

environment. While the social marketing concept represents a growing body of literature of its own, it is not a focus of this dissertation.

The evolution in marketing concepts, particularly as the marketing concept gains prominence, signifies a major shift in paradigm—from an inside-out perspective to an outside-in perspective. The production concept, product concept, and selling concepts are inside-out perspectives because they start with and focus on the firm. These concepts posit that when a firm possesses efficient production capabilities or superior product quality, and strong selling capabilities, it will succeed. The marketing concept, on the other hand, is an outside-in approach. It begins with and focuses on customers, who are external to the firm. It posits that understanding the customers' needs and wants should be the starting point. Textbooks in fundamentals of marketing seem to imply that the marketing concept is correct. It is important to note, however, that newer concepts build upon earlier ones, not replace them. Through this dissertation, I will demonstrate that when firms incorporate an outside-in approach with an inside-out approach, they can achieve better performance.

The reason for choosing to focus on MO in this dissertation is twofold. First, as mentioned above, MO has substantially shifted mainstream managerial perspective from a traditional firm-centric approach towards a customer-centric direction. MO posits that success starts with an understanding of the customers. This dissertation argues that an exclusive concentration on a single perspective is not optimal. Firms need to incorporate multiple perspectives. Second, MO is perhaps the single most dominant concept that governs most current managerial practice. This dominance in practice is echoed by a proliferation in most contemporary marketing academic research. According to recent

meta-analyses of MO literature, over 200 empirical studies have been published since Kohli and Jaworki (1990) and Narver and Slater (1990) officially introduced this construct (Cano et al. 2004; Kirca et al. 2005). Much of the MO literature examines the extent to which firms adhere to, or are inclined to adhere to, the marketing concept. The MO literature is primarily interested in the relationship between MO and its antecedents and consequences. Often, MO serves as the single thread that ties models together. Recent developments in this area have started to question the effectiveness of such a singular approach, and instead argue for a multiple-perspective contingent approach. In a sense, this dissertation is an extension of the multiple-perspective contingent paradigm.

Although the marketing concept was initially introduced in the 1950s (Borch 1957), only a small number of articles engaged in even preliminary discussion of MO's merits until the late 1980s (Webster 1988). Kohli and Jaworski (1990) and Narver and Slater's (1990) respective seminal work has been widely considered as the official start of systematic investigations of the MO construct. From the very beginning, there have been two divergent views on MO—the behavioural perspective and the cultural perspective. On the one hand, the behavioural perspective considers MO as:

composed of three sets of activities: 1) organization-wide generation of market intelligence pertaining to current and future customer needs, 2) dissemination of the intelligence across departments, and 3) organization-wide responsiveness to it (Jaworski and Kohli 1993, p. 54).

This definition indicates that MO consists of sets of activities that almost have a temporal sequence—starting with the acquisition of intelligence, then disseminating it, and, finally, responding to it. Many scholars have subscribed to this perspective and measured market-oriented behaviours in their empirical studies (Anttila 2002; Bathgate et al. 2006; Kara,



Spillan, and DeShields 2005; Liao, Foreman, and Sargeant 2001; Macedo and Pinho 2006; Varela and Rio 2003).

On the other hand, the cultural perspective focuses on organizational norms and values that encourage behaviours that are consistent with the marketing concept. Furthermore, it is also argued that an organization's ability to respond to the market depends on the extent of its knowledge of customers and competitors (Narver and Slater 1990). That is, a market-oriented firm needs to have both a customer and competitor-oriented organizational culture that encourages and facilitates all the activities involved in acquiring information about buyers and competitors in the target market, and then disseminating it throughout the various organizational units. Along this line of reasoning, MO is considered a composite construct of three distinct components: customer orientation, competitor orientation, and inter-functional coordination. This cultural perspective has also been embraced by many scholars, as exemplified by measuring market-oriented organizational culture in their respective empirical studies (Aggarwal and Singh 2004; Ellis 2005; Hammond, Webster, and Harmon 2006; Han, Kim, and Srivastava 1998; Hooley et al. 2003; Sin et al. 2004)

There has been a proliferation in MO research during the decades that followed Kohli and Jaworski (1990) and Narver and Slater's (1990) respective seminal work on MO. Kirca et al. (2005) reportedly collected 114 publications. That collection included only empirical studies that measured MO at the organizational level and reported correlation coefficients. Empirical evidence generally supports that the behaviour perspective and cultural perspective on MO often converge, and that the underlying construct is the same (Cano et al. 2004; Kirca et al. 2005). Deshpande and Farley (1998)

and Mastuno, Mentzer, and Rentz (2005) argue that the behavioural perspective and the cultural perspective differ in their operationalization of MO. They are more interested in assessing which operationalization is better at capturing the underlying construct, and find that Narver and Slater's (1990) measurement scale has the better predictive power.

### **2.1.2 Construct Dimensionality**

Since its conception, MO has been understood by both major camps to be a multi-dimensional construct. Kohli and Jaworski's (1990) perspective (KJMO) believes that MO comprises of three sets of activities: the generation, dissemination, and responsiveness to market intelligence. On the input side, Jaworski and Kohli (1993) stipulate that the various antecedents of MO may potentially have an opposite effect on the different components of an MO. On the output side, they posit, the three components influence the endogenous variables in the same direction. Narver and Slater's (1990) conceptualization (NSMO) argues that MO is a uni-dimensional construct with three equally weighted components—customer orientation, competitor orientation, and inter-functional coordination. In the following paragraphs, I will first discuss the dimensionality of these two perspectives separately, and then attempt to join them together.

#### **KJMO**

**Intelligence Generation.** According to Kohli and Jaworski (1990), collecting market intelligence is the starting point of a MO. In their conceptualization, "market" is much broader than just "customers." Market includes end users (consumers), distributors,

and other exogenous factors that affect customer needs and wants. Such exogenous factors might include government regulation, technology, competitors, and other environmental forces. Furthermore, market intelligence includes anticipated customer future needs. They suggest that generation of such market intelligence can take on different meanings. Firms can undertake customer surveys to collect primary data; they can analyze secondary data, such as sales reports and customer databases from around the world; and they can also informally discuss trends and developments with their trade partners. It is important to note that intelligence generation is not exclusively the responsibility of a marketing department. Rather, market-oriented firms should involve all functional departments of the firm to participate in the intelligence generation process.

**Intelligence Dissemination.** As Kohli and Jaworski (1990) observe, responding effectively to a market need requires the participation of virtually all facets of an organization. Thus, the intelligence about the market generated via the above mentioned process must be communicated, disseminated, and even “sold” throughout the various functional areas within an organization. Effective dissemination of market intelligence is important because it provides a shared basis for concerted actions by different departments. Information flow does not have to start exclusively from the market research division. Sometimes it might come from the engineering or R&D department. These technology-savvy departments may be the first to notice changes in the market, particularly those pertaining to technologies or procedures. Several of the marketing managers whom I interviewed also indicated that members of the engineering department were more familiar with new technologies, and were often the first to suggest new products and services to introduce to the market. Moreover, the procedures of intelligence

dissemination can be either formal or informal. For example, informal discussions about customer needs and wants can be a powerful tool for keeping people in the organization informed about strategic matters. Several scholars have documented how this type of horizontal communication, which encourages lateral flow of information within and between departments, has positive effects on coordinating departments and facilitating attainment of overall organizational goals (Jaworski and Kohli 1993; Zeithaml, Berry, and Parasuraman 1988).

**Responsiveness to Intelligence.** Responsiveness to market intelligence refers to actions taken in response to intelligence that is generated and disseminated (Kohli and Jaworski 1990). Indeed, unless an organization is willing and able to respond to ever-changing market needs, all other efforts invested in generating and disseminating market intelligence would be wasted. Kohli and Jaworski (1990) argue that responsiveness to market intelligence can take many forms, including

Selecting target markets, designing and offering products/services that cater to their current and anticipated needs, and producing, distributing, and promoting the products in a way that elicits favourable end-customer response (p. 6).

From these discussions, we can see that Kohli and Jaworski's (1990) conceptualization of MO consists of a series of actions, most likely starting with the generation of market intelligence, followed by dissemination of and responsiveness to said market intelligence throughout the organization, thereby enabling the organization to achieve stated goals. It is also possible to envision that, in responding to the market, organizations might further generate more and newer intelligence by gathering customer feedback and competitor responses. Thus, market-oriented firms have this virtuous cycle,

which can lead to continuous improvement of products and services that better serve customer needs and wants.

Next, attention is turned to Narver and Slater's (1990) perspective on MO.

## **NJMO**

Narver and Slater (1990) construe the MO construct in a different fashion. They believe MO to be a type of organizational culture that comprises customer orientation, competitor orientation, and inter-functional coordination.

**Customer Orientation.** Customer orientation is about an intimate understanding of the firm's customers and a commitment to continuously creating superior value for them (Narver and Slater 1990). A customer orientation requires firms to collect information about, and obtain understanding of, a customer's entire value chain (Day and Wensley 1988). A customer orientation advocates a continuous, proactive disposition toward meeting customers' needs. Thus, a customer orientation in itself has a positive influence on firm performance (Deshpande, Farley, and Webster 1993; Lukas and Ferrell 2000; Peters 1984).

**Competitor Orientation.** Competitor orientation refers to a timely and accurate understanding of a firm's current and future competitors (Narver and Slater 1990). Competitor-orientated firms directly measure themselves against target competitors (Day and Wensley 1988) and seek to identify their own strengths and weaknesses (Han, Kim and Srivastava 1998). Effective benchmarking and imitation can be effective deployment of resources (Vorhies and Morgan 2005; Zott 2003). Thus, competitor-orientation also has a positive influence on firm performance.

**Inter-functional Coordination.** Organizational cultural characteristics and internal procedural styles have been considered a hotbed for innovation. Specifically, participative decision-making and organizational learning has been found to be significantly related to organizational innovativeness (Hurley and Hult 1998). A collaborative organizational culture encourages the development of organizational learning and improves competitive performance (Lopez, Peon, and Ordas 2004). Organizations with strong inter-functional coordination would have greater ability to create, retain, and transfer knowledge (Argote, McEvily, and Reagans 2003). Thus, a smooth and tight inter-functional coordination in and of itself has a positive effect on firm performance.

#### **Convergence of KJMO and NSMO**

It should be noted that Kohli and Jaworski (1990) and Narver and Slater (1990) published their respective seminal papers in the same year. The differences in dimensionality seem to be in dissecting the same phenomenon from different angles. For example, the generation of market intelligences is mostly about generating intelligence on customers and competitors; the responsiveness to market intelligence includes responsive to customers and competitors; a customer orientation encompasses the generation and dissemination of, and responsiveness to, intelligence about customers; inter-functional coordination facilitates effective generation, dissemination, and responding to market intelligence. While marketing scholars acknowledge the differences between the two perspectives, empirical data indicate that these two perspectives are measuring the same underlying concept (e.g., Deshpande and Farley 1998; Matsuno, Mentzer and Rentz

2005). Neither of the two widely cited MO meta-analyses distinguish KJMO from NSMO (Cano et al. 2004; Kirca et al. 2005). Accordingly, this dissertation considers KJMO and NSMO as representing the same MO underlying concept.

Gainer and Padanyi (2005) and Kirca (2007) suspect that the difference between a cultural level NSMO and a behavioural level KJMO might be the degrees of internalization and implementation. However, the measurement instruments for these two perspectives are overlapping. As such, the next section discusses how MO has been measured.

### **2.1.3 Construct Measurement**

Parallel to the two perspectives of the conceptualization of the MO construct, there have also been two major measurement scales for MO. Narver and Slater (1990) developed MKTOR, a measurement scale consistent with their perspective on MO. Initially MKTOR consists of 15 items, categorized into three groups. The first group is customer orientation (CUSTO), which has six items; the second group is competitor orientation (COMPO), which has four items; and the third group is inter-functional coordination (COORD), which has five items. In order to enhance the scale validity and reliability, Matsuno, Mentzer, and Rentz (2005) trim the item with the worst loading from each subscale, thereby retaining a 12-item scale (these 12 items are listed in Appendix 1). At times, researchers may develop their own scale to suit their specific research context based on the work of Narver and Slater (Mavondo, Chimhanzi, and Stewart 2005). At other times, researchers may choose to use a shorter version, with select items from the original scale (Hult, Ketchen, and Slater 2005). MKTOR and its variations has been

widely employed in empirical studies (Aggarwal and Singh 2004; Ellis 2005; Hammond, Webster, and Harmon 2006; Han, Kim, and Srivastava 1998; Hooley, Fahy, Greenley, and Beracs 2003; Sin, Tse, Yau, Lee, and Chow 2004).

Kohli, Jaworski, and Kumar (1993) developed MARKOR, which is consistent with Kohli and Jaworski's (1990) behavioural perspective on MO. The original MARKOR scale consists of 32 items. These items are grouped into three sub-scales, including intelligence generation (10 items); intelligence dissemination (8 items); and responsiveness (14 items). Scholars have made attempts to further refine and validate the MARKOR scale (Matsuno, Mentzer, and Rentz 2000) or extend the MO scale (Matsuno, Mentzer, and Rentz 2005). Similar to MKTOR, MARKOR and its variations has also been widely used in MO research (Anttila 2002; Bathgate, Omar, Nwankwo, and Zhang 2006; Kara, Spillan, and DeShields 2005; Liao, Foreman, and Sargeant 2001; Macedo and Pinho 2006; Varela and Rio 2003).

Deshpande and Farley (1998) investigated the relationship between MKTOR and MARKOR. Their findings indicate that MKTOR and MARKOR are highly correlated. They conclude that these two scales measure the same underlying construct, selecting the top 10 items with the best loadings from MKTOR and MARKOR scales to synthesize a MORTN scale. However, the MORTN scale has not been widely adopted in the MO research.

Matsuno, Mentzer, and Rentz (2005) compare the efficacies of the 32-item KJMO, the 12-item NSMO, and a 44-item Extended MO scale (EMO). Using first-order confirmative factor analyses, they find that NSMO has the highest variance extracted. Using second-order factor analyses, they find the uni-dimensionality of the KJMO scale



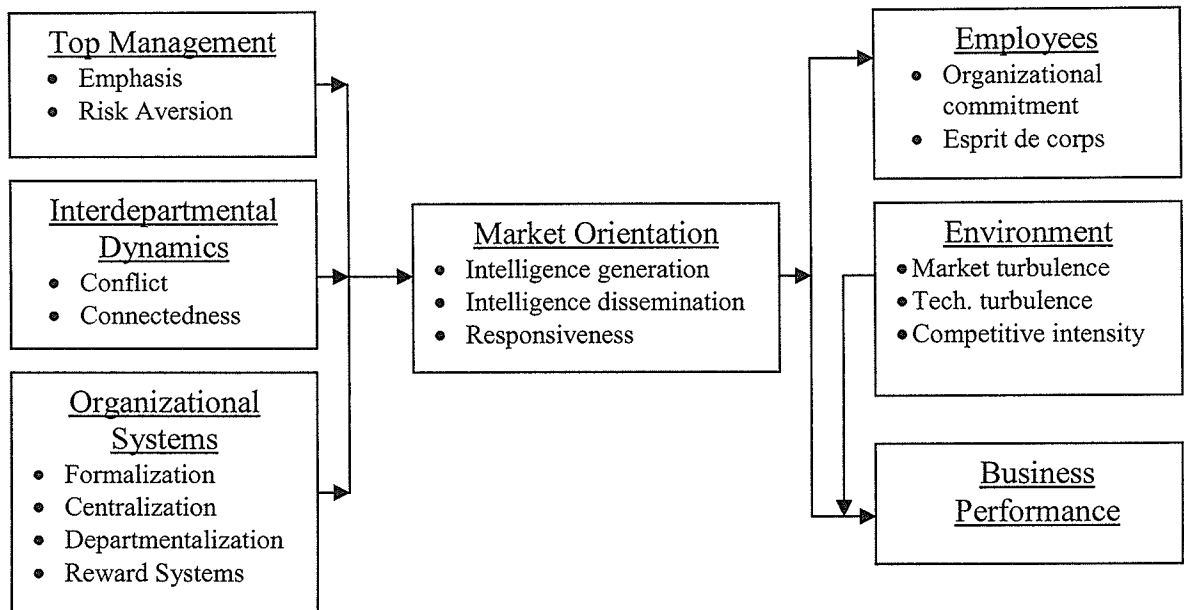
“not supported without some further purification” (p. 5). The NSMO scale produced better fit-statistics than the EMO scale. They also compare the predictive validities of NSMO and EMO, and conclude that “given the fewer number of items than the EMO scale, the NSMO scale is more efficient in predicting the performance measures” (p. 6). In essence, they suggest that NSMO is the best available measurement scale. Other recent studies have concluded that NSMO possesses a potentially higher discriminant validity than KJMO (Zhou, Yim, and Tse 2005).

From the discussion of MO’s history, dimensionality, and measurement issues, several observations can be made. First, MO is an important concept and it has generated considerable interest in academic research (Cano et al. 2004; Kirca et al. 2005). Second, two parallel perspectives exist in the conceptualization and measurement of the construct (Kohli and Jaworski 1990; Narver and Slater 1990). Third, there has been considerable empirical evidence to suggest that these two perspectives converge (Deshpande and Farley 1998; Matsuno, Mentzer, and Rentz 2005). And fourth, the NSMO scale has been found superior to other MO scales (Matsuno, Mentzer, and Rentz 2005; Zhou, Yim, and Tse 2005). Accordingly, in the next section, when discussing MO’s relationship with other organizational variables and, more specifically, MO’s antecedents and outcomes, I refer to MO as the underlying construct that is manifest in both organizational culture and behaviours. The NSMO scale will be employed in this empirical study.

#### **2.1.4 Antecedents and Consequences**

Several key antecedents to MO have been identified in the original MO framework (Jaworski and Kohli 1993; Kohli and Jaworski 1990). Figure 2.1 shows the

model presented by Jaworski and Kohli (1993). These antecedents include an emphasis by top management, interdepartmental dynamics, and the nature of organizational systems. Fifteen years and over 200 published studies later, this framework generally holds (Kirca et al. 2005).



*Figure 2.1. Antecedents and consequences of MO (Jaworski and Kohli 1993).*

**Top Management Emphasis.** Upper echelon theory suggests that top managers play a critical role in the formulation of an organization's values, orientations, and strategic choices (Hambrick and Mason 1984; Webster 1988). Jaworski and Kohli (1993) recognize the important role that top managers play in the MO creation. They argue that "top management reinforcement of the importance of a market orientation is likely to encourage individuals in the organization" to be market-oriented (p. 55). The positive relationship between top management emphasis on MO and a firm's level of MO has

been advocated by other scholars (Day 1994; Narver and Slater 1990). Kirca et al. (2005) report 13 published quantitative empirical investigations on this relationship, and reveal a positive and significant corrected mean correlation coefficient, providing empirical support for the notion that a firm's top management plays a significant role in adopting a MO.

That, however, is where the extant MO literature stops—as long as the top management places an emphasis on MO, a firm is likely to be market-oriented. But other strategic orientations, such as technology orientation and entrepreneurial orientation, would also enhance organizational performance (Zhou, Yim, and Tse 2005). The present study seeks to further our understanding of why some managers choose to place their emphasis on MO while others opt for alternative strategic orientations, and how such a decision is influenced by external environmental factors and internal organizational factors. These issues will be discussed in further detail in a later chapter of this dissertation.

Harris (1999) identifies a number of barriers to MO implementation, including employee unwillingness and unsuitable organizational structures. Kelly (1990) argues that every employee of the company should be engaged in the implementation of MO. Gummesson (1991) further suggests that every employee of the company can be considered as part-time marketer. Therefore, in order to implement MO effectively, top managers must find a way to engage employees at all levels of the organization. To do so, organizations must invest efforts and resources to change the organizational structure and design appropriate reward systems. Such investments require resources. The resource-based view (RBV) posits that each organization is endowed with a finite amount of

resources that provide opportunities to gain competitive advantages (Peteraf 1993), and each decision involves trade-offs between benefits and costs (Barney 1991). The resource-advantage theory of competition argues that a comparative advantage derives from relatively lower resource costs and higher resource-produced value (Hunt and Morgan 1995). Thus, the question becomes under what kind of contextual circumstances would choosing MO produce higher value at lower costs, relative to alternative strategic orientations? That is one of the research questions that this dissertation attempts to explore: What are the *ex ante* external industry-specific environmental factors and internal firm-specific organizational factors that might steer top management's emphasis on MO or some other alternative strategic orientations?

**Top Management Risk Aversion.** In Jaworski and Kohli's (1993) original framework, risk aversion is considered to have a negative effect on MO. The rationale is that the market is ever changing. A market-oriented firm would have to introduce new products and services frequently to match changing customer needs and expectations in order to be competitive. At the same time, introducing new products and services often runs a higher risk of failure. Thus, they argue, if top management is risk averse and intolerant of failures, then subordinates will be less likely to be market-oriented. However, their empirical data does not yield a significant relationship between risk aversion and market intelligence generation or dissemination. Instead, risk aversion is only found to have a negative effect on the responsiveness to market intelligence. This lack of significance in the overall relationship has apparently discouraged further investigation, as exemplified by its omission from Kirca et al.'s (2005) meta-analysis. This dissertation attempts to re-open the case.

There are at least two reasons why this topic warrants further discussion. First, consider the alternatives the risk-averse managers possess. Jaworski and Kohli's (1993) data suggest that, just like their risk-taking counterparts, risk-averse managers are equally likely to engage in the generation and dissemination of market intelligence. They fail to respond to market intelligence because they fear the potential risks associated with introducing new products or services. However, the risks associated with not changing in accordance with an evolving market are potentially even higher. Second, Jaworski and Kohli (1993) argue that MO brings about risks associated with introducing new products or services. But, risk aversion and risk levels are relative terms. How would the risk level of MO compare to the alternatives? This point is related to the main objective of this dissertation, which is contrasting alternative strategic orientations relative to MO. If EO is an alternative strategic orientation to MO, then managers must assess the relative risk factors associated with each orientation and, depending on their risk-tolerance level, choose where to place emphasis.

**Organizational Systems.** Jaworski and Kohli (1993) argue that organizational structure and systems, such as formalization and centralization, have significant impacts on a firm's MO. Formalization represents the degree to which an organization has explicit rules, regulations, and procedural protocols that define how, when, and through what channels business should be conducted (Hall, Haas, and Johnson 1967). Centralization refers to the degree to which an organization reserves decision-making authority to a central administration, rather than delegating responsibilities throughout the organization (Aiken and Hage 1968). While formalization and centralization often go hand in hand, this is not required. For example, Sloan (1963) suggests that one of the key

characteristics of General Motors is its decentralized, yet highly formalized, organization structure.

Jaworski and Kohli (1993) recognize the complexity of the relationship between organizational systems and MO. On the one hand, they argue, the dynamic nature of the market requires market-oriented firms to respond quickly and effectively to a changing environment. Hence, centralization and formalization are considered to have negative effects on the initiation of a market-based orientation, particularly on responding to and utilizing market intelligence. On the other hand, once top management has decided to adopt MO, formalized and centralized organizational structures can help (perhaps by force) implement MO. Because of this complex relationship between organizational systems and MO, Jaworski and Kohli's (1993) empirical data does not support a significant linear correlation between organizational systems and MO. Nevertheless, Slater and Narver (1995) advocate an organic and decentralized organizational structure. An organic organizational structure is characterized by decentralization (the negation of centralization), fluid and ambiguous job responsibility (the negation of formalization), and extensive vertical communication (Burns and Stalker 1961). Essentially, the organic structure perspective perceives that firms do not need the rigidity of formalization and centralization to increase the effectiveness of implementation. Instead, vertical communication is a better means of uniting a decentralized and informal firm. The meta-analysis performed by Kirca et al. (2005) also found support for a negative relationship between MO and formalization and centralization. While organizational systems are important aspects of a future research agenda, they will not be included in this dissertation's analysis.

Next, I will turn to the potential outcomes of MO. Jaworski and Kohli (1996) organize the consequences of MO into four categories—organizational performance, customer consequences, innovation consequences, and employee consequences.

**Organizational Performance.** Organizational performance sometimes refers exclusively to the financial performance of an organization, as measured by cost-based and revenue-based performance (Kirca et al. 2005). Revenue-based measures focus on the achievement outcome of MO, such as sales revenue and market share. Cost-based measures account for the costs associated with the initiation and implementation of MO, and emphasize the profitability of such endeavours. Such cost-based financial indicators can include, for example, return on investment (ROI) and return on assets (ROA). Researchers also use global measures that assess managers' perceptions of overall business performance in relation to organizational goals or relative to perceived competitor performance (Kirca et al. 2005). Generally speaking, because market-oriented firms actively track customer needs and wants, they are better at satisfying customers and, hence, can achieve better organizational performance (Jaworski and Kohli 1993; Narver and Slater 1990). Literature on this subject also posits that, because MO provides firms with enhanced capabilities for sensing the market and linking themselves with customers, they will experience superior organizational performance (Day 1994; Hult and Ketchen 2001). Kirca et al. (2005) suggest that organizational performance is the most frequently examined consequence of MO. The results show positive and significant correlation between MO and performance. Furthermore, they reveal that revenue-based and cost-based measures of organizational performance have the same relationship with MO. They also demonstrate that subjective measures have stronger predictive power than

objective measures. In this study, subjective measures with perceived organizational performance will be used, not only as a tool for assessing MO, but also as a comparison tool for assessing the relative efficacy of alternative strategic orientations.

**Customer Consequences.** Customer consequences include perceived customer satisfaction and loyalty to the products and services that a firm provides (Jaworski and Kohli 1993, 1996). Narver and Slater (1990) argue that the central tenet of MO is the commitment to creating superior value for customers. Brady and Cronin (2001) suggest that by helping and creating customer value, market-oriented firms enhance customers' perceived quality of the products and services they provide. Furthermore, because market-oriented firms are better positioned to satisfy customers' needs, as well as anticipate and satisfy customers' future needs, they are more likely to have satisfied and loyal customers (Slater and Narver 1994). Indeed, the meta-analysis conducted by Kirca et al. (2005) supports the positive relationship between MO and customer consequences.

It is not controversial that MO has positive influences on both customer consequences and organizational financial performance. Delbaere, Bruning, and Sivaramakrishnan (2003) demonstrate that customer satisfaction and loyalty is a mediating factor between MO and financial performance. Put differently, customer satisfaction and loyalty is the means through which market-oriented firms achieve superior financial performance. Customer satisfaction and loyalty, however, are not the only means to achieve financial performance. There are situations where firms pursue financial gains without much concern for customer satisfaction. This point will be further discussed in a later section.



**Innovation Consequences.** Innovation consequences, also referred to as a firm's innovativeness, can be a multi-faceted construct that includes a firm's ability to create and deliver new products and services to its customers and implement creative internal ideas and procedures (Hult and Ketchen 2001). Sometimes, it also is expanded to include the performance of innovations, such as sales revenue, market share, and profitability (Im and Workman 2004). Because MO stimulates a continuous and proactive disposition towards meeting customer needs and wants, and generating and utilizing up-to-date market intelligence, market-oriented firms are more innovative and more successful in terms of new product performance (Atuahene-Gima 1996; Han, Kim, and Srivastava 1998). Han, Kim, and Srivastava (1998) attribute innovation as the link between MO and performance. Lukas and Ferrell (2000) further reveal that the components of MO have differential effects on various types of innovations. Specifically, internal inter-functional coordination is more strongly associated with line-extension type incremental innovations that provide customers with more choice. In comparison, competitor orientation is more strongly associated with "me-too" types of innovation that imitate competitors' major innovations. Finally, they demonstrate that a business is more likely to launch breakthrough innovations when it becomes more customer-oriented. Atuahene-Gima and Ko (2001) provide further evidence for the positive impact of MO on innovation. They demonstrate that market-oriented firms have high levels of new product performance and high sales. Kirca et al. (2005) report a positive and significant influence of MO on innovation and new product performance.

Some mixed results have been reported in the literature with respect to the relationship between MO and innovation. For example, Atuahene-Gima and Ko (2001)

report that market-oriented firms receive lower profits from new products compared to more entrepreneurial-oriented firms. Market-oriented firms also tend to be late-to-market with new products and give innovation low importance in their human resource strategy. This surprising result led Atuahene-Gima and Ko to conclude that MO is not the only option for organizational strategic orientation, and alternative orientations such as EO might supplement the potential weaknesses of MO. Atuahene-Gima and Ko demonstrate that firms with high levels of both MO and EO have the best performance on almost all performance indicators compared to firms that are only market-oriented or only entrepreneurial-oriented. Atuahene-Gima and Ko's theoretical and empirical findings are a key starting point for this dissertation. However, Atuahene-Gima and Ko only investigated the efficacy of MO and EO alignment in the context of new product development; this dissertation will assess the efficacy of MO and EO alignment in the context of overall firm performance, measured with multiple criteria, including financial performance and customer satisfaction and loyalty. Atuahene-Gima and Ko did not investigate any antecedent variables; this dissertation will investigate the contextual antecedents to MO and EO alignment, including external environmental factors and internal organizational factors.

**Employee Consequences.** Kohli and Jaworski (1990) argue that MO leads to a sense of pride in and belonging to the organization among employees because individuals from all departments work together towards a common goal. The accomplishments of such an objective would enhance employees' organizational commitment and esprit de corps. Zhang, Delbaere, Sivaramakrishnan, and Bruning (2004) note that there is a stronger relationship between employee commitment and a market-based reward system.

The market-based reward system is considered an effective inducer of MO (Jaworski and Kohli 1993). Zhang et al. (2004) argue that employee commitment is a by-product of inducing MO, not its direct result. Consistent with Harris' (1999) theorizing that in order to successfully implement MO firms must first acquire employees' commitment, Zhang et al. (2004) demonstrate that employee commitment is a necessary antecedent to MO because committed employees are more likely to participate in market-oriented activities. That said, the positive correlations between MO and various employee consequences are occasionally reported in literature (Kirca et al. 2005).

Marketing scholars have examined the consequences of MO on a number of dimensions, including financial performance, customer satisfaction and loyalty, innovation, and employee commitment. In order to keep manageable the scope of this study, this dissertation will focus on financial performance and customer satisfaction and loyalty. This is not to suggest that innovation and employee commitment are unimportant. However, there are certain difficulties associated with investigating all these factors simultaneously. For example, as Harris (1999) predicts and Zhang et al. (2004) demonstrate, employee commitment supports the implementation of MO. Jaworski and Kohli (1993) also argue that MO enhances employee commitment. Put together, the arguments and empirical evidence imply a dynamic relationship between MO and commitment, creating a feedback loop. Such dynamic relationships are better suited to be investigated in future longitudinal studies.

### **2.1.5 Moderators and Mediators**

Environmental factors, such as market turbulence, technological turbulence, and competitive intensity were originally modeled as moderating factors that influence the magnitude of the relationship between MO and various performance indicators (Kohli and Jaworski 1990). It was later found that the relationship between MO and performance is robust, regardless of the external environment (Jaworski and Kohli 1993; Slater and Narver 1994; Kirca et al. 2005). Strategy scholars argue that managers choose strategies based on environmental conditions and, more specifically, their perception of the competitive environment. Thus, there is merit in conceptualizing environmental factors as antecedents to choosing strategic orientations.

Several other organizational factors have been recognized as having interactions or confluences with MO. For example, a learning orientation (LO), the organizational value that influences the propensity of the firm to create and use knowledge, is theorized as having a positive influence on the acquisition and dissemination of information (Baker and Sinkula 1999; Sinkula, Baker, and Noordewier 1997). Without MO, LO does not have a direct impact on firm performance (Santos-Vijande et al. 2005). MO is considered to be the interface between LO's exploratory function and the actual exploitation of opportunities (Mavondo, Chimhanzi, and Stewart 2005). A high level of MO allows managers to combine market exploitation and exploration strategies effectively by providing a unifying frame of reference. Furthermore, MO serves as a dynamic market-linking capability for integrating the two activities (Kyriakopoulos and Moorman 2004). A learning-oriented organizational value system is more likely to develop and improve firm performance when it is supported by a strong customer-oriented organizational

culture (Yilmaz, Alpan, and Ergun 2005). MO is positively associated with LO levels (Lee and Tsai 2005; Liu, Luo, and Shi 2003). The extent and magnitude of MO drives organizational learning towards different directions and yield different results. For example, Baker and Sinkula (2002) argue that firms engaged in limited and isolated learning are likely to result in manager-driven incremental innovation. By contrast, firms engaged in adaptive learning are more likely to achieve market-driven innovations.

Knowledge Management (KM) has also been identified as an important organizational factor that works closely with MO. KM refers to the strategy-driven organizational processes that facilitate and motivate employees to develop organizational knowledge by interpreting data and information, and giving them meaning (Uit Beijerse 1999). KM is considered a process that mediates the influence of MO. KM provides an organizational form that reflects the ideal of a learning organization (Firestone and McIroy 2004). A good KM strategy carefully considers the social relationships among employees and creates a sense community of learning even if the department of the company may be physically distant (Kimble and Hildreth 2005). The relationship management element of KM provides an interface between information technology (IT) and the people who use it, and takes into account the interpretative aspect of sharing knowledge (Martin et al. 2005). KM systems provide an effective and efficient vehicle for disseminating organizational knowledge, skills, and expertise throughout a firm (Muscatello 2003).

According to hierarchical and value-added knowledge development theory, raw data are processed into meaningful information through careful analysis. Information becomes knowledge through a process of further analysis and interpretation (Grover and

Davenport 2001). The trio of LO→MO→KM, as currently conceptualized, represents a rational, logical, and analytical route of organizational learning and decision-making process. Essentially, this framework suggests that in order to become successful, firms should possess a willingness and capability to learn (a high LO), a focus on what to learn (i.e., the nature of their customers and competitors), and a routine of managing what has been learned (a high KM). Organizational learning theory also implies that the choice of strategic orientations can also be a learned process, where managers continuously adjust a firm's emphasis and seek the best fit between strategic orientation and the environment.

#### **2.1.6 Critiques and Limitations**

Critics have argued that the MO paradigm is not dynamic enough to provide a sustainable competitive advantage (Dickson 1996). If MO has a positive influence on firm performance in all industries and under all market conditions, as the extant literature suggests it does, then all firms would have adopted such a strategy. When every firm becomes market-oriented, being market-oriented would no longer serve as a competitive advantage. MO would become a generic strategy easily copied by any competitor.

Baker and Sinkula (1999) critically examined the potential shortcomings of MO. They argue that market-oriented firms do not necessarily possess superior interpretive and memory functions in market information processing systems. Thus, having only a cultural predisposition towards the gathering of market intelligence is not enough. These firms must put in place certain formal or informal procedures that can effectively process information, learn from prior experience, and organize intelligence in retrievable organizational memory. Failure to comprehend what works, what does not work, and the

contextual circumstances surrounding past success could compromise future potential for success. Indeed, Sinkula (1994) notes that in certain circumstances there is a liability to success. A firm's prior successes might lead to arrogance, breeding resistance to further learning. Such mental resistance could jeopardize accurate interpretation and efficient memory storage. It becomes clear that there is something else, independent of MO, that regulates the firm's learning process. Baker and Sinkula (1999) stipulate that a strong learning orientation (LO) is a prerequisite to engendering the type of superior market-oriented processes that are capable of creating or sustaining a competitive advantage. However, they did not find a significant moderating effect from LO when overall performance was the dependent variable. This implies that LO does not necessarily change the relationship between MO and performance, but rather serves as an organizational cultural background that nurtures the development of MO. Along this line of reasoning, Santos-Vijande et al. (2005) suggest that LO might be better conceptualized as an antecedent to MO. Zhang, Sivaramakrishnan, Delbaere, and Bruning (2007) provide further empirical support for such conceptualization and demonstrate that a knowledge management process would, in turn, translate these strategic orientations into performance benefits. While LO is important, it does not specify what should be learned. This dissertation suggests that firms adopt MO under certain circumstances, and that under other circumstances firms should adopt other strategic orientations (e.g., EO) or a combination orientation. In a sense, firms go through an organizational learning process and find a strategic orientation that best fits their industry's competitive environment and firm characteristics.

Alderson (1965) maintains that an assumption of homogeneity is too broad a paintbrush. He argues that it would be naïve to suggest that a one-strategy-fits-all-circumstances is suitable for every organization. A dynamic theory of competition is needed that considers the interaction between organizational strategy and the environment within which the organization competes. Moreover, alternative strategic orientations exist. Hence, this dissertation sets out to investigate the circumstances under which managers would place their emphasis on MO or alternative strategic orientations such as EO, and what are the consequences of such decisions.

With respect to the factors that are internal to an organization, the MO paradigm is not clear as to what is the exact role that managerial risk-aversion behaviour plays. Originally, it was proposed that a risk-averse mentality in the top management team would hinder the development of MO because being responsive to the ever-changing market requires a willingness to take risk (Kohli and Jaworski 1990). However, this proposition has not received empirical support (Jaworski and Kohli 1993). Since then, the MO literature has been silent on this issue. It remains unresolved whether risk-aversion managers are more or less likely to be market-oriented. I believe that the evolution of marketing strategy theories should be considered in their historical context. In the 1980's and early 1990's, notions of production efficiency and total quality management were dominant. The notion of MO promotes an entirely new paradigm, one that demands that managers look beyond internal managing and go outside to learn what customers want. At that time, becoming market-oriented was innovative and risk-taking. Today, decades later, the notion of MO has become a dominant logic in strategic choice. Even risk-averse managers place strong emphasis on market intelligence. This leads me to suspect that MO



has become the safer choice. Accordingly, this dissertation also seeks to investigate how managers' risk tolerance levels influence their decision whether to adopt MO or other strategic orientations, such as EO.

## **2.2 Entrepreneurial Orientation**

The previous section of this study reviewed the extant literature in the MO research stream. I summarized many of the positive influences that MO has had on firm performance and raised its several shortcomings. A parallel stream of research exists on EO. Occasionally, scholars examine MO and EO simultaneously. For example, Zhou, Yim, and Tse (2005) assert that both MO and EO influence a firm's innovation. Their data indicate that MO is only positively associated with innovations that serve the existing market; EO is positively associated with innovations that serves both existing and new markets. Atuahene-Gima and Ko (2001) demonstrate that integrating MO and EO leads to the best results in the commercialization of new product development. This dissertation attempts to assess the benefits of MO-EO integration for firms' overall performance, including financial performance and customer satisfaction and loyalty, and to delineate the contextual circumstances that foster MO-EO integration. In the next section, I will review the literature on the EO stream of research.

### **2.2.1 Origin of the Construct**

According to Lumpkin and Dess (1996), while the term "entrepreneurship" in the strategy literature refers primarily to the act of new entry, such as starting a new company, entering into a new market, or developing a new product, "entrepreneurial orientation" refers to the processes, practices, and decision-making activities that lead to

new entry. EO involves not only the intentions but also the actions of key players functioning in a dynamic generative process aimed at new venture creation. The key dimensions that characterize an EO, Lumpkin and Dess argue, include a propensity to act autonomously, a willingness to innovate and take risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities.

In addition to capturing the processes that lead to entering and predicting the act of initial “entering,” EO also has a strong influence on the on-going success of a (new) venture (Lumpkin and Dess 2001). In this regard, EO does not function in isolation. Rather, as Lumpkin and Dess (2001) argue, EO’s influence is contextual and contingent upon many external environmental factors or internal organizational factors. In a manner consistent with Lumpkin and Dess’ (2001) contingent approach, this dissertation proposes and investigates several contextual factors’ influences on EO, including external environmental factors and internal organizational factors. The operant influences from these antecedents will be discussed in further detail in later chapters.

A majority of EO researchers treat EO as an organizational-level construct (e.g., Atuahene-Gima and Ko 2001; Covin and Slevin 1991; Lumpkin and Dess 2001; Zhou, Yim and Tse 2005). These researchers are interested primarily in assessing how well an organization’s EO level predicts its on-going financial performance, much like the investigation of the efficacy of a firm’s MO. For example, Covin and Slevin (1991) investigate entrepreneurship behaviours at the organizational level. They argue that an organizational-level EO is not about what is going on in the individual’s mind. Instead, it is more about the manifested outcomes of entrepreneurial-oriented processes and behaviours, such as how often a firm enters into a new strategic business, the extent of

expansion, and the development of new markets and new products. Lumpkin and Dess (1996) use small corporations and strategic business units in larger corporations as their unit of analysis. The enduring benefits of EO are not limited to small corporations. Guth and Ginsberg (1990) argue that organizational level entrepreneurship is also a means of growth and strategic renewal for larger firms.

Krauss et al. (2005) examine EO both on an organizational and an individual level. An individual level EO centers on the perceptions and behaviours of the entrepreneurs or the top managers of an organization because individual entrepreneurs play important roles, particularly in the early years of a firm. Krauss et al. (2005) find hierarchical ordering relationships between these individuals' personalities, their individual EO levels, the organizational level EO for the companies they manage, and the performance of those companies. I shall keep the EO construct at the organizational level in this dissertation to be consistent with the majority perspective in EO research (e.g., Atuahene-Gima and Ko 2001; Covin and Slevin 1991; 1993; Guth and Ginsberg 1990; Lumpkin and Dess 1996; 2001; Zhou, Yim, and Tse 2005).

### **2.2.2 Construct Dimensionality**

From its inception, EO has always been a multi-dimensional construct. There is no consensus in the EO literature, however, as to which group of elements or dimensions of strategy-making process should be considered under the EO umbrella. Miller and Friesen (1978) identify 11 strategy-making process dimensions, including adaptiveness, analysis, integration, risk taking, and product market innovation. Some of these dimensions, such as how much risk managers are willing to take and how innovative

products have to be, were later adopted in the conceptualization of an entrepreneurial strategic orientation (Covin and Slevin 1991; Lumpkin and Dess 1996).

Based on the different strategic decision making styles, Miles and Snow (1978) formulate a typology of competitive strategies that include prospectors, defenders, analyzers, and reactors. Olson, Slater, and Hult (2005) argue that EO is one of the underlying factors that separate the different archetypes of firms. For example, prospectors might be more entrepreneurial than defenders, and analyzers more entrepreneurial than reactors.

Several alternative conceptualizations of EO have been proposed in the literature. Stevenson and Gumpert (1985) define entrepreneurial management as a set of opportunity-based management practices with six dimensions: strategic orientation, resource orientation, management structure, reward philosophy, growth orientation, and entrepreneurial culture. They argue that entrepreneurial management can help firms remain vital and contribute to firm and societal-level value creation. Because Stevenson and Gumpert's (1985) conceptualization is broad, it might be difficult to be operationalized and tested. However, it serves as a foundation for later refinement of the construct (Lumpkin and Dess 1996).

Fredrickson (1986) investigates how organizational structure influences decision making process, and reveals that firms differ along five different dimensions, including pro-activeness, rationality, comprehensiveness, risk-taking, and assertiveness. Lumpkin and Dess (1996) further refine firms' decision styles and propose a five-dimensional construct of EO. These five dimensions are autonomy, innovativeness, risk-taking, pro-activeness, and competitive aggressiveness. Lumpkin and Dess (1996) argue that these

five dimensions are salient and independent of each other. However, in a later empirical study, Lumpkin and Dess (2001) only find support for two of the five dimensions, pro-activeness and competitive aggressiveness.

Brown, Davidsson, and Wiklund (2001) argue that there are overlaps and redundancies in the various conceptualizations of the EO construct. For example, Brown, Davidsson, and Wiklund's (2001) data demonstrate that Lumpkin and Dess' (1996) five-dimensional construct of EO is highly correlated with Stevenson and Gumpert's six-dimensional construct of entrepreneurial management, and that the dimensions overlap with each other.

Covin and Slevin (1991) began their investigation of entrepreneurship with a grounded theory approach, which generated a large number of items that characterize entrepreneurial behaviours. They propose that three key factors underpin an entrepreneurial orientation, namely innovation, pro-activeness, and risk-taking (Covin and Slevin 1993). Kreiser, Marino, and Weaver (2002) empirically tested this more parsimonious model of EO and find evidence to support the convergent validity, discriminant validity, and cross-cultural validity for the three-dimensional construct.

A number of different perspectives for conceptualizing EO have been proposed in the literature, including Covin and Slevin's (1993) three-dimensional model and Lumpkin and Dess' (1996) five-dimensional model. However, there has been a lack of empirical validation of Lumpkin and Dess's (1996) model. A recent empirical study explicitly contrasts the psychometric properties of these two models and finds that Covin and Slevin's (1993) three-dimensional model possesses better validity (Kreiser, Marino,

and Weaver 2002). Hence, this dissertation adopts Covin and Slevin's (1993) three-dimensional model.

### **2.2.3 Construct Measurement**

There have been a number of approaches to the operationalization of EO, most notably managerial perceptions, firm behaviours, and resource allocations. Managerial perceptions of organizational-level variables (e.g., strategy, structure, processes, and performance) often obtained from surveys using questionnaires are frequently used in strategy research (e.g., Covin and Slevin 1991; Miller and Friesen 1978; Naman and Slevin 1993). The apparent advantage of using the managerial perceptual approach is that researchers can directly ask the questions that they are interested in asking, thereby ensuring a high level of validity (Lyon, Lumpkin, and Dess 2000). A disadvantage is perhaps a reliance on the self-report of a single informant. That said, Chandler and Hanks (1993) compare the owner/manager/CEO's self-reported perceptual assessment of their business and archival data, and find a high correlation between the two, demonstrating that data reliability and validity can be obtained by this method.

A potentially richer and more detailed approach to studying organizational entrepreneurial behaviour is to observe and measure the behaviours directly. This method requires a long-term time investment and focus on a small sample. However, if used effectively, this method can reveal great detail and aid us in conceptualizing constructs (e.g., Covin and Slevin 1991). An indirect variation of this approach is the content analysis of headlines and abstracts contained in the annual reports, industry news, or other print media (Jauch, Osborn, and Martin 1980). Although some might argue that this

approach is more objective and less biased by perceptual interpretations (either by the researcher or the manager), Lyon, Lumpkin, and Dess (2000) observe that much of what really has been taking place within a firm does not appear in annual reports or external media.

A third method requires that researchers measure a firm's actual resource allocation because commitment of resources is the best support for strategy choice (Arditti 1973; Gale 1972; Hitt, Hoskisson and Kim 1997). For instance, Hitt, Hoskisson, and Kim (1997) measure the ratio of R&D employees to total employees and use that as a proxy for a firm's propensity and commitment to innovation. Arditti (1973) and Gale (1972) measure a firm's debt-to-equity ratio and use that as a proxy for its risk-taking behaviour.

While prior studies have adopted various approaches, each has advantages and disadvantages. In the methodology chapter (Chapter 4), I will discuss further the details of these advantages and disadvantages, and select an approach that is better suited for this dissertation.

#### **2.2.4 Antecedents and Consequences**

Prior studies document that EO has a high degree of predictive power for a firm's resultant innovativeness. For example, Manimala (1992) demonstrates that firms with a high level of EO are more likely to be innovative, particularly in pioneering innovation. Smart and Conant (1994) find that EO is positively and significantly related to distinctive marketing competencies and organizational performance. Covin and Slevin (1991) argue that entrepreneurship is an essential feature of high-performance firms. It is generally agreed that EO has a significant and positive impact on firm performance (Lumpkin and

Dess 1996; 2001; Lyon, Lumpkin and Dess 2000). The positive influence of EO on performance is extensive, and the strength of the relationship increases over time. Therefore, Wiklund (1999) argues, investment in EO is worthwhile, especially for smaller firms, as it will pay off over an extended period of time.

Lumpkin and Dess (1996) believe that the positive influence of EO on performance (as measured by sales growth, market share, profitability, overall performance, and stakeholder satisfaction) is contingent upon environmental factors (dynamism, munificence, complexity, and other industry characteristics) and organizational factors (size, structure, strategy, strategy-making processes, firm resources, culture, and top management team characteristics). Specifically, firms with an EO that uses an organic structure will have higher performance relative to those that do not use an organic structure. Organic structure is an organizational type characterized by low structural formalization, decentralization, and low complexity (Covin and Slevin 1991). This notion of organic organization is similar to the type of desirable organizational factors that are conducive for MO (Kohli and Jaworski 1990).

Empirical evidence suggests that established and comparatively larger organizations with a higher level of EO tend to have a formal marketing department. These entrepreneurial organizations are more likely to emphasize marketing's role. They are more likely to have marketing professionals occupying senior executive positions, engage regularly in marketing research, and believe that marketing should play a major role in innovation and the strategic direction of the firm (Morris and Paul 1987).

In smaller firms, EO is the foundation upon which other constructs are built. It is argued that the level of EO impacts the level of task motivation and the degree to which



an individual, particularly the entrepreneur, perceives the ability to control the business' success. EO serves as the thread that ties upper echelon characteristics, behaviours, and contextual factors together to co-influence performance outcomes (Keats and Bracker 1988).

Although both strategy and entrepreneurship theories predict that EO will have a strong positive influence on firms' overall performance, empirical evidence for this direct relationship is relatively weak. For example, neither Lyon, Lumpkin, and Dess (2000) nor Lumpkin and Dess (2001) are able to provide solid empirical support for the relationship between EO and overall performance. Instead, these studies are only able to provide partial support for their models. Wiklund and Shepherd (2005) argue that main-effect-only analysis provides an incomplete picture of performance. Access to capital and the dynamism of the environment are important to small businesses. Wiklund and Shepherd (2005) combine EO with other organizational variables, and purport that the configurational approach (a three-way interaction model) explains variance in performance over and above a contingency (two-way interaction) and a main-effects-only models.

In addition to having a direct influence on firm performance, EO is also thought to have a moderating effect on the influences from other organizational factors. Management has the discretion of manipulating resources in order to build competitive advantage. The resource-based view of the firm focuses on the combination of various types of resources. In this regard, organizational characteristics, such as its level of EO, can be considered a unique resource. It has been demonstrated that while both discovery-based knowledge resources and exploitation-based knowledge resources make positive

contributions to firm performance, EO enhances this relationship between the two types of resources and provides additional performance benefits (Wiklund and Shepherd 2003).

### **2.2.5 Moderators**

There has been an increase in research efforts invested in EO in recent years. However, researchers seem to have focused on solidifying EO's positive main effects on various performance indicators. For example, Zhou, Yim, and Tse (2005) find that EO positively affects breakthrough innovations. Atuahene-Gima and Ko (2001) find that EO positively affects new product development, and when EO is aligned with MO, it positively affects the commercial success of new product development. Only a few studies have explored factors that might moderate EO's influences.

In their interview of small business owners in Namibia, Frese, Brantjes, and Hoorn (2002) find that EO has a positive influence on business success vis-à-vis a reactive strategy having a negative impact. Moreover, they find that perceived environmental difficulties moderate the relationship between EO and success. The moderating roles played by industry environmental factors have also been proposed (Jaworski and Kohli 1993) and debated (Slater and Narver 1994) in the MO literature. Neither Jaworski and Kohli (1993) nor Slater and Narver (1994) find significant moderation effects. However, environmental factors continue to attract researchers' attention. Empirical results for such a moderation relationship have been mixed. Kirca et al. (2005) conduct a nonparametric sign test on a large number of reported findings and conclude that there is insufficient empirical evidence to support the moderating roles played by market turbulence, technology turbulence, or competitive intensity. In this

dissertation, following the notion that managers must choose strategies that fit their firm's operant environment (Porter 1980; Porter 1991; Venkatraman and Prescott 1990), I model the environmental factors as antecedent variables that influence the manager's decision whether to place emphasis on MO or EO, or both.

#### **2.2.6 Critique and Limitations**

One limitation in the stream of EO literature is a lack of a solid framework outlining under the industry environmental context where EO is viable and beneficial. Porter (1980) posits that the industry within which a firm competes has a critical impact on performance. For example, in a munificent industry environment where the market experiences a higher rate of growth, firms are more likely to enjoy a higher profit margin. Lumpkin and Dess (1996) propose that EO has a separate, independent, and unique influence on firm performance, in addition to the influence of environmental munificence. Lumpkin and Dess (1996) claim that EO and munificence do not interact with each other. However, they also argue that EO's influence is "contingent" upon industry munificence. It is not clear what they mean by such contingency.

Another limitation is that little is known about what motivates firms to take a more entrepreneurial approach. Lumpkin and Dess (1996) propose that EO's influence on performance is contingent upon the firm's strategy-making processes. They do not identify, however, what types of strategy-making processes interact with EO, and in which direction.

EO can be considered an aspect of organizational culture that is parallel to MO. Similar to MO, EO represents a set of organizational capabilities that generates

competitive advantage for the firm. Its positive influences on various aspects of a firm's performance have been well documented in the literature (e.g., Atuahene-Gima and Ko, 2001; Covin and Slevin 1991; 1993; Lumpkin and Dess 1996; 2001; Lyon, Lumpkin, and Dess 2000; Zhou, Yim, and Tse 2005). However, unlike MO, which emphasizes taking cues from external factors, such as customers and competitors (Naver and Slater 1990; Slater and Narver 1994), and more specifically from an ability to process market information and respond to it (Hult, Kitchen, and Slater 2005), EO emphasizes primarily internal factors, such as being innovative, pro-active, and willing to take risks.

While MO and EO have typically resided in separate streams of research, several recent studies that investigate their joint influences have produced interesting results (e.g., Atuahene-Gima and Ko 2001; Bhuian, Menguc, and Bell 2005; Zhou, Yim, and Tse 2005). Atuahene-Gima and Ko (2001) posit that a high-MO/high-EO combination (integrated strategy) is optimal. Bhuian, Menguc, and Bell (2005) argue that a high-MO/moderate-EO combination is better. Zhou, Yim, and Tse (2005) reveal that MO and EO result in different types of innovations. Attempting to extend our knowledge about the joint influences of MO and EO on performance, this dissertation will examine whether MO and EO assert their respective influences on overall firm performance via different paths, and investigate which environmental factors steer managers' decisions when selecting an MO/EO combination.

## CHAPTER 3: THEORETICAL DEVELOPMENT OF HYPOTHESES

### 3.1 Integrating MO & EO

Marketing scholars agree that MO is an important construct in marketing strategy management, and that MO has a profound positive influence on firm performance (e.g., Kohli and Jaworki 1990; Narver and Slater 1990; Deshpande and Farley, 1998; Baker and Sinkula 1999; Cano et al. 2004; Kirca et al. 2005). However, several marketing scholars have recognized MO's potential shortcomings and argued for seeking additional strategic orientations that complement MO (Sinkula 1994; Baker and Sinkula 1999). Meanwhile, in a separate stream of strategy management literature, EO has been recognized as a vital strategic orientation for firm success (e.g., Covin and Slevin 1991; 1993; Lumpkin and Dess 1996; 2001; Guth and Ginsberg 1990; Stevenson and Gumpert 1985; Wiklund 1991). When these two strategic orientations are investigated jointly, a more dynamic picture of organizational competitive strategy emerges (Atuahene-Gima and Ko 2001; Bhuian, Menguc, and Bell 2005; Slater and Narver 2000; Zhou, Yim, and Tse 2005). However, investigation of the integration of MO and EO is relatively recent. This dissertation attempts to expand our knowledge on this topic.

Zhou, Yim, and Tse (2005) compare the individual influence of MO, EO, and technology orientation (TO) on firm innovation and performance. They find that MO facilitates innovations that use advanced technology to offer greater benefits to mainstream customers (current), but inhibits innovations that target emerging market segments (new). A TO is also beneficial to mainstream markets, but has no effect on emerging markets. EO facilitates both types of breakthroughs. Zhou, Yim, and Tse (2005) further argue that both technology-based innovations that target the current

customer base and market-based innovations aimed at cultivating new and future markets are important. While these two types of innovations affect firm performance differently, there is no reason to believe that they are mutually exclusive. A new product with new technology, for instance, could be a technology-based innovation that caters to a new market. Table 3.1 summarizes Zhou, Yim and Tse's (2005) findings.

Table 3.1  
*Summary of Findings from Zhou, Yim, and Tse (2005)*

	Current Markets	New Markets
MO	Positive	Negative
EO	Positive	Positive
TO	Positive	Not significant

From Table 3.1, it can easily be seen that different strategic orientations exert differential influences on technology and market-based innovations. This finding is consistent with several criticisms of MO present in the literature. For example, Harris and Piercy (1999) argue that MO, as presently conceptualized, risks steering firms to becoming "market-led." In this instance, Zhou, Yim, and Tse's (2005) finding suggests that MO has a negative impact on firms' abilities to create or enter new markets, which implies that strictly market-oriented firms might be led by current markets. Sinkula (1994) argues that a singular MO cannot provide firms with competitive advantages in all situations. In this case, Zhou, Yim, and Tse's (2005) finding suggests that when firms attempt to create or enter new markets, it would be beneficial to also cultivate an EO.

Slater and Narver (2000) also compare the influences of MO and EO on business profitability and find that, when considered individually, both MO and EO have significant and positive influences on profitability, but when considered together, EO does not add to the explanatory power of their model. Slater and Narver (2000) offer several possible interpretations of this finding of non-significance. First, they suspect that EO's influence on profitability might have been indirect, via product and market development, or time-lagged. Second, they suspect that the non-significant finding might have been a result of using cross-sectional data with a small sample ( $N=66$ ). Cross-sectional data with a small sample provides insufficient variance and degrees of freedom to reveal effectively statistical relationships among the variables investigated. Third, as Slater and Narver describe, marketing managers have been asked to assess MO and EO, and general managers to assess performance. Arguably, the general managers, CEOs, or business owners might be more reliable informants for assessment of EO because the cognitive schemata that CEOs have in mind for the entire organization may not be apparent to divisional managers. Perhaps using a single key informant—the CEO—could enhance the internal validity of the model. Despite all these methodological limitations, the regression table reported in Slater and Narver (2000) suggests that one can still infer that both MO and EO have positive influences on performance, and that MO and EO are related. Based on these observations, Slater and Narver's (2000) research is a good point of departure for further investigations of the relationship between MO and EO. In this dissertation, precautions will be taken to address the problems that Slater and Narver (2000) have encountered. Specifically, I will use a single informant, a larger sample size, and test alternative models, including mediation models, to detect indirect relationships.

Both MO and EO have been considered as mechanisms through which firms cope with environmental uncertainties. Becherer and Maurer (1999) demonstrate that both MO and EO coexist and both have positive influences on firm performance. A firm's external environment changes the relationship between MO and EO and their respective influences on firm performance. Although MO and EO are correlated, as Becherer and Maurer (1999) argue, these two strategic orientations represent very different underlying business philosophies. EO places emphasis on innovative, pro-active, and risk-taking behaviours. These factors imply an internal locus of control, where a firm might believe that its own actions are the primary determinants of its success. By contrast, MO places emphasis on generating market intelligence about customers and competitors, which implies an external locus of control. Strictly market-oriented firms might believe that influential external forces, such as customers and competitors, are the determining factors for its success. As Harris and Piercy (1997) argue, however, these strictly market-oriented firms run a risk of becoming market-led. In order to lead the market, typified by creating new markets or entering new markets, firms must incorporate an EO (Zhou, Yim, and Tse 2005) or an "entrepreneurial-drive" (Slater and Narver 1995) to complement MO.

Empirical evidence suggests that combining MO and EO results in superior performance in terms of product innovation and commercialization of such innovation (Atuahene-Gima and Ko 2001). More specifically, Atuahene-Gima and Ko propose a two by two typology of combinations of market-oriented and entrepreneurial-oriented strategic orientations (see Figure 3.1).



		Entrepreneurial Orientation	
		Low	High
Market Orientation	High	<b>1</b> Market-driven	<b>2</b> Integrated
	Low	<b>4</b> Conservative	<b>3</b> Entrepreneurial-driven

*Figure 3.1.* Typology of strategic orientations (modified from Atuahene-Gima and Ko 2001).

A high level of MO and a low level of EO characterizes organizations in the first quadrant. These organizations place a primary emphasis on generating market intelligence about their customers and competitors, then responding to that market intelligence. However, they are not especially innovative, pro-active, or risk-taking. I label them as “market-driven.”

A high level of MO and a high level of EO characterizes organizations in the second quadrant. These organizations not only generate and respond to market intelligence, they are also innovative, pro-active, and willing to take risk. I label this category as “integrated.”

A high level of EO, but a low level of MO, characterizes the third quadrant. These organizations are innovative, pro-active, and willing to take risks. However, they are not very good at keeping the pulse of the market. I label this category as the “entrepreneurial-driven.”

A low level of MO and a low level of EO characterizes the fourth quadrant. Organizations in this category are neither entrepreneurial nor market-oriented. These firms are labelled as “conservative.”

Atuahene-Gima and Ko (2001) demonstrate that in a new product development context, market-driven firms tend to have good sales revenues but low profit margins. Entrepreneurial-driven firms, in contrast, tend to have high profit margins but low sales. Integrated firms have the best performance for new product commercialization.

There are a number of questions unanswered in Atuahene-Gima and Ko's (2001) study. First, they only investigated the commercialization of new product development. Would the integration of MO and EO be beneficial for firms' overall performance? Obviously, successful commercialization of new product development is critical for a firm's success. Would the benefits of aligning MO and EO expand to other aspects of firm performance, more specifically customer satisfaction and loyalty and financial performance? Second, does MO and EO influence different performance indicators differently? If the combination of MO and EO is "robustly" better than all other types of combinations of strategic orientations, as Atuahene-Gima and Ko (2001) indicate, then, why would some firms place more emphasis on MO or EO? Third, little is known about the contextual circumstances under which firms formulate various types of combinations of strategic orientation. How would external industry environment and organizational factors influence such decisions?

The resource-based view of the firm posits that each organization is endowed with only limited amounts and types of resources. Resource heterogeneity gives rise to differentiated performance. More specifically, valuable and rare resources that are difficult to duplicate are theorized to result in superior performance for the firm (Barney 1991). Acquisition of new resources involves transaction costs and trade-offs (Peteraf 1993). Being capable of strategically acquiring, bundling, positioning, and maintaining

organizational resources is a foundation for sustainable competitive advantage (Wernerfelt 1984). Thus, before advising managers to go out and acquire both MO and EO capabilities, we must first understand the unique benefits of these strategic orientations on performance outcomes.

### **3.2 Performance Outcomes**

“Performance” has been used extensively in marketing and strategy management research. A wide range of factors have been considered “performance outcomes.” However, as Bayyavarapu (2005) observes, there is no consensus as to which factor is the best indicator for firm performance. Jaworski and Kohli (1996) argue that organizational performance should be a multi-dimensional construct and measured by a number of factors. They categorize these factors into four types: revenue- and cost-based financial performance, customer-related performance, innovation-related performance, and employee-related performance. Several prior studies have examined the influences of MO and EO in the context of innovation-related outcomes. For example, Atuahene-Gima and Ko (2001) examine the combination of MO and EO in the context of commercialization of new product development. Zhou, Yim, and Tse (2005) examine MO and EO’s influences on different types of innovation. However, no research to date has focused on the customer-related performance outcomes from combining MO and EO. Bayyavarapu (2005) examines financial-related performance and customer-related performance, and argues that financial performance is an immediate and short-term indicator of firm performance vis-à-vis customer-related performance, which implies a more long-term perspective. Thus, by examining both financial performance and

customer-related performance, one could achieve a reasonably comprehensive understanding of a firm's overall performance. Accordingly, this dissertation will focus on assessing financial performance and customer satisfaction and loyalty as indicators for performance outcomes.

In addition to different types of performance, there are also variations in how performance is measured. Objective measures investigate the absolute values of such indicators as sales revenue, return on assets, or return on investment. Subjective measures center on managers' assessment of the performance of their businesses relative to competitors or how performance meets expectations.

There might be differences between objective measures and subjective measures. Schlegelmilch and Ram (2000) find that MO affects subjective but not objective ROI. Jaworski and Kohli (1993) find that MO has a positive impact on subjective performance, which is operationalized as an assessment of overall performance relative to competitors, but not on objective measures. Jaworski and Kohli (1993) argue that subjective performance assessments might be more suitable in MO studies because subjective measures account for particular strategies of a company. In contrast, an objective measure might be affected by other factors unrelated to strategies. Moreover, Jaworski and Kohli (1993) and Sargeant and Mohamad (1999) argue that there might be a time-lag between MO inputs and objective performance outcomes. Adopting market-oriented or entrepreneurial-oriented strategies may not result in immediate changes detectable in accounting books in the same fiscal year. Rather, the benefits of adopting market-oriented or entrepreneurial-oriented strategies may have a more long-term impact on firm performance. Thus, cross-sectional studies, such as this dissertation, may not be able to

capture the true strength of MO's impact on objective performance. Jaworski and Kohli (1993) conclude, "Based on these considerations, the authors tend to place more confidence in the results obtained using judgmental measures of performance" (p. 6). Accordingly, for the purpose of this dissertation, I will adopt subjective measures of financial performance and customer satisfaction and loyalty.

Sales Revenue (SR), Return On Assets (ROA), and Return On Investment (ROI) are conventional measures of an organization's financial performance. As previously discussed, in marketing research financial performance is often operationalized as a perceived relative performance compared to major competitors in the industry. For example, Kohli and Jaworski (1993) ask respondents to indicate their perception of a firm's overall SR, ROA, and ROI relative to its major competitors. This kind of operationalization might be more meaningful than measuring absolute values. Is 5% ROI a good performance? The answer depends on the particular industry, company history, size, and a host of other factors. If a manager considers his or her company having a suitably better performance than its major competitors, then it is a good performance. This type of measure accounts for general industry conditions, national economic conditions, interest rates, and other elements. Presumably, these factors would also have similar impacts on competitors, *certis paribus*.

Customer satisfaction and loyalty are considered important indicators of organizational performance in marketing (Kohli and Jaworski 1990). Satisfaction refers to how the product or service has fulfilled customer expectation; loyalty refers to an enduring preference and commitment for repeated patronage (Oliver 1999). A traditional view on the relationship between customer satisfaction and loyalty is that product/service

quality leads to customer satisfaction, which in turn leads to customer loyalty (Oliver 1999; Szymanski and Henard 2001). A number of other variables, such as expectation (Szymanski and Henard 2001), reputation (Selles 1993), and trust (Delgado-Ballester and Munuera-Aleman 2001) moderate these relationships. Oliver (1999) argues that it is often difficult to distinguish where satisfaction ends and loyalty starts. Empirical evidence (Bei and Chiao 2001; Delbare et al. 2005; Hellier et al. 2003; Hong and Goo 2004; Szymanski and Henard 2001) suggests that there is a high correlation between satisfaction and loyalty. Hence, for this dissertation I consider customer satisfaction and loyalty in a cluster and as a proxy that represents customer-related performance outcomes of the firm.

### **3.2.1 MO's Impact on Performance**

While financial performance (FP) of a firm, such as sales revenue, ROI, and ROA, might be the ultimate goal of entrepreneurs, senior management, and investors, the extant literature that evaluates the benefits of MO often places more emphasis on measuring customer satisfaction and loyalty (CSL). For example, in Kohli and Jaworski's (1990) seminal work, CSL is specified as one of the important outcomes of MO. But, assuming that CSL serves as a performance outcome measure, one important question to ask is whether possessing a higher degree of MO directly translates into superior financial performance. According to several research findings, the answer is not necessarily so. Kirca et al. (2005) suggest that empirical evidence on the direct link between MO and financial performance is somewhat mixed. Delbaere et al. (2003) conclude that having a superior MO alone is not sufficient—firms must also be capable

of managing and making sense of the generated knowledge about their customers and competitors by inculcating a MO culture. Moreover, firms must be capable of utilizing such knowledge to cultivate a loyal customer base. In other words, firms need to possess superior knowledge management capabilities. These findings also confirm that customer loyalty has a positive influence on the firm's financial performance. While CSL's mediating role in the MO-performance link has been proposed and tested in prior studies, this dissertation seeks to replicate this relationship. Moreover, CSL's role in the MO-performance link serves as a contrast to the EO-performance link. Therefore, in this dissertation, I hypothesize and test this mediation relationship again, that CSL is a mediating factor between MO and FP.

*H1 Market orientation's influence on firm financial performance is mediated through customer satisfaction and loyalty.*

### **3.2.2 EO's Impact on Performance**

Evidence suggests that EO is highly predictive of firm performance, and that firms with a high EO are much more likely to engage in developing pioneering-innovation (Manimala 1992). Such new-to-the-world innovations can potentially create new markets for pioneering firms and provide first mover advantages. In such new markets, these first movers have the option of employing a skimming pricing strategy and realizing handsome profits for their innovations. Empirical evidence suggests that EO is positively and significantly related to distinctive marketing competencies and overall organizational performance (Smart and Conant 1994). Indeed, such creativity and entrepreneurship have been considered essential features of many high-performance firms (Covin and Slevin 1991), and EO has been found to have a significant and positive

impact on a firm's financial performance (Lumpkin and Dess 1996; 2001; Lyon, Lumpkin, and Dess 2000). The positive influence of EO on performance is extensive and the strength of its impact increases over time. Therefore, researchers argue that investment in EO is financially worthwhile because it will pay off over an extended period of time (Wiklund 1999).

What has been conspicuously absent in the EO-performance research is any mention of customer satisfaction and loyalty. Anecdotal evidence seems to suggest that the pursuit of disruptive technological innovations has sometimes sacrificed, at least temporarily, the satisfaction and loyalty of existing customer base. For example, the invention of the tape cassette almost entirely erased the home vinyl record market. Understandably, those customers who owned turntables at home would not be satisfied or loyal, at least during the period of transition, because they needed to spend extra money to start all over, investing in cassette players and music cassettes. History repeated itself when the compact disc (CD) was invented. Will MP3 players replace CDs and CD players in the near future? Perhaps, but what is apparent is that the pursuit of such disruptive technological innovations was not meant to satisfy existing customers' current needs and wants. It was meant to create new markets and gain new customers, even if that meant exiting from existing markets.

Another example is Microsoft's aggressive competitive strategies. Microsoft has combined zero-pricing strategy, product bundling (combining its Web browser, Internet Explorer, with its operating system, Windows), and exclusive distribution contracts to drive Netscape, a former major competitor, almost out of business (Klein 2001). Microsoft acts pro-actively in its competition with other major competitors. For example,



Raffi and Kampas (2002) describe how Microsoft preemptively launched its Xbox video game system after it sensed that rival Sony was to use a new generation of Playstation video game system to enter the so-called home computainment market, combining all audio and video content in a digital format with broadband digital network access. It is common knowledge that Microsoft has always been aggressive in its pursuit of innovation. Microsoft is innovative in the sense that it continuously introduces new applications and new versions of existing applications. Microsoft is proactive in the sense that it has consistently expanded into new territories and aggressively eliminated competitors, often allowing it to define market standards. Microsoft is risk-taking in the sense that it is not afraid of introducing new applications despite knowing the existence of their defects and imperfections. Microsoft would be an exemplar of a firm possessing a high level of EO. It is of little surprise that it has become the superpower in technology. At the same time, however, it seems that few customers are satisfied with Microsoft. In one of the antitrust cases against Microsoft, the U.S. government specifically argued that Microsoft engaged in anticompetitive conduct designed to maintain its operating system monopoly to the detriment of consumers (Gilbert and Katz 2001).

The link between EO and a firm's financial performance has been well documented in the literature. However, evidence to support EO's influence on customer satisfaction and loyalty has been missing. Anecdotal evidence seems to suggest that when firms pursue a strong EO, as exemplified by Microsoft, satisfying customers takes a secondary position to striving for technological superiority. Highly entrepreneurial-oriented firms believe that technological superiority is the key to success (Atuahene-Gima and Ko 2001) and, as such, assign low priority to intelligence about the current

market and current customers (Bhuian, Menguc, and Bell 2005). Thus, I hypothesize that EO has a direct positive impact on firms' financial performance, and such influence is not mediated via CSL.

*H2a Entrepreneurial orientation has direct positive influence on a firm's financial performance.*

*H2b Entrepreneurial orientation's influence on a firm's financial performance is not mediated through customer satisfaction and loyalty.*

### **3.2.3 MO and EO's Joint Impact on Performance**

Parnell and Wright (1993) argue that adoption of a combination of strategies is a viable means for sustaining competitive advantage. Firms must be careful, however, in selecting what types of strategies to combine and to what extent (Parnell 2000). Empirical evidence suggests that firms rarely use a singular strategy, that strategy combinations are common (Parnell and Hershey 2005). For example, by combining low-cost and differentiation strategies, firms are able to attain competitive advantage and outperform those using a singular strategy (Helms, Haynes, and Cappel 1992). Moreover, firms not only pursue multiple strategies, they also alter their strategic agenda over time in response to changes in the environment (Webb and Pettigrew 1999).

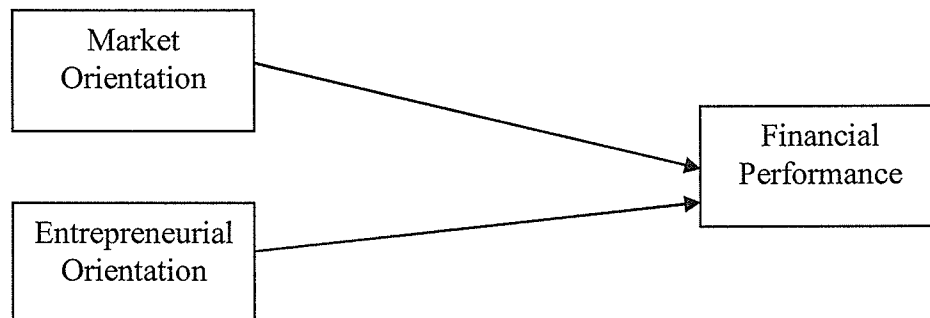
Drawing on a firm's RBV, Hult and Ketchen (2001) suggest that both MO and EO can be considered as organizational capabilities that contribute to the creation of unique resources. The ability to effectively combine different organizational resources to maximize the return on resources is a dynamic capability that provides sustainable competitive advantages (Teece, Pisano, and Shuen 1997). Menguc and Auh (2006) demonstrate that when MO is bundled with innovativeness, its effect on firm performance is strengthened.

The combination of MO and EO into an integrated strategy makes intuitive sense. Firms adopting an integrated strategy are well grounded in abundant marketing intelligence—they know what customers want and what their competitors are doing. At the same time, they have enough entrepreneurial proaction to take risks and recognize an opportunity when it arises. In other words, entrepreneurial firms are better at using market intelligence (Bhuian, Megnuc, and Bell 2005). Firms with a high MO and low EO may become submerged in the overwhelming amount of market intelligence acquired and fail to take responsive action. On the other hand, firms with a high EO and a low MO may be obsessed with the indulgence of higher-order goals and pursue innovations that are, perhaps, not as well grounded in market intelligence. Their potential risk is high and the costs of mistakes expensive.

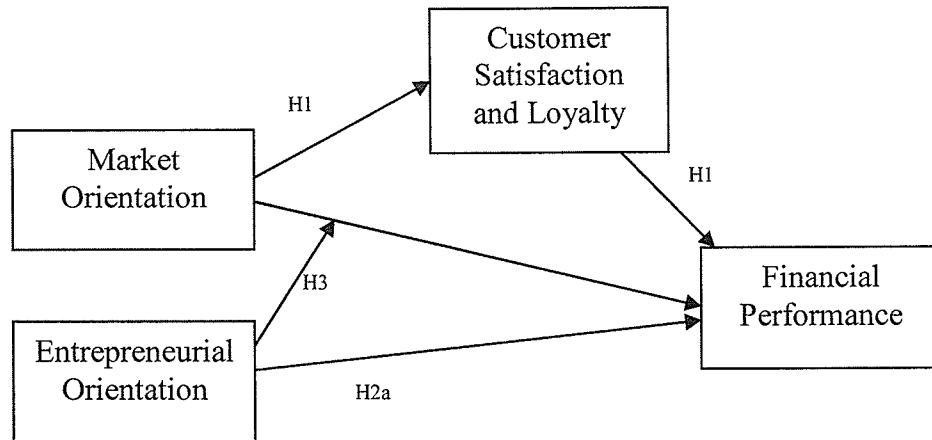
Prior studies suggest that not only do MO and EO have unique influences on performance, they have a synergetic effect (e.g., Atuahene-Gima and Ko 2001; Barrett and Weinstein 1998; Han, Kim, and Srivastava 1998; Jaworski and Kohli 1993). Empirically, MO's positive influence seems to be stronger and more robust. By comparison, EO's influence is not as strong and robust. Theoretically, the dimensions of EO (i.e., innovativeness, pro-activeness, and risk-taking) seem to be well suited as catalysts that enable a better actualization of MO's benefits. This has led scholars to predict that the extent of entrepreneurship moderates the relationship between MO and performance (e.g., Bhuian, Megnuc, and Bell 2005). Hence, I hypothesize that EO moderates the strength of the relationship between MO and performance.

*H3 The relationship between MO and performance is stronger among firms that also have higher EO.*

As discussed in previous sections, prior MO and EO research has typically examined the main effect type of relationships between MO and performance (e.g., Jaworski and Kohli 1993; Narver and Slater 1990; Slater and Narver 1994) and EO and performance (e.g., Covin and Slevin 1991; Lumpkin and Dess 1996; 2001). Occasionally, these two relationships have been investigated jointly (e.g., Atuahene-Gima and Ko 2001; Zhou, Yim, and Tse 2005). Figure 3.2a illustrates the main effect type models that have been investigated in prior studies. This illustration reveals that main effect type models are overly simplistic. The relationship between MO and EO and how they differ in influencing performance has not been fully explored. The first set of hypotheses in this dissertation, H1, H2, and H3, proposes a moderation relationship and a mediation relationship. These relationships are depicted in Figure 3.2b. From this model, one can see that MO and EO work together, albeit differently, in influencing a firm's financial performance.



*Figure 3.2a.* Main effect model.



*Figure 3.2b.* Hypothesized model that combines H1, H2a, and H3.

The previous set of hypotheses specifies the outcomes of strategic orientations. The following sections will discuss what antecedents have influenced various organizations to choose different combinations of strategic orientations.

### **3.3 Antecedents to Strategic Orientations**

A dominant logic in strategy-making posits that firms formulate competitive strategies to best fit the industry environment (Dess and Beard 1984; Porter 1980, 1991; Venkatraman and Prescott 1990) and best utilize firm resource endowments and core competencies (Barney 1991). It is no different in selecting and cultivating appropriate strategic orientations for a firm. If a firm chooses its strategic orientation to fit the competitive environment, then the nature of the environment would have an impact on what types of strategic orientations to select, how to combine them, and where to place emphasis.

Several prior studies have examined the consequences of MO and EO, either separately (e.g., Slater and Narver 2000; Zhou, Yim, and Tse 2005) or jointly (e.g., Atuahene-Gima and Ko 2001; Bhuian, Megnuc and Bell 2005). No research to date has examined what determines or influences managers' selection of strategic orientations. Industry organization theorists believe that the external environment exerts a fundamental, if not determining, influence on how firms behave and how well they perform (Dess and Beard 1984). In order to be successful, firms must strive to achieve strategy-environment co-alignment (Venkatraman and Prescott 1990). Moreover, the environment in which the firm competes is constantly changing. Therefore, it must develop a dynamic strategy to sustain its competitive advantages in the dynamic environment (Porter 1991). Put together, these theories imply that a firm's selection and adoption of a specific combination of strategic orientations is a dynamic process and is contingent upon external environmental factors.

It is also true that firms behave and perform differently within the same environment. The resource-based view posits that this is because each firm has its own unique resource endowment. Such resources can be financial assets, natural resources, and acquired human resources, such as different types of skills and competencies (Barney 1991; Peteraf 1993; Wernerfelt 1984). Heterogeneity in terms of possessing and acquiring different assets, skills, and, arguably, different strategic orientations of the firm gives rise to differential firm behaviour and performance. Thus, depending on certain internal organizational characteristics, a firm would select the best suitable combination of strategic orientations.

Today's business environment is marked with frequent technological discontinuities and ever-changing customer needs and wants. How would a firm compete? One clue coming from the marketing concept and the MO stream of literature suggests that firms should look outside the organization—i.e., survey customers and/or competitors—for inspiration. In other words, firms should become market-oriented. An alternative approach coming from the EO stream of literature seems to suggest that firms should look inside for inspiration and become more intuitive, creative, innovative, and daring—i.e., become more entrepreneurial-oriented. In order to conciliate these two divergent perspectives and understand how managers find the right balance, the next section explores how industry condition, market and technological turbulence, competitive intensity, and organizational tolerance to ambiguity influence firms' selection of strategic orientations.

### **3.3.1 Munificence**

The concept of environmental munificence refers to the extent to which the industry environment can support sustained growth (Starbuck 1976). The construct of munificence is often operationalized as industry growth rates. In fact, some respected research in strategic management operationalize it as a single item—the slope of shipments (Goll and Rasheed 1997; Goll and Rasheed 2005)—while others operationalize munificence to include the growth rate of multiple industry indicators, such as sales, employment, value-addition, and profit margin (Castrogiovanni 2002). I believe that the construct of munificence is more complex than a simple growth rate. Suppose that an industry experiences growth, yet many of its employment opportunities

have moved offshore or the profit margin has been shrinking. This would imply that the industry would not be very munificent. A truly ideal munificent industry would demonstrate growth potentials in many, if not all, these indicators. Accordingly, in this dissertation I operationalize munificence to include the perception of growth in sales, employment, value-added, and profit margin, as well as a global perception of opportunities.

Researchers have found patterns within U.S. firms indicating an inverse relationship between the degree of perceived environmental hostility and the likelihood that a firm will adopt an EO (Miles, Arnold, and Thompson 1993), even though prior theories may offer opposite predictions. This finding suggests that perceived industry munificence would allow managers to feel more comfortable in the pursuit of creativity and innovation. Munificence allows an organization to generate slack resources (Cyert and March 1963) that can buffer the organization during periods of relative scarcity (Dess and Beard 1984) and allow it to pursue divergent goals (Dess and Origer 1987). A munificent environment encourages managers to make more aggressive decisions (Koberg, Tegarden, and Wilsted 1993).

Munificence is not a frequently examined factor in MO research. There has been only scattered evidence to suggest that MO is more prevalent in a low munificence and high dynamism environment (Van Egeren and O'Connor 1998). Thus, under high industry munificence accumulated slack resources allow companies to pursue entrepreneurial-driven goals, such as innovations, and not to be pressured to worry about what competitors might be doing. It would be reasonable to conclude that munificence steers an organization towards an entrepreneurial-driven strategic orientation, which



places more emphasis on EO, but not on MO. Put differently, the firms that choose to take an entrepreneurial-driven approach have done so because they perceive a more munificent industry environment.

*H4a Industry munificence has a positive influence on EO.*

*H4b Industry munificence has a negative influence on MO.*

### **3.3.2 Competitive Intensity**

Under conditions of high competitive intensity, customers have alternatives to satisfy their needs and wants, so organizations must pay more attention to their customers and be more market-oriented (Jaworski and Kohli 1993). The MO literature typically conceptualizes competitive intensity as a moderator for the relationship between MO and performance (Jaworski and Kohli 1993; Kirca et al. 2005; Kohli and Jaworski 1990). However, empirical evidence strongly supports a robust relationship between MO and performance, regardless of competitive intensity (Jaworski and Kohli 1993, Slater and Narver 1994). It makes intuitive sense, however, that more intense competition drives companies to adopt a more market-oriented strategy.

Under a highly competitive environment, organizations cannot afford to undertake risky endeavours because they do not have the necessary slack resources to insulate them from potential failures. Moreover, scattered empirical evidence seems to suggest that creativity and innovation may not lead to immediate financial benefits for a firm (Darroch 2005; Hurley and Hult 1998). Thus, firms must carefully evaluate the options that are available and place more emphasis on the strategy that is the most appropriate

under the circumstances. For example, when competition is intense and profit margins are low, firms cannot afford expensive mistakes and must focus on carefully calculated strategies that ensure financial success. As previously noted, perceived environmental hostility (including intense competition) would reduce the likelihood of a firm becoming more entrepreneurial (Miles et al. 1993). Thus, competitive intensity steers an organization towards MO and away from EO, thus becoming more market-driven. Put differently, firms choose to be more market-oriented and not entrepreneurial-oriented because they perceive a high degree of competitive intensity.

*H5a Competitive intensity has a negative influence on EO.*

*H5b Competitive intensity has a positive influence on MO.*

### **3.3.3 Market and Technological Turbulence**

Market turbulence refers to rapid change in the composition of customers and their needs. Technological turbulence refers to rapid change in technologies (Jaworski and Kohli 1993). Models in MO research typically consider market turbulence and technological turbulence as moderators. MO exerts a stronger influence on organizational performance under a turbulent environment (Jaworski and Kohli 1993). However, the moderating effect has not received much empirical support. In the occasional cases where the moderating effect was evident, MO was found to be an effective strategy in low turbulence environments (Slater and Narver 1994), which is contrary to the initial theorizing. In high market turbulence environments, organizations are more likely to rely on market information (Low and Mohr 2001). Market-oriented behaviours are important for organizations operating under conditions of high environmental turbulence (Cadogan,

Cui, and Li 2003). Thus, I believe that MO is vital for organizational success in high turbulence environments. Market and technological turbulence would encourage companies to become more market-oriented.

When the industry environment is characterized with rapid, frequent, and discontinuous changes in technologies, and changes in players and the rules of play, methodically tracking customer wants and needs and closely monitoring competitors' moves is not enough. Firms are pressured to be more creative and innovative, to attempt to stay one step ahead of competitors, rather than pursuing a follow-the-leader strategy. Market and technological turbulence heighten the need to make risky investments and, sometimes, risky decisions (Calantone, Garcia, and Droge 2003). Risk-taking behaviours are encouraged in such environments. In other words, organizations must become more entrepreneurial-oriented in a turbulent environment. A rapidly changing external environment is likely to offer mixed signals. Managers must take into account these external signals and use their own managerial intuition to make decisions despite the uncertainty.

In essence, in an environment with high market and technological turbulence, organizations must adopt an integrated strategy and become simultaneously market-oriented and entrepreneurial-oriented.

*H6a Market and technological turbulence has a positive influence on EO.*

*H6b Market and technological turbulence has a positive influence on MO.*

### 3.3.4 Tolerance for Ambiguity

The previous several hypotheses relate to how external environmental factors influence firms' selection of varying combinations of strategic orientations. However, it still does not explain why firms within the same industry environment behave differently. RBV argues that organizational factors that are idiosyncratic to a firm have profound influences on organizational strategy and performance. For example, Penrose (1959) argues that, ultimately, the people make the difference. Each organization is made up of individuals, each possessing a unique set of skills and knowledge. Such human resources are, she argues, the only source for sustained competitive advantage. Barney (1991) argues that any resource endowments, as long as they are valuable, rare, and difficult to imitate, can be sources of sustainable competitive advantage. These resources can be natural resources, financial resources, or human resources.

One of the factors that might differentiate the people in one company from another is their tolerance for ambiguity (TFA). The management literature suggests that TFA is one of the key markers that characterize entrepreneurs (Gurol and Atsan 2006; Koh 1996). TFA refers to the ability to respond positively to ambiguous situations (Gurol and Atsan 2006). If an individual is comfortable dealing with inadequate data and trusts making decisions under uncertainty, then his/her TFA is considered high (Teoh and Foo 1997). Compared to their counterparts who score low on TFA, entrepreneurs with higher TFA are better positioned to cope with organizational change (Judge et al. 1999), display greater confidence in their decisions (Ghosh and Ray 1997), and are better prepared to neutralize the effects of role stress in the entrepreneurial role, all of which thus leads to better perceived performance (Teoh and Foo 1997). Entrepreneurs with a high TFA are

more capable of processing complicated, novel, ambiguous, or dynamic strategic information in a turbulent environment (Wang and Chan 1995). They tend to be aggressive decision-makers with a flexible decision-making style (Nutt 1993) and are better decision-makers under uncertainty (Gimpl and Dakin 1984).

Empirical evidence indicates that organizations with managers who possess higher levels of TFA are more innovative (Kim, Song, and Lee 1993). This evidence transfers an individual-level characteristic to an organizational level. Simply put, when managers have a high level of TFA, the firm itself would behave as if it has a high level of TFA. Firms with a high TFA would be more innovative. This transformation from individual-level characteristic to firm-level is supported by upper echelon theory (Hambrick and Mason 1984), which posits that an organization is a reflection and extension of its top managers. As such, a firm's strategic choices, behaviours, and performance are influenced by the characteristics of its top executives (Smith et al. 1996), their social connections (Geletkanycz and Hambrick 1997), their perceptions of the environment (Kiesler and Sproull 1982), and their decision-making styles (Eisenhardt 1999). If the organization is an extension of its top managers, then it seems logical to expect that the organization might take on a character similar to that of its top managers, and its business style might possess certain pre-dispositional "personalities."

The idea that one construct can manifest itself in both individual and organization levels is not new. With the personality construct, for example, psychologists investigated various personality traits to understand individual behaviours (Costa and McRae 1985). Aaker (1997) argues that corporations can also cultivate and project corporate personalities and brand personalities. The construct of intuition is another example. Every

individual, at times, resorts to his/her intuition to aid decision-making. Eisenhardt (1999) observes that when individuals work together and form a team, the team can gain a collective intuition. MO can also manifest itself in both individual and organization levels. Schlosser and McNaughton (2007) illustrate that in order to create an organization-level MO, each individual within the organization must acquire individual-level MO and work together. The construct of EO also manifests itself in both individual (e.g., Krauss et al. 2005) and organization levels (e.g., Covin and Slevin 1991; Lumpkin and Dess 1996; Zhou, Yim, and Tse 2005).

Several prior studies have examined TFA's influence on firm performance (e.g., Gurol and Atsan 2006; Kim, Song, and Lee 1993; Koh 1996; Teoh and Foo 1997). In this dissertation, I operationalize TFA as an organization's ability to respond to less than full information and make decisions under uncertainty. The measurement of organizational-level TFA will be developed based on established individual-level TFA (MacDonald 1970).

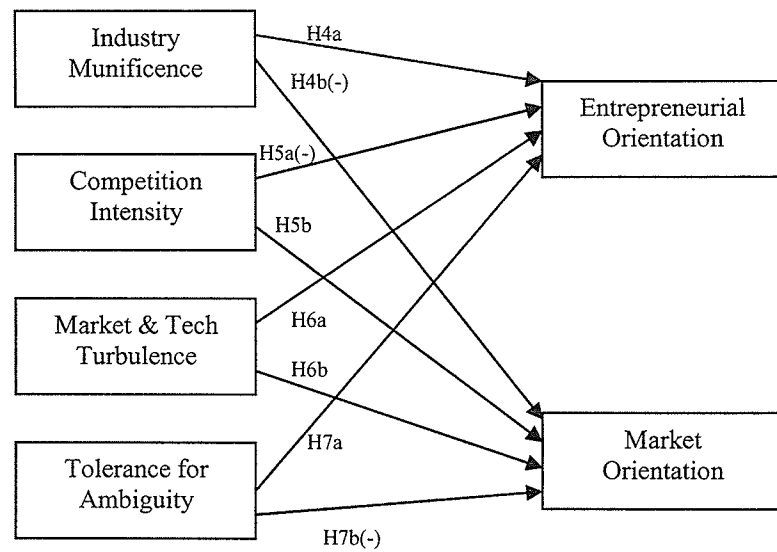
Prior studies suggest that when a business owner or top manager scores high on TFA, he/she is more like to be entrepreneurial (Gurol and Atsan 2006; Koh 1996), more comfortable to deal with uncertainties (Gimpl and Dakin; Teoh and Foo 1997), more innovative (Wang and Chan 1995), and more prepared to adopt more aggressive decision-making styles (Nutt 1993). Prior theory also suggests that an organization tends to behave similarly to its top manager (Eisenhardt 1999; Hambrick and Mason 1984). Thus, when an organization possesses a high TFA, it also tends to be more entrepreneurial, more aggressive, and more innovative, all of which means that an organization's level of TFA is positively associated with its EO.

Jaworski and Kohli (1993) argue that managerial risk-aversion might have a negative impact on a firm's MO. However, they fail to find empirical evidence to support their proposition. Kirca et al. (2005) simply drop risk-aversion from the MO framework in their meta-analysis. Today, given the prevalence of MO, I suspect that it might have become the default strategic orientation for firms with low TFA. Because firms with low TFA are uncomfortable dealing with incomplete information, they continue surveying their customers for directions and monitoring their competitors for ideas and cues. Market-oriented firms seem to rely on external data to solidify the rationalities of their decisions. In contrast, firms with a high level of TFA are less concerned with the incremental value of additional market intelligence. They are more likely to act upon the intelligence that is available and take a more proactive and risk-taking approach. Hence, I believe that firms with a high level of TFA are more likely to be entrepreneurial-oriented and less market-oriented.

*H7a TFA has a positive influence on EO.*

*H7b TFA has a negatively influence on MO.*

In summary, with respect to the antecedents to the MO and EO combination, I proposed four pairs of hypotheses to predict how external environmental factors (i.e., munificence, competitive intensity, and turbulence) and an internal organizational characteristic (i.e., tolerance for ambiguity) would steer managers in their placement of emphases. These hypotheses are depicted in a path model as shown in Figure 3.3. The next chapter presents the methodology employed to test these hypotheses.



*Figure 3.3.* Hypothesized antecedents to MO and EO combination.



## **CHAPTER 4: RESEARCH METHODOLOGY**

This chapter presents the methodology employed for this dissertation. This dissertation involves two studies, both of which use the survey method for data collection. The questionnaires are developed following general guidelines in the existing literature (Anderson and Gerbing 1988; Klein 2007; Podsakoff et al. 2003). For example, wherever possible I have used previously published measurement scales with multiple measurement items that demonstrate good dimensionality (Anderson and Gerbing 1988) in lieu of single item question. I further assured participants their anonymity and confidentiality to avoid respondent social desirability biases, and explicitly advised them that there were no right or wrong answers (Podsakoff, MacKenzie, Lee, and Podsakoff 2003). I also broke the questionnaire into blocks with headings to break any potential respondent mental “bubble.” Finally, questions were occasionally reverse coded to reduce the chance that a respondent would answer all questions in a similar direction (Klein 2007).

The first study is a pilot study in which data were collected from students enrolled in the Masters of Business Administration (MBA) program in a large western Canadian university. The second study is the main study. Data were collected from a national sample of business owners and senior managers of manufacturing companies across Canada. The following sections discuss each study in detail.

## **4.1 Pilot Study**

### **4.1.1 Study Design**

#### **Purpose**

The major purpose of the pilot study was three-fold: 1) to compare the relative efficacies of KJMO and NSMO, 2) to establish the discriminant validity of MO and EO, and 3) to test whether environmental factors influence firms' choices on strategic orientations.

A previous section of this dissertation reviews the historical development of the MO construct and reveals that there have been two major perspectives in its conceptualization, operationalization, and measuring. One is Kohli and Jaworski's (1990) behavioural perspective and the other is Narver and Slater's (1990) organizational cultural perspective. Both perspectives have developed measurement scales (Kohli, Jaworski, and Kumar 1993; Narver and Slater 1990, respectively). Both KJMO (e.g., Antilla 2002; Bathgate, Omar, Nwankwo, and Zhang 2006; Kara, Spillan, and DeShields 2005; Liao, Foreman, and Sargeant 2001; Macedo and Pinho 2006; Rojas-Mendez, Kara, and Spillan 2006; Varela and Rio 2003) and NSMO (e.g., Aggarwal and Singh 2004; Ellis 2005; Hammond, Webster, and Harmon 2006; Han, Kim, and Sarvastava 1998; Hooley et al. 2003; Mavondo 1999; Sin et al. 2004; Tse et al. 2003) scales have been used extensively in prior studies. Several scholars have also attempted to further validate, refine, or enrich these scales (e.g., Deshpande and Farley, 1998; Matsuno, Mentzer, and Rentz 2000; 2005; Ward, Girardi, and Lewandowska 2006). Recent studies seem to have adopted various shortened and modified scales (e.g., Bhuian, Megnuc, and Bell 2005; Hult, Ketchen, and Slater 2005; Zhou, Yim, and Tse 2005). In order to ensure construct

validity and scale efficiency in the main study, the first objective of the pilot study was to compare the efficacies of the KJMO and NSMO scales.

There have also been some concerns about whether MO and EO are truly different. As the literature review reveals, while both constructs are considered important strategic orientations that positively influence firm performance (e.g., Covin and Slevin 1991; Kohli and Jaworski 1990; Lumpkin and Dess 1996; Narver and Slater 1990), MO and EO evolved from two separate streams of research. While several studies have examined MO and EO's joint influences and potential interactions (e.g., Atuahene-Gima and Ko 2001; Bhuian, Megnuc and Bell 2005; Zhou, Yim and Tse 2005), no study has specifically reported the discriminant validity of these two constructs. Hence, the second objective of this pilot study was to statistically establish the discriminant validity between MO and EO.

Finally, prior studies have presented a mixed relationship between the environment and strategic orientations. In the MO stream of research, Jaworski and Kohli (1993) propose that environmental factors moderate the relationship between MO and performance but fail to support this proposition with empirical evidence. Slater and Narver (1994) argue that the relationship between MO and performance is robust and not moderated by the environment. More recently, several other scholars provide empirical evidence to support the moderation effect (Calantone, Garcia, and Droge 2003; Vasudevan et al. 2006). Kirca's (2005) meta-analysis argues that, considering the number of studies that report a non-significant moderation, data are not sufficient to support the idea of environment's moderation role. Interestingly, several other scholars have moved to propose, and provided evidence for, the notion that environmental factors influence

market-oriented behaviours (Bennett 2005; Cadogan, Cui, and Li 2003). Similarly, in the stream of EO research scholars have proposed that the environment either moderates the relationship between EO and performance (Becherer and Maurer 1999; Frese, Brantjes, and Hoorn 2002) or influences the adoption of EO (e.g., Mason 2006; Miles, Arnold, and Thompson 1993). The third objective of this pilot study, then, was to test whether firms' levels of MO and EO are associated with environmental factors.

### **Research method**

Considering the three objectives of this pilot study, it was necessary to capture variations in the nature of competitive environments and firms' strategic orientations. With such variance, the researcher can then analyze how firms' strategic orientations differ along MO and EO measures, and how the variance of strategic orientations relates to variance in environmental factors. A cross-sectional survey-based method is well suited for testing these relationships. Data on a large number of organizations can be collected systematically via this method. Furthermore, the survey method is the least susceptible to researcher bias in data collection, analysis, and interpretation.

#### **4.1.2 Procedure**

A survey was administered to 60 students enrolled in the MBA program in a large western Canadian university. The use of MBA students in pilot studies (Withers and Ebrahimpour 1996) or even in main studies (Foxall and Hackett 1994; Scandura, Munter, and Korvin 1996) in management and marketing research is not uncommon. Several studies have involved both practicing managers and MBA students in their sample, and

found the groups in almost unanimous agreement or consensus (Dacko 2002; Siegel 1982).

The MBA students in this pilot study were registered in a managerial accounting class and a strategic marketing class. A majority of these MBA students have had work experience; many of them have held senior managerial positions. They were assured anonymity and confidentiality and their participation was voluntary. The survey questionnaire for the pilot study is attached in Appendix 3. Forty-five survey questionnaires were completed and returned, yielding a 67% participation rate. Among the participants of this survey, 21 were female and 24 were male.

#### **4.1.3 Measurement**

##### **Market orientation**

The first objective of the pilot study was to compare the relative efficacies of KJMO and NSMO in order to select a relatively more effective and efficient MO scale to be used in the main study. Accordingly, the questionnaire for the pilot study includes both KJMO and NSMO.

Jaworski, Kohli, and Kumar (1993) and Narver and Slater (1990) originally developed measurement scales to capture the MO construct in accordance to their respective perspectives. Over the years, scholars have extended, shortened, or modified these scales to suit research contexts (e.g., Gainer and Padanyi 2005; Matsuno, Menzer, and Rentz 2005; Mavondo, Chimhanzi, and Stewart 2005; Hult, Ketchen, and Slater 2005; Zhou, Yim, and Tse 2005). Based on recent development, this pilot study adopts a

12-item KJMO and a 12-item NSMO. All items are measured on seven-point Likert-type semantic differential scales, from “1=strongly disagree” to “7=strongly agree”.

### **Entrepreneurial orientation**

Covin and Slevin (1991) used a qualitative methodology to observe firm behaviours, and generated a collage of items to measure entrepreneurship. Although this collection of items was not initially labelled as measurement scale for EO, it has served as a foundation for later developments of EO scales. For example, Kreiser, Marino, and Weaver (2002) developed an EO scale based on the work of Covin and Slevin. This scale bears the same three dimensions suggested by Covin and Slevin (i.e., innovativeness, proactiveness, and risk-taking). The three dimensions were found to co-vary, yet with demonstrated discriminant and cross-cultural validity.

In marketing, researchers have used considerably shorter versions of measurement scales to assess EO. For example, Zhou, Yim, and Tse (2005) adopt a four-item scale based on the work of Naman and Slevin (1993) and Hult and Ketchen (2001). The four items are specific to the context of their Chinese sample and only deal with the opportunities associated with China's then newly acquired membership to the World Trade Organization (WTO). Hult and Ketchen (2001) based their scale on the work of Naman and Slevin (1993), which is in turn based on Covin and Slevin's (1991) three-dimensional conceptualization of entrepreneurship.

In light of this tradition, and the fact that EO is a focus of this study, the pilot adopted a nine-item, three-dimensional scale of EO developed by Naman and Slevin (1993), which is generic, multi-dimensional, and reasonably short. Each item is

measured on a seven-point semantic differential scale, with polarized exemplar extreme behaviours anchoring each end of the scale. Respondents were asked to choose a number between one and seven, with one denoting that their company's behaviours are similar to the exemplars on the left hand side, seven denoting their company's behaviours are similar to the exemplars on the right hand side, and the numbers in-between indicating their company's behaviours are somewhere in-between these exemplars.

### **Munificence**

Munificence refers to the extent to which the industry environment can support sustained growth (Starbuck 1976). Prior studies operationalize munificence into a single item by measuring growth rate (e.g., Goll and Rasheed 1997; 2005). Consistent with the tradition of utilizing subjective measures in marketing research, the pilot study measured munificence by asking participants to rate the perceived growth potential of their industry on a seven-point Likert-type scale, from 1= "very low" to 7= "very high".

### **Competition intensity**

Competitive intensity was measured with a single item by asking the participants to rate the perceived degree of competition in their respective industry on a seven-point Likert-type scale, from 1= "very low" to 7= "very high".

### **Customer satisfaction**

Customer satisfaction was measured with a single item by asking participants to rate the perceived relative degree of customer satisfaction for their company compared to

the competitors in their respective industry on a seven-point Likert-type scale, from 1= “very low” to 7= “very high”.

### **Financial performance**

Financial performance was also measured with a single item by asking the participants to rate the perceived relative financial performance of their company compared to the competitors in their respective industry on a seven-point Likert-type scale, from 1= “very low” to 7= “very high”.

## **4.1.4 Results**

### **Scale reliability**

All three major multi-item scales, NSMO, KJMO, and EO, have achieved good internal scale reliability, with standardized Cronbach alpha values of 0.8484, 0.7939, and 0.8173, respectively (see Table 4.1.1).

### **Comparison of KJMO and NSMO**

The first objective of this pilot study was to compare the efficacies of KJMO and NSMO in order to select a more suitable scale to be used in the main study. Data indicate that NSMO has a slightly higher reliability than KJMO (see Table 4.1.1). While Cronbach Alpha alone is not a reliable judgement for scale quality, this finding is consistent with prior findings in comparative studies of KJMO and NSMO, which suggest that NSMO is more favourable than KJMO (Matsuno, Mentzer, and Rentz 2005). Accordingly, this result suggests that NSMO should be employed in the main study.



Table 4.1.1  
*Scale Reliability*

	Cronbach Alpha
NSMO	0.8484
KJMO	0.7939
EO	0.8173

### **Discriminant validity**

Using a confirmatory factor analysis (CFA) with Amos 4.0 (Arbuckle and Wothke 1995), NSMO, KJMO, and EO were each conceptualized as a uni-dimensional latent construct. The correlation between NSMO and KJMO is, as expected, very high ( $r = 0.84$ ,  $p=0.025$ ) (see Table 4.1.2). This suggests that NSMO and KJMO converge and are different measures for the same construct.

Table 4.1.2 also shows that the relationship between EO and NSMO is insignificant ( $r=0.37$ ,  $p=0.065$ ). The relationship between EO and KJMO is also insignificant ( $r=0.55$ ,  $p=0.099$ ). Hence, the data indicate that EO and MO are distinctive constructs, and that the discriminant validity between MO and EO has been achieved.

Table 4.1.2  
*Scale Discriminant Validity*

	NSMO	KJMO	EO
NSMO	1.00		
KJMO	0.84 ( $p=.025$ )	1.00	
EO	0.37 ( $p=.065$ )	0.55 ( $p=.099$ )	1.00

### Dimensionality of EO

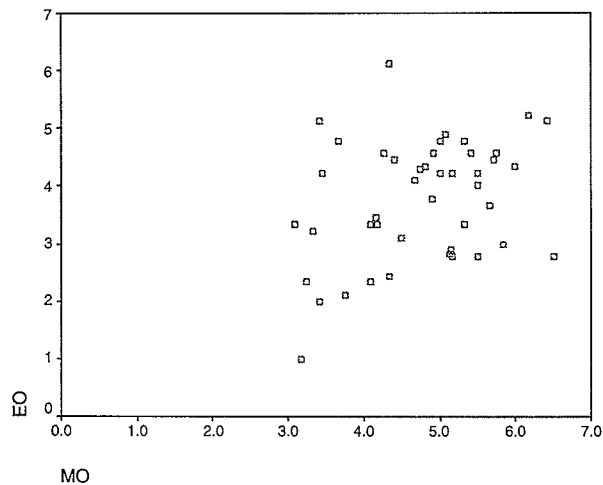
CFA was used to investigate the three-dimensional structure of EO. While a small sample prohibits rigorous tests, the result nevertheless provides interesting indications for the dimensionality of an EO construct. The three factors—pro-active, risk-taking, and innovativeness—are positively correlated with each other, which suggests a convergent validity (see Table 4.1.3). The pro-active dimension and risk-taking dimension are particularly highly correlated, with a covariance equal to 0.675. However, innovation is only marginally and weakly related to other dimensions. As discussed previously, innovation is often considered an indicator of performance outcomes. Hence, while the previous scale reliability test suggests that it is acceptable to consider EO as a uni-dimensional composite construct, the data also provides empirical support for a multi-dimensional conceptualization of the EO construct as Covin and Slevin (1993) envisioned.

Table 4.1.3  
*Covariances Among EO Dimensions*

Covariances			Estimate	S.E.	p-value
Proactive	↔	Risk-taking	0.675	0.151	0.000
Proactive	↔	Innovative	0.227	0.104	0.028
Innovative	↔	Risk-taking	0.148	0.077	0.055

### Variance in Combination of MO and EO

Respondents' scores on MO and EO were plotted in a scatter plot (see Figure 4.1.1).



*Figure 4.1.1. Distribution of MO & EO.*

The result indicates that all respondent's MO scores were neutral or higher. This suggests that none of the companies from which these respondents came would object to market-oriented behaviours. This result seems to echo the notion that MO has become the norm of business philosophy. If all companies have become market-oriented, then being market-oriented alone cannot provide sustainable competitive advantage (Sinkula 1994). Potentially, one might interpret this phenomenon as a respondent error that is associated with “yay-saying” bias or social desirability bias, which would artificially shift the scores higher. A “yay-saying” effect does seem to be present in the present data, however, because such potential bias is not observed in the distribution of EO.

In comparison, there seems to be a greater variance in the distribution of EO (from 1 to 6). This suggests that some respondents come from companies that have

extremely low EO scores. Compared to MO, EO is apparently not as widely embraced or even appreciated in some businesses.

The naturally occurring wide scattering of MO and EO also indicates that firms have adopted very different approaches in terms of their strategic orientations and provides preliminary support for the four-quadrant typology of strategic orientations (as presented in Figure 3.1). Some firms seem to have adopted a market-driven strategic orientation, with relatively high scores on MO, but low scores on EO. Other firms seem to have adopted an entrepreneurial-driven strategic orientation, with high EO scores, but not so high on MO. Yet, other firms seem to have employed the integrated approach, indicated by relatively high scores on both MO and EO. How would these groups of firms differ in their performance? How would environmental and organizational factors influence their adoption of MO and EO? The next section will attempt to answer these questions.

### **Testing of hypotheses**

H1 predicts that MO's impact on a firm's financial performance is mediated through customer satisfaction and loyalty. In order to test this hypothesis, a mediation analysis was conducted based on Baron and Kenny's (1986) recommendations. This involved the testing of four regression models: 1)  $MO \rightarrow FP$ , 2)  $MO \rightarrow CSL$ , 3)  $CSL \rightarrow FP$ , 4)  $MO + CSL \rightarrow FP$ . Results of these four models are shown in Table 4.1.4.

Table 4.1.4

*MO's Influences on Performance*

IV	DV	Adj. R <sup>2</sup>	Beta coefficient	F- value	Significance
MO	FP	0.081	0.325	4.357	0.044
MO	CSL	0.043	0.207	1.574	0.218
CSL	FP	0.487	0.698	33.161	0.000
MO	FP	0.493	0.191	18.533	0.124
CSL			0.658		0.000

As can be seen, MO is a significant predictor of FP when it is the only independent variable. When CSL is added as an additional independent variable in the model, MO's influence on FP becomes insignificant. As predicted, the relationship between MO and CSL is positive. However, this relationship fails to achieve statistical significance. A small sample size might have limited our statistical power to detect the significance of this relationship. Hence, I claim that H1 is partially supported.

H2a and H2b predict that EO has a direct impact on FP, and such influence is not mediated through CSL. Using ordinary least square (OLS) regression method, relationships were tested between EO→FP, and EO→CSL. The results of these regression models are shown in Table 4.1.5.

Table 4.1.5

*EO's Influences on Performance*

IV	DV	Adj. R <sup>2</sup>	Beta coefficient	F- value	Significance
EO	FP	0.000	0.017	0.011	0.918
EO	CSL	0.004	-0.065	0.148	0.703

As expected, EO is positively correlated with financial performance. However, such relationship fails to achieve statistical significance in the data. Thus, H2a is not supported. Also, as expected, EO is not a significant predictor of CSL. This is consistent with anecdotal evidence that customers are sometimes frustrated with entrepreneurial-

oriented firms because of the introduction of disruptive technologies, planned obsolescence, and continuous requirements for upgrades. Thus, I was unable to reject the null hypothesis, as stated in H2b. Not finding a significant relationship between EO and financial performance is rather disappointing. Of course, one could place blame on the limitation of a small sample. However, in this instance, judging from the magnitude of the relationship between these two constructs, an increase of sample size alone may not be sufficient. Several other factors need to be considered. For example, respondents in this pilot study came from a wide variety of industries. Certain industries, such as the high-tech sector, might demand that all players in the industry be relatively entrepreneurial. More traditional industries, such as the banks, tend to act more conservatively. And yet, banks are normally very profitable. Thus, the main study needs to control for the influence of industry-type and ensure that sample companies are reasonably comparable.

H3 predicts that the interaction term of MO and EO would have an additional positive influence on performance. In order to test this hypothesis, a general linear model regression was employed with multiple independent variables and multiple dependent variables. In this model, financial performance and customer satisfaction are the dependent variables. The independent variables include EO, MO, and their cross product (EO\*MO). The results suggest that only MO approaches statistical significance in predicting customer satisfaction. Neither EO nor the MO\*EO interaction have a statistically significant relationship with performance (Table 4.1.6). Hence, H3 is not supported.

Table 4.1.6

*MO and EO's Influences on Performance Indicators*

<b>Independent Variable</b>	<b>Dependent Variables</b>	<b>Beta</b>	<b>p-value</b>	<b>Adjusted R<sup>2</sup></b>
EO	Customer Satisfaction	.431	.224	.020
MO		.745	.011	
EO*MO		-.900	.085	
EO	Financial Performance	-.157	.641	.039
MO		.320	.235	
EO*MO		.077	.874	

H4a and H4b predict that industry munificence has a positive influence on EO and a negative influence on MO. In order to test these hypotheses, I conducted a multivariate general linear model regression, with MO and EO as the dependent variables and munificence as the independent variable. The results are shown in Table 4.1.7.

Table 4.1.7

*Munificence's Influences on MO & EO*

<b>Independent Variable</b>	<b>Dependent Variables</b>	<b>F-value</b>	<b>p-value</b>	<b>Model Adjusted R<sup>2</sup></b>
Munificence	EO	14.804	.000	.252
	MO	1.803	.187	.019

As expected, munificence has a positive relationship with EO. Hence, H4a is supported. The relationship between munificence and MO is not statistically significant. Hence, H4b is not supported. This implies that, consistent with prior findings, in a munificent environment availability of slack resources enables a firm to be more innovative, as manifested in a higher level of EO. However, having slack resources does not necessarily lead to neglecting market intelligence. On the contrary, some firms might

opt to take advantage of an abundance of resources to increase collection of market intelligence.

A mean comparison was also conducted among the four groups of companies as clustered according to the four-quadrant typology (Figure 3.1). The data suggest that the entrepreneurial-driven firms (those characterized with a high EO and low MO) are associated with the highest perception of industry munificence. The between groups variance is statistically significant ( $p=0.007$ ; means are reported in Table 4.1.8), which indicates that, in a munificent environment, firms are more likely to adopt an entrepreneurial-driven strategic orientation.

Table 4.1.8  
*Mean Comparison of Munificence*

	<b>Typology</b>	<b>Characteristics</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
1	Market-driven	High MO Low EO	9	4.67	1.22
2	Integrated	High MO High EO	12	5.17	1.03
3	Entrepreneurial-driven	Low MO High EO	7	5.71	0.95
4	Conservative	Low MO Low EO	13	3.46	1.98

H5a and H5b predicted that competitive intensity is negatively associated with EO and positively associated with MO. In order to test these hypotheses, a multivariate general linear model regression was conducted, with MO and EO as the dependent variables and competitive intensity as the independent variable. The result (shown in Table 4.1.9) suggests that, contrary to what H5a predicted, competitive intensity has a positive and significant relationship with EO. The relationship between competitive intensity and MO is not statistically significant. Hence H5a and H5b are not supported. Contrary to the prediction that competition inhibits innovation, the pilot study data indicate that competition seems to encourage innovation. This finding is interesting in that it supports the propositions made by other researchers that entrepreneurship is a



means of gaining a competitive advantage in a competitive environment (e.g., Miles, Arnold and Thompson 1993).

Table 4.1.9  
*Competitive Intensity's Influences on MO & EO*

<b>Independent Variable</b>	<b>Dependent Variables</b>	<b>F-value</b>	<b>p-value</b>	<b>Model Adjusted R<sup>2</sup></b>
Competitive Intensity	EO	4.876	.033	.084
	MO	2.127	.152	.026

A mean comparison also conducted of perceived competitive intensity among the groups. Between groups variance is not statistically significant. However, the integrated firms are associated with the highest level of perceived competitive intensity (see Table 4.1.10), and therefore provide a preliminary indication that under a competitive environment firms are more likely to adopt an integrated strategic orientation.

Table 4.1.10  
*Mean Comparison of Competitive Intensity*

	<b>Typology</b>	<b>Characteristics</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
1	Market-driven	High MO Low EO	9	4.44	2.70
2	Integrated	High MO High EO	12	5.75	2.09
3	Entrepreneurial-driven	Low MO High EO	7	4.88	1.36
4	Conservative	Low MO Low EO	13	4.38	2.06

#### 4.1.5 Discussion

This pilot study compared the relative efficacies of NSMO and KJMO. Prior studies have indicated that NSMO has higher predictive power in explaining variances in business performance than KJMO (e.g., Mastuno, Mentzer and rentz 2005; Oczkowski

and Farnell 1998). The pilot study data indicate that NSMO has higher reliability than KJMO. Thus, the main study adopted NSMO.

This pilot study also tested the discriminant validity between MO and EO. Based on confirmatory factor analysis, I am confident that MO and EO are two distinctively different strategic orientations that are only weakly correlated. It is apparent that firms could, and do, choose between different combinations of strategic orientations. Variations in the levels of firms' MO and EO provide qualitative support for the four-quadrant typology of combinations of strategic orientation (Figure 3.1). While some firms have adopted an integrated approach, with high scores on both MO and EO, many opt to be more focused and place emphasis on either EO or MO. Yet, there are conservative firms that are neither market-oriented nor entrepreneurial-oriented.

I suspect that such strategic orientation choices would have a differential impact on a firm's financial performance and customer satisfaction and loyalty. As predicted, MO has a positive influence on financial performance, and such influence is mediated through customer satisfaction and loyalty. In contrast, EO has no correlation with customer satisfaction and loyalty or financial performance.

The pilot study data also indicate that some firms have adopted a market-driven strategic orientation. These firms emphasize the pursuit of better understanding their customers' needs and wants, then delivering products and services that meets those needs and wants. On the other hand, other firms appear to have adopted an entrepreneurial-driven strategic orientation, and pursued continuous innovations as a basic objective.

No research to date has delineated what factors have influenced where managers place their emphasis. I hypothesized that certain industry environmental factors might

have influenced managers' decisions on the choice of various combinations of strategic orientation. Indeed, as expected, industry munificence encourages EO, but not MO. The data show that entrepreneurial-driven firms are associated with the highest level of perceived industry munificence. These companies have high levels of EO and low levels of MO. Essentially, when the industry environment is munificent, where growth opportunities are abundant and profit margins are wide, firms can afford to be more creative and innovative. With high sales revenue and profits, firms might not necessarily feel the urgency of listening to their customers. The pilot study data indicate that munificence has no influence on firms' MO levels.

A high level of competitive intensity makes quite a difference. The data show that integrated firms—those with high levels of EO and high levels of MO—are associated with the highest level of perceived competitive intensity. Essentially, when a firm has to compete with other firms in the same industry for the same customer base, they must ensure that they understand customers better. It is not enough to make a good product. They must make a good product that the customer wants. They have to be simultaneously entrepreneurial-oriented and market-oriented.

#### **4.1.6 Limitations**

There are a number of limitations associated with the pilot study. First, this study had a small sample size. A small sample size leads to a low level of statistical power of the study. I suspect that this might have been the reason why I failed to find statistically significant support for several of the hypotheses. The results of statistical analyses based on a small sample might not have been stable, and a few outliers might have altered the

mathematical calculations of relationships. Therefore, sample size and statistical power of study became an important consideration in the main study.

Second, this study used a convenience sample of MBA students. While the majority of participants had industry experience and have held managerial positions, many were not business owners or senior managers in their respective company. The main hypotheses involve organizational strategic orientations and overall performance. I believe that only the business owners or senior managers would have a more comprehensive and accurate information on these constructs. Accordingly, selecting an appropriate sample would also be an important consideration in the main study.

These MBA students also came from a wide variety of industry backgrounds. Some were from high-tech start-ups and some from government agencies. Some participants answered “Do not apply” to some questions or wrote on the margins of the questionnaire to express frustration with the rules or regulations in their industry or organization. I suspect that different industries might have different norms of conduct. The same construct might have different meanings to respondents from different industries. Therefore, the main study took this factor into consideration so as to generate a sample that allows variance, yet maintains some consistency.

## **4.2 Main Study**

### **4.2.1 Study Design**

#### **Choice of research method**

This study aimed to address two main research questions. First, it attempted to contrast the different impacts of MO and EO on firm performance, and assess the merits of integrating MO and EO by observing variance in performance when firms integrate MO and EO in different fashions. Second, this study investigated what industry environmental and organizational factors influence managers' decisions as to where to place emphasis. These research questions were operationalized in such a way that variations in the perceptions of industry environmental factors would result in adoption of various types of strategic approaches. Variation in firms' adoption of different combinations of strategic orientations would lead to different levels of performance. A cross-sectional survey-based method was well suited for testing these hypotheses, for it is an effective way of systematically collecting data, particularly opinions and perceptions, which are difficult to otherwise observe in a large number of respondents (Babbie 1973). Furthermore, when used correctly, the survey method is the least vulnerable to researcher biases in data collection, analysis, and interpretation (Busha and Harter 1980).

Several other methods were considered and deemed not suitable. For example, I considered using the case study method with in-depth interviews. Such a method would have provided rich data that can be helpful for better understanding the proposed relationships (Eisenhardt 1989). However, the in-depth interview method precludes obtaining a larger sample and thus sacrifices the external validity and potential generalization of the findings. Informal interviews were conducted in the idea

formulation stage. Some insights gathered from these interviews are reported throughout the hypothesis development section as anecdotal evidence.

Another method that was considered was secondary archival data, such as Standard & Poor's Compustat data. However, Compustat does not contain information on the key constructs of this dissertation, such as MO or EO. A survey method was still needed to capture information on these constructs. The benefit of combining subjective measures gathered through surveys and objective measures reported in Compustat is a reduced single-method bias. The trade-off of using a combination method is a compromised anonymity because the researcher needs to track each respondent and match every returned questionnaire with the Compustat company profile. This tracking may lead to a reduced response rate. Moreover, prior studies have made the case that subjective measures of performance indicators are more suitable for marketing research than objective measures (Jaworski and Kohli 1993). Therefore, this study opted against employing archival data.

### **Choice of analysis techniques**

For the treatment and analysis of data, this dissertation employed a number of statistical techniques. First, confirmatory factor analysis (CFA) was employed to test the loading and structural properties of constructs that are relatively well established in the marketing strategy literature, such as MO, EO, CSL, and FP. Second, exploratory factor analysis (EFA) was used to investigate the loadings and structural properties of constructs that are relatively less well established, such as Turbulence and TFA. Third, general linear model (GLM) regression was employed to test relationships among constructs.

Fourth, path analysis with AMOS was used to test multi-path simultaneous equations, including the test of mediation relationships. Finally, Structural Equation Modeling (SEM) will be used to replicate and test path models with latent variables.

### **Choice of sample size**

The power of a statistical test is the probability of rejecting a null hypothesis when it is false. While there is no consensus on what level of statistical power is ideal, several researchers have suggested that 0.80 would be an acceptable level of power for most statistical analyses in social sciences (Kline 2005; Glass and Hopkins 1996). Statistical power is influenced by the level of type-I errors (rejecting a null hypothesis when it is true) that the researcher is willing to accept, estimated effect size, and sample size (Glass and Hopkins 1996). Conventionally, an acceptable level for type-I errors is usually set at a  $p=0.05$  level. Based on prior studies, effect sizes in this study are expected to be moderate. Thus, the primary purpose of discussing statistical power in the context of this study is to estimate an appropriate sample size.

Various tables for estimating statistical power have been provided in the literature. For example, when using one-way ANOVA to test the null hypothesis of equal means, and assuming moderate effect sizes (as observed in the pilot study), 50 respondents per group would yield a power of 0.71 at an alpha level of 0.05, and a power of 0.81 at an alpha level at 0.10 (Glass and Hopkins 1996). This dissertation presents a four quadrant typology. Thus, a sample size of 200 would provide a statistical power of 0.81 in ANOVA. A sample size of 160 would provide a statistical power of (approximately) 0.70.

For SEM, estimating power is more complicated and tedious. MacCallum and Austin (2000) surveyed over 500 published papers that used SEM and found about 20% of the papers had less than 100 cases. Kline (2005) suggests that 200 cases would be considered as “large.” Saris and Satorra (1993) suggest a method of estimating power by comparing the fit indices in a series of alternative models, adding and deleting one parameter at a time. This technique, however, is more post-hoc than a priori. MacCallum et al. (1996) provide a rough table for estimating statistical power in SEM with degrees of freedom and rooted mean square error of approximation (RMSEA). A full SEM with latent variables similar to the hypothesized path model depicted in Figure 3.2 would have over 100 degrees of freedom. A sample size of 132 would yield a statistical power equal to 0.80 for a close-fit model (RMSEA approximates 0.08). The final sample size of this study is 161.

### **Choice of sample frame**

To test the theoretical model proposed in this dissertation, it was important to capture a wide range of industry environments, levels of strategic orientations, and performance measures. However, as discussed at the end of the pilot study, various industries have very different traditions and norms of behaviours. Intuitively, one would expect that a majority of companies in high-tech industries tend to be more innovative than those in commodity industries or government agencies. Companies in natural resource industries, such as petroleum companies, might not be overly concerned with customer satisfaction. In contrast, companies in consumer product industries or service industries might be more naturally concerned with customer satisfaction and loyalty.



Moreover, monopoly, oligopoly, or monopolistic environments might produce very different mindsets compared to competitive environments. Differences in strategic orientations due to industry type would itself be an interesting research topic. However, this dissertation must keep a manageable scope, which means a trade-off between collecting data from a wide variety of industries and collecting data from companies that are comparable. In the final assessment, I decided to use companies in the manufacturing industry (Standard Industry Code from 2000 to 3999) as the sample frame. Manufacturing companies are similar in that they are usually competitive in selling their products to certain customers, acquiring resources, and delivering better products at better efficiency. Therefore, both MO and EO would be meaningful to them. At the same time, the manufacturing industry has a wide enough range to offer sufficient variance. Several prior studies have also used data collected from manufacturing industry (Avlonitis and Gounaris 1999; Knight 2000; Matsuno and Mentzer 2000; Menguc and Auh 2006; Pelham 1999).

### **Choice of respondents**

While both the single- and multiple-informant approaches to collecting organizational level data were potentially viable, I elected to use the single-informant approach. Researchers have suggested that there are several reasons why the single-informant approach is more feasible than multiple informant approach (Bayyavarapu 2005; Huber and Power 1985). First, the single informant method is more cost effective. Organization is the unit of analysis in this dissertation, but if I were to seek multiple responses from every organization, then the cost of doing so would be considerably

higher than seeking single response from each organization. Second, a single informant method allows the researcher to approach more companies and potentially generate a higher response rate. Third, if each company provides a different number of responses, the data is more difficult to analyze. Fourth, if each respondent from the same company provides a different response, the data is yet even more difficult to analyze. Bayyavarapu (2005) examined 18 survey-based research studies published in a premium strategy research journal, and found that 15 of them used a single informant method. Furthermore, a majority of empirical studies in the MO and EO streams of research also adopt a single informant approach (e.g., Atuahene-Gima and Ko 2001; Lukas and Ferrell 2000; Mastuno, Mentzer and Ozsomer 2002; Slater, Olson, and Hult 2006; Zhou, Yim, and Tse 2005). Therefore, it was decided to use a single respondent as the key informant on behalf of the organization.

#### **4.2.2 Procedure**

A mail survey was conducted to collect information about Canadian manufacturing companies. A sample of 2,200 companies with Standard Industry Codes (SIC) from 2000 to 3999 was randomly selected from approximately 100,000 Canadian companies listed in Profile Canada's database. The owners of these businesses or senior managers of these selected companies were contacted by mail, informed of the nature of the study, and asked to complete and return a survey questionnaire in a self-addressed, stamped, return envelope. Follow-up reminder postcards were sent to all contacts two weeks after the initial mail-out. Out of the 2200 packets mailed, 209 were returned as undeliverable. Among the 1,991 delivered surveys, 163 respondents returned the

questionnaire within 6 weeks of the initial mail-out. Two responses were deleted due to large portion of missing data. The survey yielded 161 usable responses, representing an 8.1% response rate.

### **Non-response bias**

A low response rate can introduce bias into survey results. If the responding group has characteristics systematically different from the non-responding group, then data from the responding group cannot represent the entire sample or population. In order to test non-response bias, extrapolation procedures were conducted, as recommended by Armstrong and Overton (1977). These tests are commonly reported in empirical studies in marketing and strategy research (Bhuian, Menguc, and Bell 2005; Hult, Ketchen, and Slater 2005; Matsuno, Mentzer, and Ozsomer 2002). First, I conducted a t-test to assess whether the respondent companies are representative of the overall sample. I compared the respondent companies' size (operationalized as the number of employees) with that of the overall sample. No statistically significant difference was found (See Table 4.2.1).

Table 4.2.1  
*Respondent—Overall Sample t-test*

Group	N	Mean	Standard deviation	t-value	Sig.
Respondents	157	1401.98	6446.98	1.28	.202
Overall sample	2206	736.23	3315.09	Equal variance not assumed.	

Fowler (1995) argues that an important factor that affects a participant's decision as to whether to respond to a survey is how they feel about the subject. While I am unable to determine how non-respondents feel about the subject, I am able to compare earlier respondents with later respondents. In this comparison, early respondent is defined as those surveys returned before the reminder postcards were mailed. In this test, I compared company size as well as scores on major constructs, such as MO and EO. Again, no statistically significant difference was found (see Table 4.2.2). Hence, I am confident that non-response bias is not a major concern in this data. That having been said, post hoc t-tests only provide researchers with comfort and confidence in the data. They cannot overcome the fact that only 8% of the respondents returned the survey. Therefore, any interpretation of the data must keep in mind this limitation.

Table 4.2.2  
*Early Respondent—Late Respondent t-test*

Variable	Group	N	Mean	SD	t-value	Sig.
Firm size	Early	106	781.70	2663.52	-1.24	.221
	Late	51	2611.19	10490.75		
MO	Early	108	5.24	.84	.803	.424
	Late	53	5.13	.79		
EO	Early	108	4.03	1.10	.002	.998
	Late	53	4.03	1.23		

### Method biases

Method biases refer to the artificially high correlations among constructs that can be attributed to the measurement method rather than the constructs that the measures represent (Podsakoff, MacKenzie, Lee, and Podsakoff 2003). Klein (2007) suspects that respondents sometimes have difficulties in differentiating subtle distinctions between constructs. When they are asked to answer a number of questions, they tend to get into a

mental “blob” and answer all questions in a similar fashion. In order to reduce potential method biases, methodologists in survey research (e.g., Busha and Harter 1980; Klein 2007; Podsakoff et al. 2003) have compiled lists of recommendations on how to design a better survey questionnaire. I rigorously followed these recommendations when designing this survey. First, for example, wherever possible, I used previously published measurement scales with demonstrated construct validity and measurement reliability. Second, I did not inter-mix measurement items for various constructs. Instead, I measured constructs in blocks. Third, I employed several different types of scales, such as Likert-type scales, semantic differential scales, and “fill in the blank” types of questions. Fourth, I also inserted several open-ended questions, such as “What industry does your company primarily compete in?” These open-ended questions sought to break respondents’ mental “blobs.” Fifth, I also reverse coded some of the questions, so that respondents had to pause and re-think questions that were negatively framed. Furthermore, I broke the questionnaire into sections, with descriptions and instructions at the beginning of each section. All these techniques were aimed at providing respondents with mental breaks, thereby reducing potential common method biases.

Potential method bias can also arise from social desirability (Podsakoff et al. 2003). As recommended, I assured respondent confidentiality and anonymity to all responses. I further reminded respondents that there was no right or wrong answer, and encouraged them to answer the questions as honestly as possible.

With these procedural remedies at hand, it is still possible that common method bias exists in the data. In order to diagnose the presence of this bias, I conducted Harman’s single-factor test (Podsakoff and Organ 1986) with exploratory factor analysis.

Prior studies that reported common method bias also employed this technique (e.g., Bayyavarapu 2005; Bhuian, Megnuc and Bell 2005). This test involves including all items from the study constructs into an exploratory factor analysis to determine whether a majority of the variance can be accounted for by one general factor—the common error. The result of this test revealed that there were 27 factors within the data with Eigen values greater than 1.00, which suggests that precautions employed in designing the questionnaire successfully reduced respondents' potential mental “blob” and that method bias is not a major concern for this data.

Another type of respondent bias may arise as respondents' personal characteristics might influence their answers. The survey questionnaire in this study did not ask respondents many questions about their personal characteristics because the focus of this study was about their organization, not the individual. Gender is one variable that was included in the questionnaire. T-tests find no statistically significant difference between male and female respondents in terms of their scores on MO ( $t=-0.750$ ,  $p=0.454$ ) or EO ( $t=0.888$ ,  $p=0.376$ ).

#### **4.2.3 Measurement**

##### **Market Orientation (MO)**

Following Narver and Slater's (1990) cultural perspective on market orientation (NSMO), I used a 12-item, 7-point Likert-type scale, from 1= “strongly disagree” to 7= “strongly agree,” to capture a respondent's perceptions on his/her company's customer orientation, competitor orientation, and inter-functional coordination (see Appendix 2).

These 12 items demonstrated good reliability, with a standardized item coefficient alpha of 0.8570.

I conducted confirmative factor analyses (CFA) with AMOS to test the structure of MO construct. I tested two models—a uni-dimensional, model with all 12 items loading onto a single factor, and a three-dimensional model with 3 inter-correlated factors. The results indicated that the normed fit index (NFI) and comparative fit index (CFI) for both models were greater than 0.90 (see Table 4.2.3). Therefore, both models were acceptable. Judging from chi-square discrepancies ( $\chi^2$ ), discrepancy per degree of freedom ( $\chi^2/\text{df}$ ), NFI, and CFI, the three-dimensional model fits the data slightly better than the uni-dimensional model. However, considering the parsimony principle (Klein 2005), the uni-dimensional model was better, with higher parsimonious-adjusted NFI (ANFI) and parsimony-adjusted CFI (ACFI). Therefore, I will employ the uni-dimensional model for MO in later SEM analysis. For the purpose of regression analyses, I averaged the 12 items into one MO composite index score.

Table 4.2.3  
*CFA Model Fit Indices—MO*

<b>Fit Indices</b>	<b>Uni-dimensional Model</b>	<b>Three-dimensional model</b>
$\chi^2$	314.948	164.011
df	54	51
$\chi^2/\text{df}$	5.832	3.216
NFI	0.947	0.972
CFI	0.955	0.981
RMSEA	0.174	0.118
ANFI	0.656	0.636
ACFI	0.661	0.641

## **Entrepreneurial Orientation (EO)**

EO was measured with a nine-item, seven-point semantic differential scale based on the work of Naman and Slevin (1993). These items were designed to capture a firm's innovativeness, proaction, and risk-taking behaviour. These items are measured on seven-point semantic differential scales with polarized exemplar extreme behaviours anchoring each end of the scale. The respondents were asked to choose a number between 1 and 7, with 1 denoting their company's behaviours as similar to the exemplars on the left hand side, 7 denoting their company's behaviours as similar to the exemplar on the right hand side, and the numbers in-between indicating their company's behaviours as somewhere in-between these exemplars. These nine items also demonstrated good reliability, with a standardized item coefficient alpha of 0.8462.

Parallel to the CFA conducted on MO, I also conducted CFA on EO. I constructed two models—a uni-dimensional model with all nine items loading onto a single factor, and a three-dimensional model with three inter-correlated factors. The results indicated that the normed fit index (NFI) and comparative fit index (CFI) for both models were greater than 0.90 (see Table 4.2.4). Therefore, both models were acceptable. Judging from  $\chi^2$ ,  $\chi^2/\text{df}$ , NFI, and CFI, the three-dimensional model fitted the data slightly better than the uni-dimensional model. Again, considering the parsimony principle, the uni-dimensional model was favoured based on higher ANFI and ACFI. Subsequently, these nine items were averaged into one EO composite index for regression analyses.



Table 4.2.4  
CFA Model Fit Indices—EO

Fit Indices	Uni-dimensional Model	Three-dimensional model
$\chi^2$	115.269	39.269
Df	27	24
X <sup>2</sup> /df	4.269	1.636
NFI	0.964	0.988
CFI	0.972	0.995
RMSEA	0.143	0.063
ANFI	0.579	0.527
ACFI	0.583	0.531

### Customer satisfaction and loyalty (CSL)

Following Kohli and Jaworski's (1990) MO framework, which stipulates that customer satisfaction and customer loyalty are important consequences of market orientation, I measured customer satisfaction and loyalty with three items each. The participants were asked to rate their perception of customer satisfaction with and loyalty to their company compared to major competitors on a six-item, seven-point Likert-type scale, from 1= "very low" to 7= "very high". An exploratory factor analysis, using principal component analysis with varimax rotation, revealed one predominant underlying factor. These six items demonstrated an acceptable reliability coefficient, with a standardized item coefficient alpha of 0.7898, which is greater than the 0.70 recommended by Nunnally (1978). Hence, I averaged these six items into one CSL composite index.

### Financial performance (FP)

FP was measured with a three-item, seven-point perceptual measure of the firm's performance relative to competition. Respondents were asked to indicate the firm's overall sales revenue, return on investment, and return on assets relative to its major

competitors—the identical measure used by Kohli and Jaworski (1993). An exploratory factor analysis, using principal component analysis with varimax rotation, revealed a single underlying factor. These three items demonstrated an excellent reliability, with a standardized item coefficient alpha of 0.9011. Hence, I averaged these three items into one FP index.

### **Munificence**

The construct of munificence was measured with a five-item, seven-point Likert-type scale to capture the perceived growth rate of industry indicators, such as sales, employment, value-added, profit margin (Castrogiovanni 2002), and a general global perception of munificence. An exploratory factor analysis, using principal component analysis with varimax rotation, revealed one predominant underlying factor. These five items demonstrated an acceptable reliability coefficient, with a standardized item alpha of 0.8486. Hence, I averaged these five items into one Munificence composite index.

### **Competitive intensity**

Competitive intensity was measured with a three-item, seven-point Likert-type scale based on the work of Jaworski and Kohli (1993). These three items were designed to capture the degree of competitive intensity in terms of cutthroat, quick response to each other and low barrier to entry. However, a scale reliability analysis revealed that a low barrier to entry does not load well with the other two items. Hence, it was omitted from further analysis. The two remaining items exhibited good reliability, with a

standardized item alpha of 0.72. These two items were then averaged to create a Competitive Intensity index score.

### **Market and technological turbulence**

Market and technological turbulence were each measured with a three-item, seven-point Likert type scale based on the work of Jaworski and Kohli (1993). These items measured diverse aspects of turbulence in technology and the market. An exploratory factor analysis revealed that these aspects were not uni-dimensional. The most dominant factor seemed to describe a market where new products were introduced frequently, technology changed rapidly, and such change provided opportunities. Thus, I retained only these three items to create the Turbulence composite index score ( $\alpha=0.65$ ). Other aspects, such as customers being price-sensitive, were not included in further analyses.

### **Tolerance for ambiguity (TFA)**

Organizational-level TFA was measured with a five-item, seven-point Likert-type scale based on the work of MacDonald (1970). The original “true or false” type of questions was modified to seven-point Likert scales, from 1 equalling “strongly disagree” to 7 equalling “strongly agree”. Such a change would result in a quasi-continuous measure to assess the degree of tolerance for ambiguity. An exploratory factor analysis revealed that these items were not uni-dimensional. Most noticeably, the three reverse coded items loaded together, and the two positively framed items loaded together. Hence, I suspect that there might be measurement problems. The potential limitation arising from

this problem will be discussed later. For the time being, the two positively framed items were averaged to create an index score for TFA ( $\alpha=0.58$ ).

It appears that Turbulence and TFA are poorly measured, even although I have adopted established scales and followed the practice of some top researchers in the field (such as Jaworski and Kohli 1993). These measurement problems would introduce errors in the subsequent analyses and place a limitation on this study's conclusions.

#### **4.2.4 Results**

##### **H1: MO's influences**

H1 predicts that the influence of MO on FP is mediated through CSL, so I conducted a mediation analysis (Baron and Kenny 1986) that involved the testing of four regression models:  $MO \rightarrow FP$ ;  $MO \rightarrow CSL$ ;  $CSL \rightarrow FP$ ;  $MO + CSL \rightarrow FP$ .

Table 4.2.5 summarizes the correlation matrix among the variables, and Table 4.2.6 summarizes the results of the above-mentioned four regression models. The relationships between MO, CSL, and FP are depicted in Figure 4.2.1. As can be seen, MO is a significant predictor of FP when it is the only independent variable. When CSL is added as an additional independent variable in the model, MO's direct influence on FP becomes insignificant. Instead, MO has a positive and significant influence on CSL, and CSL has a positive and significant influence on FP. Thus, according to Baron and Kenny (1986), conditions of complete mediation have been met, and that MO's positive influence on FP is completely mediated through CSL. Hence, H1 is supported.

Table 4.2.5  
*Correlation Matrix*

	MO	EO	CSL	FP
MO	1.00			
EO	0.341 P<0.001	1.00		
CSL	0.303 P<0.001	0.215 p=0.010	1.00	
FP	0.193 P=0.022	0.223 p=0.008	0.287 p=0.001	1.00

Pearson correlation (2 tailed).

Table 4.2.6  
*MO's Influences on Performance*

IV	DV	Adj. R <sup>2</sup>	Beta coefficient	F- value	Significance
MO	FP	0.030	0.193	5.359	0.022
MO	CSL	0.086	0.303	14.497	0.000
CSL	FP	0.076	0.287	12.301	0.001
MO	FP	0.080	0.110	6.993	0.204
CSL			0.251		0.004

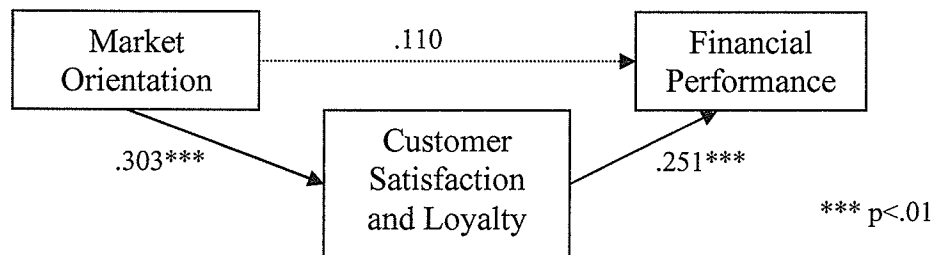


Figure 4.2.1. Relationships among MO, CSL and FP.

## H2: EO's influences

H2a posits that EO has a direct impact on FP, and H2b proposes that such a direct impact is not mediated through CSL. In order to test these hypotheses, I conducted similar regression tests, which included four regression models:  $EO \rightarrow FP$ ;  $EO \rightarrow CSL$ ;  $CSL \rightarrow FP$ ;  $EO + CSL \rightarrow FP$ . The results of these regression models are shown in Table 4.2.7. The relationships among EO, CSL, and FP are depicted in Figure 4.2.2. As the data indicate, EO is significantly related to FP. Hence, H2a is supported. When CSL is added as an additional independent variable in the model, EO remains a significant predictor of FP at  $p < 0.05$  level. Its beta coefficient is reduced from 0.223 to 0.169. Therefore, according to Baron and Kenny (1986), conditions of partial mediation are met, thus indicating that a portion of EO's influence on FP is mediated through CSL. However, a portion of EO's influence is directly related to FP and independent of CSL. Hence, H2b is partially supported.

Table 4.2.7  
*EO's Influences on Performance*

IV	DV	Adj. $R^2$	Beta coefficient	F- value	Significance
EO	FP	0.043	0.223	7.271	0.008
EO	CSL	0.040	0.215	6.905	0.010
CSL	FP	0.076	0.287	12.301	0.001
EO CSL	FP	0.097	0.169 0.250	8.374	0.043 0.003

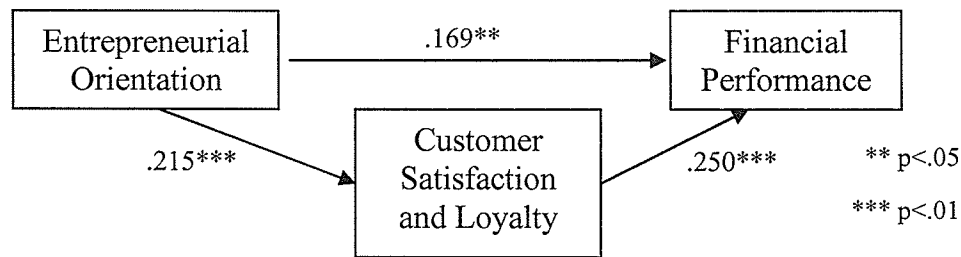


Figure 4.2.2. Relationships among EO, CSL and FP.

### H3: MO & EO's joint influence

H3 predicts that EO moderates the relationship between MO and performance—when EO is higher, the magnitude of such relationship is stronger. The test for such moderation relationship, as recommended by Baron and Kenny (1986), is to test the relationship between the interaction term and the endogenous variables. I first created a centred interaction term between MO and EO (MO\*EO) by subtracting the means of MO and EO from each individual score and computed cross products of the centred scores. The purpose of creating a centred interaction term is to remove potential co-linearity problems (Aiken and West 1991; Kline and Dunn 2000). Afterwards, I conducted a multivariate regression with CSL and FP as dependent variables, and MO, EO, and MO\*EO as independent variables. The results are summarized in Table 4.2.8. Consistent with the results of the above uni-variate regression analyses, it was revealed that MO has a significant influence on CSL, but not directly on FP, and that EO has a significant influence on FP, but not on CSL. However, the interaction term (MO\*EO) has no significant influence on either of the DVs investigated. Hence, H3 is not supported.

Table 4.2.8  
*MO and EO's Interaction*

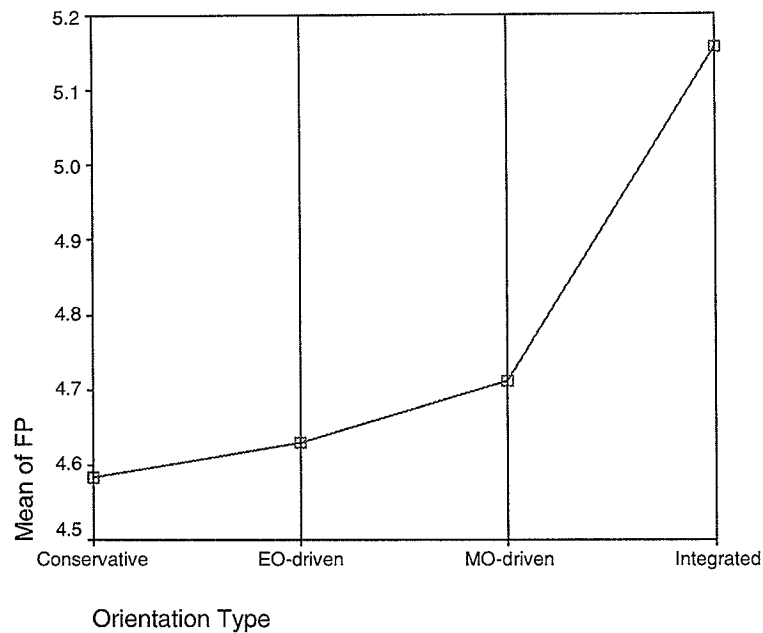
IV	DV	F-value	Significance
MO	CSL	10.508	0.001
	FP	2.592	0.110
EO	CSL	1.871	0.174
	FP	4.587	0.034
MO*EO	CSL	0.174	0.677
	FP	1.293	0.257

That the interaction term has no significant influence on performance means that variation in a firm's levels of EO does not change the strength of the relationship between MO and performance. However, I found that the benefits from MO and EO can be combined. Using a median split on MO and EO scores, I created a two by two high/low matrix to resemble the four-quadrant typology presented in Figure 3.1. Using uni-variate analysis of variance (ANOVA), I contrasted the performance indicators among these four groups. I found that the integrated firms out-perform all other three categories on both FP (Figure 4.2.3) and CSL (Figure 4.2.4) dimensions. It did not come as a surprise that the conservative group has the lowest performance on both CSL and FP. It was interesting to see that the market-driven group has slightly better performance on both FP and CSL than the entrepreneurial-driven group.

Figure 4.2.3 illustrates the average scores on financial performance by the four groups of companies in the typology. On a scale of 1 to 7, with 1 being "much worse than major competitors" and 7 being "much better than major competitors," the "integrated" group scored 5.2. By comparison, the market-driven group scored 4.7, the entrepreneurial-driven group scored 4.6, and the conservative group scored 4.5. The ANOVA model is not significant at  $p < .05$  level ( $F=2.294$ ,  $p=0.080$ ). However, the data

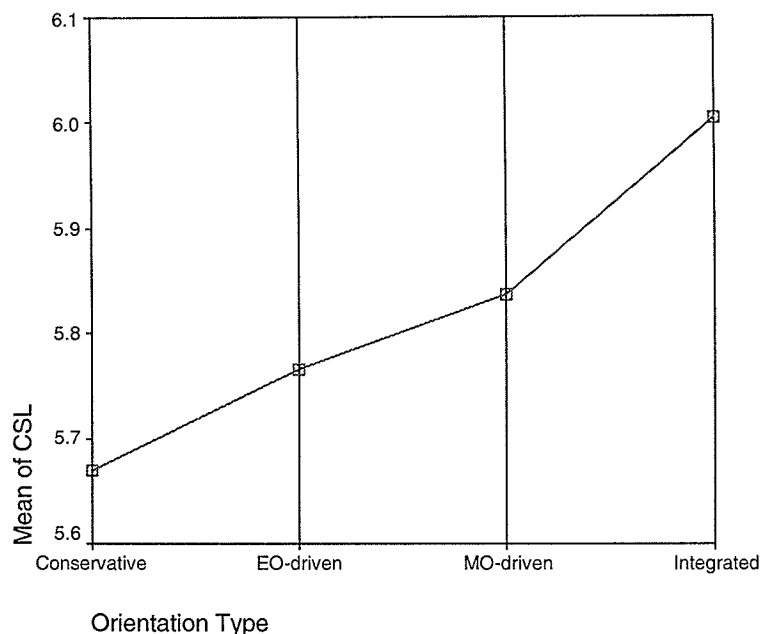


qualitatively support Atuahene-Gima and Ko's (2001) proposed benefits of aligning MO and EO.



*Figure 4.2.3. ANOVA Result on FP.*

Figure 4.2.4 illustrates the average scores on customer satisfaction and loyalty by the four groups of companies in the typology. On a scale of 1 to 7, with 1 being “much worse than major competitors” and 7 being “much better than major competitors,” the “integrated” group scored 6.0. In comparison, the market-driven group scored 5.8, the entrepreneurial-driven group scored 5.7, and the conservative group scored 5.6. The ANOVA model is not significant at  $p < .05$  level ( $F=1.818$ ,  $p=0.146$ ). However, the data also qualitatively support Atuahene-Gima and Ko's (2001) proposed benefits of aligning MO and EO.



*Figure 4.2.4. ANOVA Result on CSL.*

### **Combining H1, H2, and H3**

Next, using path analysis with Amos 4.0 (Arbuckle and Wothke 1999), I specified a simultaneous path model that included MO, EO, CSL, and FP, similar to the hypothesized model as presented in Figure 3.2. I made three modifications. First, I dropped the MO\*EO variable because the regression analysis suggested that MO\*EO is not a significant predictor for performance. Second, I added a link between EO and CSL because the previous regression analysis detected a partial mediation relationship. Third, I also added an unanalyzed covariance link between MO and EO because not specifying such link would imply that MO and EO are unrelated, which might not be the case. The resultant path model is illustrated in Figure 4.2.5, which I labelled as Model A. The results of the path-analysis indicate that when both MO and EO are considered simultaneously, EO's influence on CSL is not significant. This is likely because Model A

includes an unanalyzed covariance link between MO and EO, which is significant. After accounting for the shared variance between MO and EO, EO has a significant direct influence on FP. This provides further support for H2a and H2b, which is only partially supported in the previous regression analysis. This path model also confirms that MO's influence on FP is mediated through CSL by demonstrating significant path coefficients from MO to CSL, and from CSL to FP.

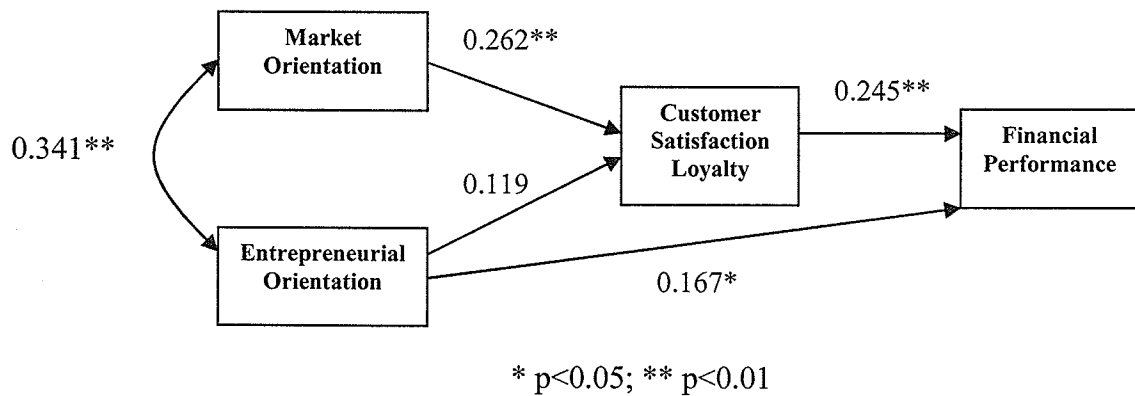


Figure 4.2.5. Path Model A.

### Antecedents to MO & EO

The next group of hypotheses deal with various antecedents to the combination of MO and EO. Specifically, I hypothesized four pairs of relationships predicting how external environmental factors (munificence, competition, and turbulence) and internal organizational characteristics (tolerance for ambiguity) influence strategic orientations. These hypotheses are summarized and presented in Figure 3.3. The hypotheses were tested individually by regression method, and jointly by path analysis.

#### H4a & H4b Munificence

H4a predicts that industry munificence is positively related with EO, and H4b posits that industry munificence is negatively related with MO. Combined, H4a and H4b suggest that under a highly munificent environment firms are more likely to adopt an entrepreneurial-driven strategic orientation. In order to test these hypotheses, I used multivariate regression, with both MO and EO as the dependent variables and munificence as the independent variable. The results, presented in Table 4.2.9, indicate that munificence, as predicted, has a significant influence on EO ( $F=17.023$ ,  $p=.000$ ). Hence, H4a is supported. However, munificence is not a significant predictor of MO ( $F=1.244$ ,  $p=.267$ ). Hence, H4b is not supported.

Table 4.2.9  
*Munificence's Effects*

IV	DV	F-value	p-value
Munificence	MO	1.244	.267
	EO	17.023	.000

Next, I conducted a one-way ANOVA to assess whether the entrepreneurial-driven group perceived the highest level of industry munificence. The result suggested a significant between-group difference ( $F=3.153$ ,  $p=.027$ ) and, as predicted, the group of entrepreneurial-driven firms are associated with the highest perceived level of munificence (see Figure 4.2.6). On a scale from 1 to 7, with 1 being “very low munificence” and 7 being “very high munificence,” the entrepreneurial-driven group scored 4.3. The integrated group was closely behind, at 4.2. The market-driven group

(3.8) and the conservative group (3.7) were associated with considerably lower levels of industry munificence.

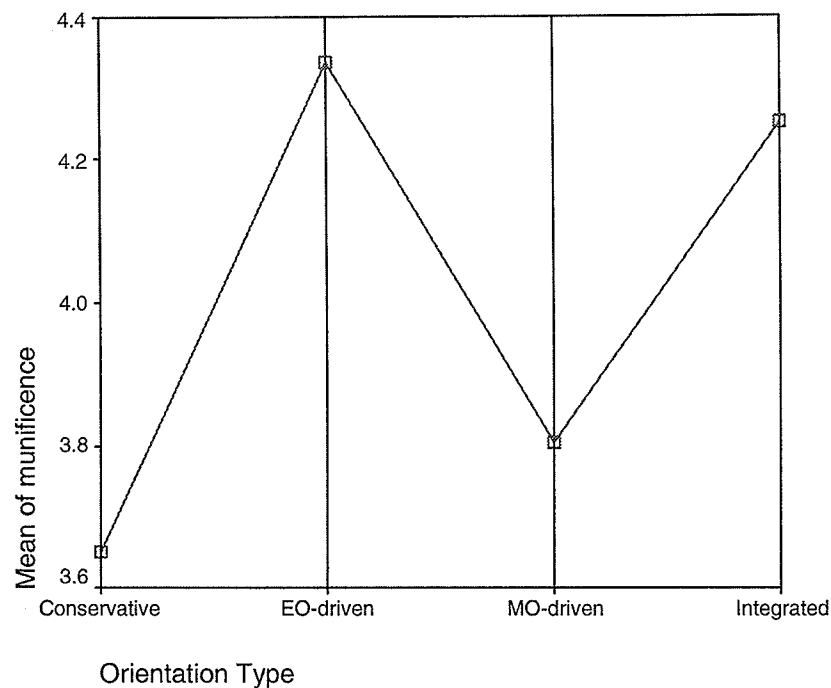


Figure 4.2.6. Munificence by MO/EO typology.

### H5a & H5b Competitive intensity

H5a and H5b posit that competitive intensity has a negative influence on EO and a positive influence on MO. In other words, a high level of perceived competitive intensity should steer firms to adopt a market-driven strategic orientation. Managers of market-driven firms might feel that, in a highly competitive market, they must be more market- than entrepreneurial-oriented. Results of the regression analyses are presented in Table 4.2.10. As H5b predicts, competitive intensity has a significant influence on firms' levels of MO ( $F=6.315$ ,  $p=.013$ ). Hence, H5b is supported. However, the data suggest that competitive intensity is not a significant predictor for firms' levels of EO, thus H5a is not supported.

Table 4.2.10  
*Competitive Intensity's Effects*

IV	DV	F-value	p-value
Competitive Intensity	MO	6.315	.013
	EO	.005	.944

Next, I conducted a similar one-way ANOVA to compare the average levels of perceived competitive intensity among four strategic types. The result revealed a significant overall difference in perceived levels of competitive intensity among the groups ( $F=6.076$ ,  $p=.001$ ). On a scale of 1 to 7, with 1 being “extremely low on competitive intensity” and 7 being “extremely high,” the market-driven group (High MO, Low EO) was associated with the highest level of perceived competitive intensity (5.0), followed by the integrated group (4.6). The entrepreneurial-driven group (4.0) and the conservative group (3.9) scored considerably lower on perceived competitive intensity (see Figure 4.2.7). This result provides further support for the hypotheses.

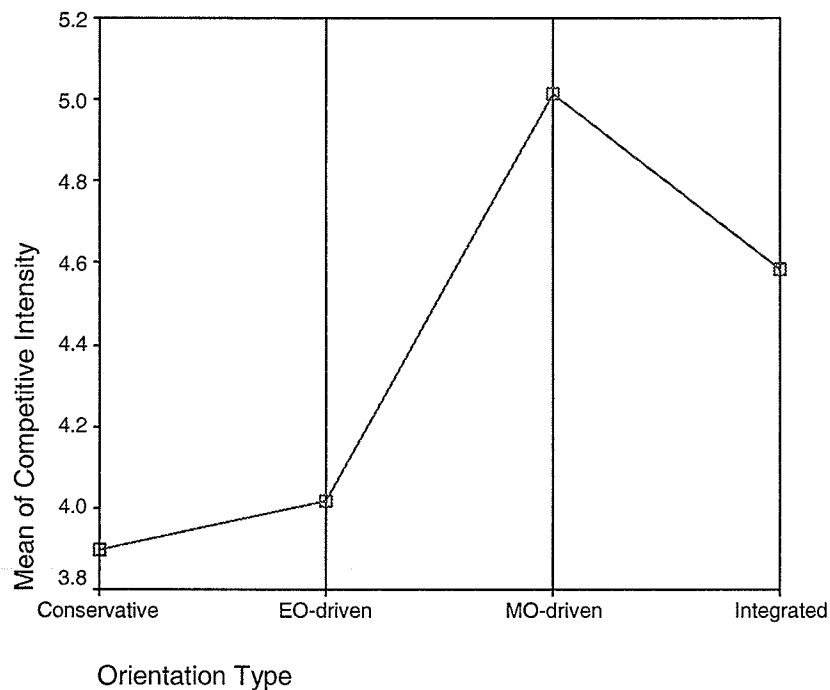


Figure 4.2.7. Competitive Intensity by MO/EO type.

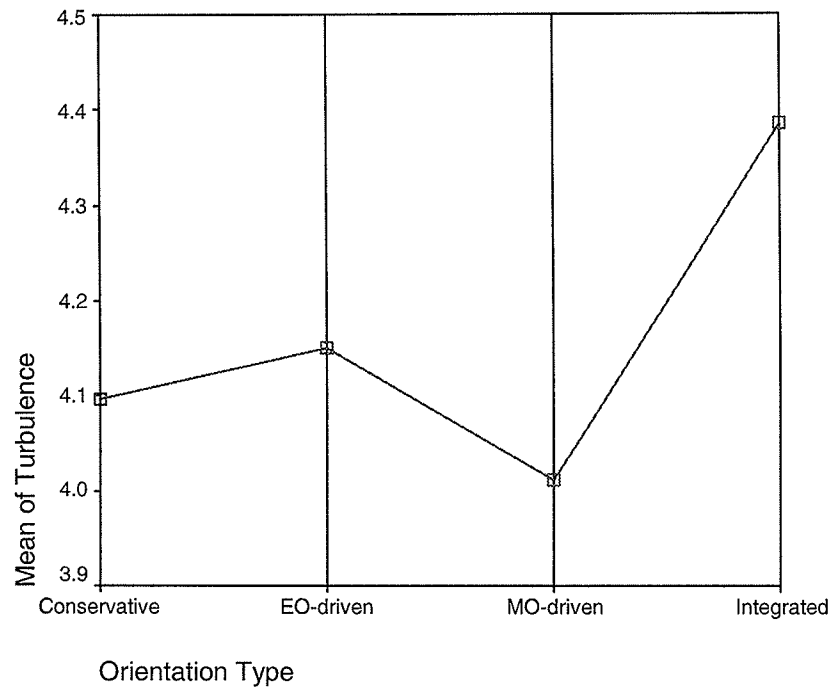
## H6a & H6b Turbulence

H6a and H6b predict that market and technological turbulence drives firms to adopt an integrated strategic orientation, and that turbulence is positively related with both MO and EO. In a highly turbulent environment, firms must compete using not only better and newer products, but also a better understanding of their customers. However, these hypothesized relationships fail to achieve statistical significance (see table 4.2.11). Hence, H6a and H6b are not supported.

Table 4.2.11  
*Turbulence's Effects*

IV	DV	F-value	p-value
Turbulence	MO	.005	.941
	EO	2.351	.127

Next, I compared the four strategic types by their average perceived levels of turbulence on a scale of 1 to 7, with 1 being “very low” and 7 being “very high”. The result of a one-way ANOVA (see Figure 4.2.8) indicated that, as expected, the integrated group is associated with the highest level of perceived turbulence (4.4) in comparison to the market-driven group (4.0), entrepreneurial-driven group (4.2), and conservative group (4.1), providing qualitative support for the hypotheses. However, the overall between-group difference is not statistically significant ( $F=0.635$ ,  $p=.594$ ).



*Figure 4.2.8. Turbulence by MO/EO type.*

#### **H7a & H7b Tolerance for ambiguity**

H7a predicts that TFA is positively associated with EO, and H7b predicts that TFA is negatively associated with MO. The result of a multivariate regression indicated that TFA has a significant influence on both MO and EO (see Table 4.2.12). Because this test provided only F-values, I tested Pearson correlations between MO, EO, and TFA to find the direction of the influences (see Table 4.2.13). As predicted, TFA is positively correlated with EO ( $r=.455$ ,  $p=.000$ ). Hence, H7a is supported. Contrary to H7b, the correlation between TFA and MO is also positive ( $r=.272$ ,  $p=.001$ ). Hence, H7b is not supported.



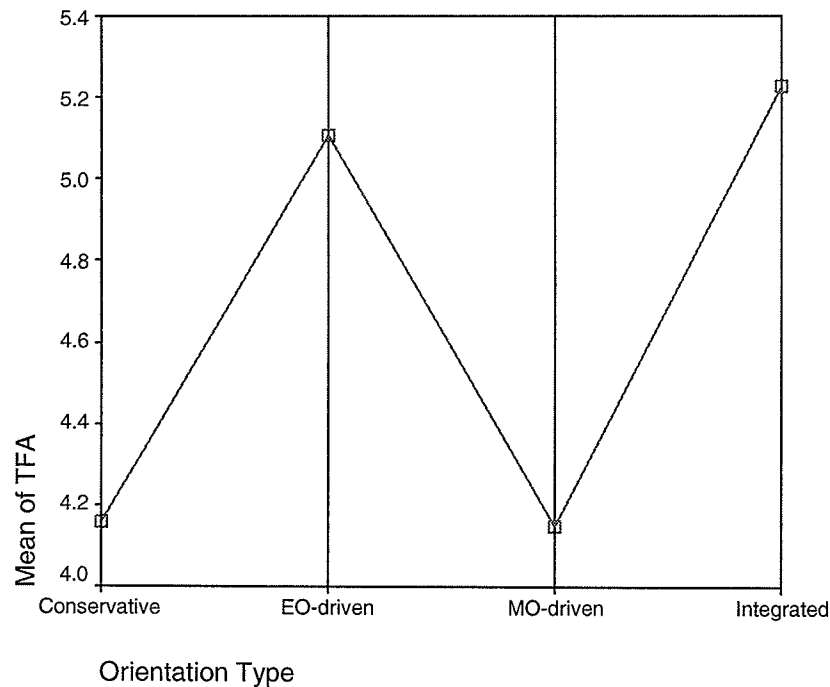
Table 4.2.12  
*TFA's Effects*

<b>IV</b>	<b>DV</b>	<b>F-value</b>	<b>p-value</b>
TFA	MO	13.051	.000
	EO	40.440	.000

Table 4.2.13  
*Pearson Correlation Among MO, EO, & TFA*

	<b>MO</b>	<b>EO</b>	<b>TFA</b>
<b>MO</b>	1.00		
<b>EO</b>	.324 (p=.000)	1.00	
<b>TFA</b>	.272 (p=.001)	.455 (p=.000)	1.00

The result of one-way ANOVA suggested that, indeed, significant differences exist among the four strategy groups in terms of their degree of TFA ( $F=10.040$ ,  $p=.000$ ). On a scale of 1 to 7, with 1 being “very low TFA” and 7 being “very high TFA,” the integrated group scored the highest (5.2), followed closely by the entrepreneurial-driven group (5.1). By comparison, the market-driven group (4.2) and the conservative group (4.1) scored considerably lower on TFA measure (see Figure 4.2.9).



*Figure 4.2.9. TFA by MO/EO type.*

### **Environment and orientation type**

After having examined each of the environmental factors and their unique influence on strategic orientation, I tested their combined influence. I employed multivariate regression, with MO and EO as the dependent variables and munificence, competitive intensity, turbulence, and tolerance for ambiguity as the independent variables. The result of this multivariate test is shown in Table 4.2.14. The results of this multivariate regression were similar to the results of testing each antecedent individually. Two pieces of interesting new information emerged from this test. First, the data suggest that the environmental context where firms operate can significantly predict firms' adoption of MO ( $F=6.692$ ,  $p=.000$ ) and EO ( $F=17.542$ ,  $p=.000$ ). Second, the four

combined antecedents investigated in this study explain a substantial portion of the variance in the adoption of MO ( $R^2=0.129$ ) and EO ( $R^2=0.301$ ).

Table 4.2.14  
*Results of Multivariate Regression Analysis*

IV	DV	F-value	Sig.
Corrected Model	MO	6.692	.000
	EO	17.542	.000
Munificence	MO	4.173	.043
	EO	23.792	.000
Competitive Intensity	MO	10.431	.002
	EO	2.063	.153
Turbulence	MO	.474	.492
	EO	.000	.992
Tolerance for Ambiguity	MO	16.714	.000
	EO	47.553	.000

Adjusted R-square on MO:  $R^2=0.129$

Adjusted R-square on EO:  $R^2=0.301$

### Path Model B

Next, I combined all the hypotheses and created a path model that links external and internal factors, firms' choice on strategic orientation, and subsequent performance outcomes. The big path model is labelled as Model B (see Figure 4.2.10). The path coefficients (standardized regression weights, hereafter denoted as  $\beta$ ) exhibited in Model B are similar to the results found in the previous regression analyses.

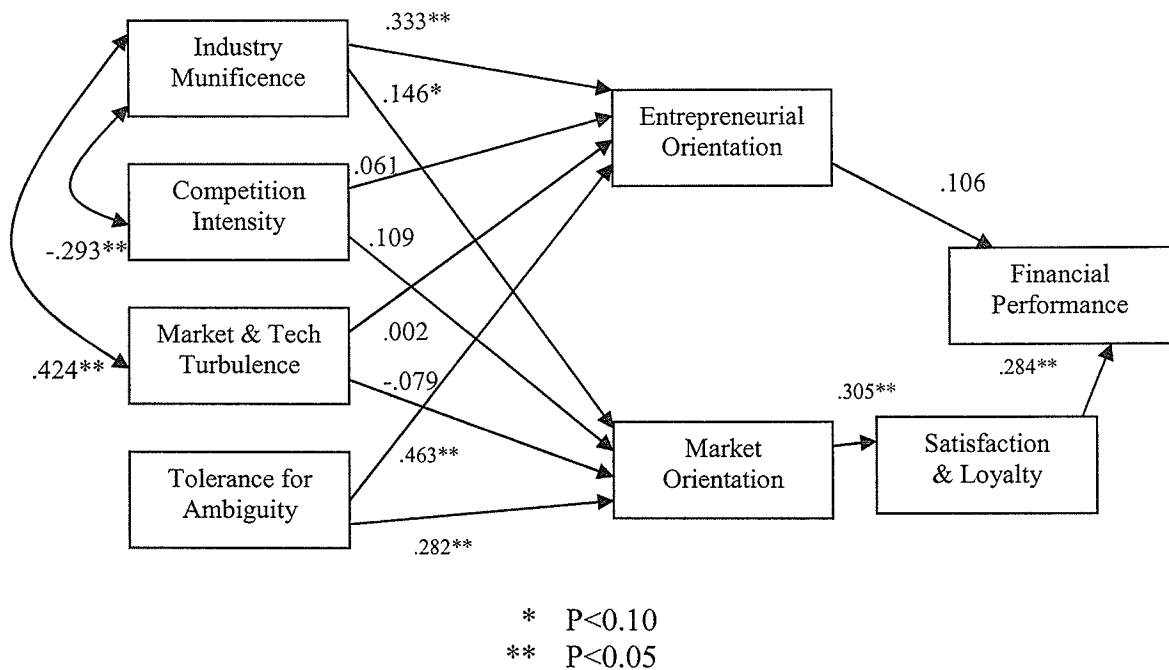


Figure 4.2.10. Path Model B.

Fit Indices	Default Model	Saturated Model	Independent Model
$\chi^2$	33.392	0	3862.028
Df	15	0	36
$\chi^2/df$	2.226	3.098	107.279
NFI	0.991	1	0
CFI	0.995	1	0
AIC	91.392	88.000	3878.028
ECVI	0.571	0.550	24.238
RMSEA	0.088		0.815
RMSEA lower bound	0.047		0.793
RMSEA upper bound	0.128		0.837

Specifically, munificence has a positive and significant influence on EO ( $\beta=.333$ ,  $p<.01$ ) as hypothesized. Munificence also has a positive influence on MO, but at a lesser degree, and only marginally significant ( $\beta=.146$ ,  $p=.067$ ). This finding, again, supports

the theory that accumulation of slack resources under munificent environment encourages firms to be more entrepreneurial.

Competitive intensity has a positive influence on MO, but such influence failed to achieve statistical significance in our data ( $\beta=.073$ ,  $p=.158$ ). Competitive intensity does not have a significant influence on EO ( $\beta=.107$ ,  $p=.365$ ).

Turbulence is not a significant predictor for either MO ( $\beta =-.079$ ,  $p=.312$ ) or EO ( $\beta=.002$ ,  $p=.974$ ). TFA has significant influences on both MO ( $\beta =.282$ ,  $p<.01$ ) and EO ( $\beta=.463$ ,  $p<.01$ ).

In turn, supporting the mediation hypothesis, MO has a positive influence on CSL ( $\beta=.305$ ,  $p<.01$ ), and CSL has a positive influence on FP ( $\beta=.284$ ,  $p<.01$ ). Disappointingly, the relationship between EO and FP fails to achieve statistical significance ( $\beta=.106$ ,  $p=.173$ ). This indicates that the direct relationship between EO and FP is relatively weak, and that EO's influence on performance is not as robust as that of MO.

Model B also reveals that munificence and competitive intensity negatively co-vary ( $COV=-.293$ ,  $p=.012$ ), while munificence positively co-varies with turbulence ( $COV=.424$ ,  $p=.001$ ). These covariance relationships seem to suggest that firms perceive turbulent environments as more munificent than competitive environments because turbulence, which signifies market changes and technological changes, also represents opportunity.

Based on several conventionally set standards for model fit (Kline 2005), the results suggest that the fit between Model B and this study's data is reasonable. The absolute size of discrepancy ( $\chi^2=33.392$ ) is not overly large. After taking the number of

degrees of freedom ( $df=15$ ) into consideration, the normed discrepancy ( $\chi^2/df=2.226$ ) is reasonably close to the conventional benchmark for a well-fitted model ( $\chi^2/df=2$ ). The model exhibits levels of normed fit index (NFI=.991) and comparative fit index (CFI=.995), both above the standards for a well-fitted model (0.9 level). The error term, measured by a rooted mean square error of approximation (RMSEA=0.088), is slightly higher than the benchmark of 0.08 as a close-fit. Both Akaike information criterion (AIC) and expected cross-validation index (ECVI) indicate the hypothesized model is a much better fit than the independent model, and only slightly fits less well than the saturated model.

There are a number of factors that may have contributed to the errors in Model B. First, Model B employed composite index scores for each variable in the model. It should be recalled that I averaged the scores of multiple items measuring the same construct into a composite index. For example, I averaged the scores on the 12 items measuring MO to create an MO composite index score. This method ignores the possibility that items might have different levels of loading on the underlying latent construct, and hence may introduce errors. Second, as mentioned in the measurement section, two constructs in the model, namely turbulence and TFA, were poorly measured, with low reliability alphas (0.65 and 0.58, respectively). These suboptimal measurements might also have contributed to errors. Third, turbulence was not a significant predictor for either MO or EO. Inclusion of turbulence in Model B does not add explanation power but does add errors because turbulence is one of the poorly measured variables.

In light of these considerations, I constructed Model C, a structural equation model (SEM), to re-examine the relationships among variables of interest. Numerous

scholars have advocated the benefits of employing SEM, which provides a comprehensive means for assessing and modifying theoretical models (Anderson and Gerbing 1982; Bentler 1983; Joreskog 1978). SEM has been commonly used in marketing and strategic management research (Shook et al. 2004).

Compared to Model B, there are several major changes in Model C. First, turbulence is not included because both regression analysis and Model B demonstrated that turbulence is not a significant predictor. Second, all variables in Model C are specified as first order latent variables. Third, each latent variable has multiple indicators. These indicators are the individual scores measured by the multi-item scales in the questionnaire. A latent variable represents the latent construct underlying a group of indicators. Figure 4.2.11 shows the structural portion of Model C, presenting only the latent variables and the relationships among them. Figure 4.2.12 shows the full detail of Model C.

The results of Model C indicate an improved fit with our data, signified with an acceptable error term (RMSEA=.078). The path coefficients found in Model C are similar to that of Model B. For example, munificence positively influences EO ( $\beta=.335$ ,  $p<.01$ ), and TFA has significant influences on both MO ( $\beta=.437$ ,  $p<.01$ ) and EO ( $\beta=.675$ ,  $p<.01$ ). In turn, and supporting the mediation hypothesis, MO has a positive influence on CSL ( $\beta=.385$ ,  $p<.01$ ) and CSL has a positive influence on FP ( $\beta=.353$ ,  $p<.01$ ). The direct relationship between EO and FP is not significant ( $\beta=.124$ ,  $p=.174$ ) in this model, either. It should be noted that the direct relationship between EO and FP is positive and statistically significant in the bi-variate regression analysis. This non-significance here should be interpreted as that when the contribution to financial performance of a firm

from other variables, such as MO, are considered simultaneously, the unique contribution from EO to FP in the same time period is not significant. Slater and Narver (2000) examined EO's contribution to return on investment, and found EO to be not a significant predictor for ROI in their multiple regression analysis. They argued that EO's contribution might be indirect and has a delayed effect. This study employs multiple indicators for firm financial performance and establishes a positive and significant relationship between EO and FP in a simple ordinary least square regression analysis.

The fit between Model C and the study data is acceptable based on the conventional set of fit indices (Kline 2005). The size of discrepancy ( $\chi^2=1368.786$ ) is relatively small, relating to the degree of freedom ( $df=692$ ,  $\chi^2/df=1.978$ ). Both AIC and ECVI indices indicate that the hypothesized model is a better fitting model than the saturated or independent models. Other fit indices such as RMSEA (0.078), NFI (0.926) and CFI (0.962) all indicate that Model C is a well fitted model.



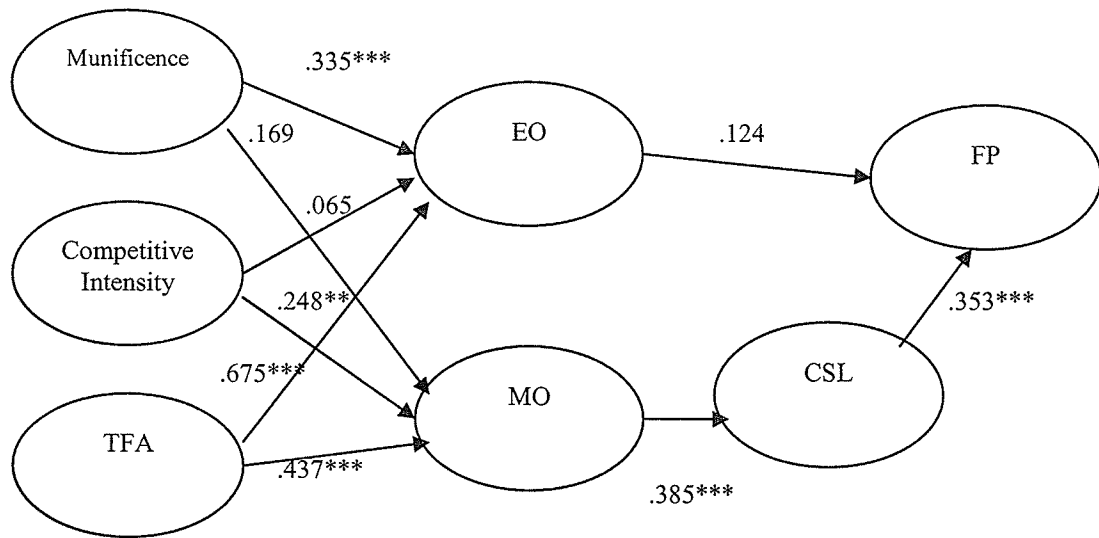


Figure 4.2.11. Simplified Model C.

Fit Indices	Default Model	Saturated Model	Independent Model
$\chi^2$	1368.786	0	18611.389
Df	692	0	780
$\chi^2/\text{df}$	1.978		23.861
NFI	0.926	1	0
CFI	0.962	1	0
AIC	1622.786	1638.000	8689.389
ECVI	10.142	0.238	116.809
RMSEA	0.078		0.378
RMSEA lower bound	0.072		0.373
RMSEA upper bound	0.084		0.383

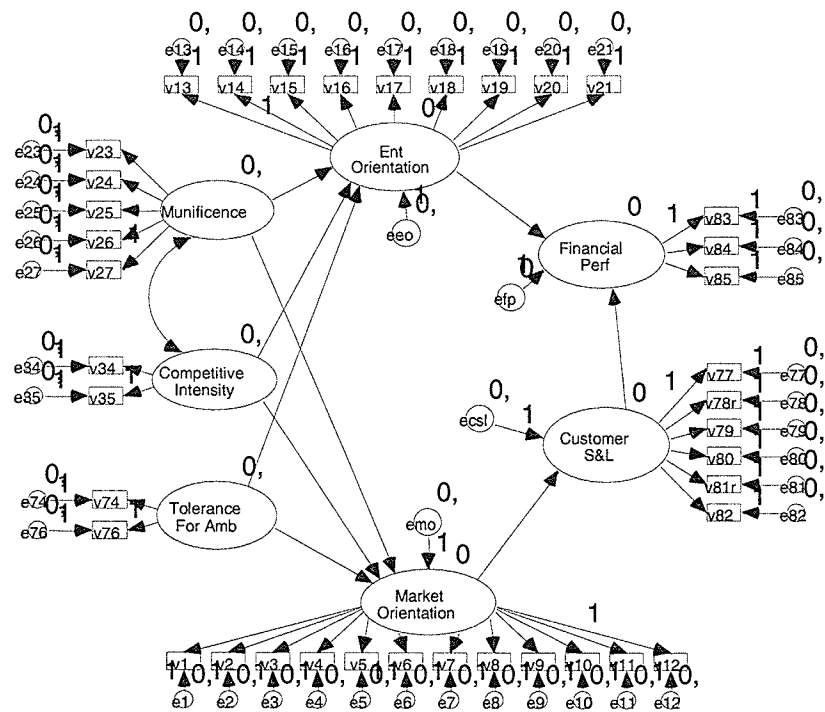


Figure 4.2.12. Details of Model C.

## CHAPTER 5: DISCUSSION, CONCLUSION, AND LIMITATIONS

### 5.1 Discussion of Findings

Table 5.1 summarizes the hypotheses and empirical findings.

Table 5.1

*Summary of Findings*

		<b>Predicted Relationship</b>	<b>Result</b>
Outcomes	H1	MO→CSL→FP	Supported
	H2a	EO→FP	Supported
	H2b	No mediation	Partial mediation
	H3	MO*EO interaction	Not supported
Antecedents	H4a	Munificence→EO	Supported
	H4b	Munificence→MO(-)	Not supported
	H5a	Competitive Intensity →EO(-)	Not supported
	H5b	Competitive Intensity →MO	Supported
	H6a	Turbulence→EO	Not supported
	H6b	Turbulence→MO	Not supported
	H7a	TFA→EO	Supported
	H7b	TFA→MO(-)	Not supported

Market orientation (MO) has been an important research stream in marketing strategy research since Kohli and Jaworski (1990) and Naver and Slater's (1990) official introduction of this construct. Two decades later, there has been a proliferation in research that has systematically examined the antecedents and consequences of MO. In recent meta-analyses, Kirca et al. (2005) report that there have been over 200 published empirical studies on the relationship between market orientation and organizational performance. At the aggregate level, it is generally supported that MO has a robust positive influence on various measures of organizational performance, including customer-based performance measures, financial-based performance measures, innovation-based performance measures, and employee-based performance measures. Similarly, drawing from a meta-analysis of over 140 empirical studies, Cano et al. (2004)

also conclude that MO's positive influence on organizational performance is robust across industry types, environmental conditions, and cultural geopolitical conditions.

To an extent, the extant literature on entrepreneurial orientation (EO) has also established EO's positive influence on a number of indicators of organizational performance. Prior research reveals that entrepreneurial-oriented firms are more likely to be innovative, particularly in pioneering innovations (Manimala 1992); to have distinctive marketing competencies (Smart and Conant 1994); and to have better organizational performance (Covin and Slevin 1991; Lumpkin and Dess 1996; 2001; Lyon, Lumpkin, and Dess 2001). EO's positive influence on performance increases over time (Wiklund 1999).

Efforts have been invested in exploring the synergy between these two important strategic orientations. Morris and Paul (1987) argue that entrepreneurial-oriented firms are more likely to emphasize marketing's role and regularly engage in marketing research, hence suggesting a positive correlation between MO and EO. Zhou, Yim, and Tse (2005) suggest that MO concentrates on the benefits of mainstream customers and inhibits the pursuit of new markets, while EO plays a different and complementing role in enhancing organizational performance. Atuahene-Gima and Ko (2001) assert that aligning MO and EO would lead to better performance in successfully commercializing new product development. However, no research to date has systematically investigated how these two strategic orientations differ, how they relate, and how they differentially assert their respective influences on performance measures, as well as what external environmental factors or internal organizational factors steer managers' decisions on the choice of various combinations of these two strategic orientations.

This dissertation has taken several steps in attempting to address several important issues. First, by examining the origins of these two constructs and their respective components, antecedents, and outcomes, I proposed a two by two typology of combinations of strategic orientations (see Figure 3.1). These four combinations of strategic orientations represent different options available to managers. For example, firms have the option of becoming market-driven, characterized by high levels of MO, but low levels EO. A market-driven firm might place a primary emphasis on listening to the existing customer base and delivering products and services that fulfill customer needs. By contrast, integrated firms, characterized by high scores of both MO and EO, might be more aggressive in exploiting market opportunities. Firms could also be primarily entrepreneurial-driven, placing more emphasis on EO, but less on MO, and pursue market-based innovations or frontier-type innovations. It is also possible that some of the more conservative firms might be shy away from adopting either of these two strategic orientations. The empirical evidence in this dissertation confirms the discriminant validity between MO and EO, and demonstrates that they are only weakly correlated. The data also show that there is considerable variance in firms' choices. The scatter plot in the pilot study (see Figure 4.1) clearly shows that there are firms that fall in each of the above-mentioned four quadrants. Moreover, this typology does not simply describe that firms are different in their strategic orientations, but rather proposes that firms have different options in choosing their strategic orientations.

Second, this dissertation has gone beyond a simplistic view that having either one of MO or EO is good, or that having both is better. I believe that each firm's circumstance is unique. Each firm operates in a specific set of environmental constraints,

and it must seek the best strategy-environmental fit in order to be competitive. Each firm is endowed with a given set of resources, and it must maximize the utility of its available resources and acquire the suitable core competencies in the most effective and efficient fashion. Thus, simply advising adoption of an integrated approach would be too simplistic. Instead, I have taken a contextual and configurational approach. I hypothesized that each MO and EO has its own unique benefits and influences different aspects of performance in different ways. A firm could elect to be more entrepreneurial-driven, so that it would concentrate its efforts on innovations and new product developments. Such continuous innovation would lead to financial success. Alternatively, a firm could also opt to be market-driven, focusing its resources on understanding its customers and learning from its competitors. As expected, the empirical evidence here confirms that MO's influence on financial performance is mediated through customer satisfaction and loyalty (CSL). In contrast, EO partially bypasses CSL and exhibits a direct and significant link to financial performance in the regression analyses. Such a link, however, is weakened in more complex models. However, EO and financial performance maintain a positive association. As Slater and Narver (2000) argue, the presence of the relationship between EO and performance cannot be ignored, even though the existing theory can only partially explain it and the existing models cannot fully capture its influences.

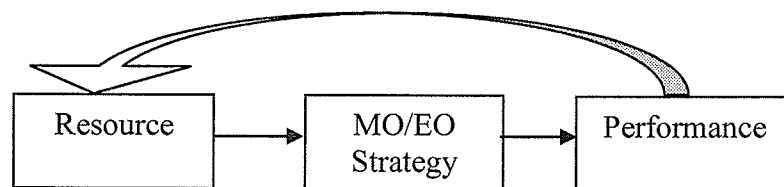
Third, I also hypothesized a synergetic relationship between MO and EO. More specifically, I predicted that EO moderates the relationship between MO and performance, where MO's positive influence on performance is stronger when firms are also entrepreneurial-oriented. This is because these innovative and proactive firms would

be more likely to take advantage of market intelligence. However, such positive interaction between MO and EO fails to achieve statistical significance in the data. In the case of using financial performance as the outcome measure, there is a positive, but not statistically significant, interaction. In the case of using CSL as the outcome measure, there is again no statistically significant interaction. The data did, however, suggest a cumulative effect. In both cases, the integrated group of firms outperformed firms in all other categories. From this result, I infer that MO and EO might operate independently from each other. It is possible that various departments within the same organization might have different levels of emphases on strategic orientations. Or the implementation of these strategic orientations might be more successful in certain departments than the others. This topic deserves further investigation, and will be discussed in further details in the future research.

Fourth, I investigated a number of external industry environmental factors as antecedents that might influence managers' decisions as to what combination of strategic orientations to adopt. For example, I stipulated that industry munificence encourages EO, but not MO; competitive intensity stimulates MO, but not EO; and market and technological turbulences drive firms toward an integrated strategic orientation. Marketing scholars have typically modeled such environmental factors as the moderator of the relationship between MO and performance (Jaworski and Kohli 1993). However, there has been insufficient empirical evidence to support such moderation propositions (Kirca et al. 2005). Pelham (1999) compares the industry competitive environment, MO, and competitive strategies in terms of their relative influences on firm performance, and concludes that MO has the strongest impact on performance. Implicitly, Pelham (1999)

assumes that MO is independent of industry competitive environment. Strategy scholars have typically believed that industry competitive environment factors are the antecedents that shape a firm's strategy (e.g., Porter 1980; 1991) and strategic orientations (e.g., Covin and Slevin 1991; Lumpkin and Dess 1996).

This study's empirical data provide some qualified support for my claims. As expected, munificence has a positive effect on EO, but not as much on MO. The data suggest that under a munificent environment, where sales revenues are high, profit margins are large, and growth opportunities are abundant, firms are more likely to adopt an entrepreneurial-driven strategic orientation. Under such an environment, firms enjoy resource slacks and can afford to be more creative and innovative. Contrary to initial predictions, the data also indicate that firms operating in a munificent environment would also invest in MO. It appears that a rich environment does not lead firms to abandon the pursuit of further understanding the market. Instead, being rich perhaps allows firms to invest more resources in gathering market intelligence about their customers and competitors. This indicates a positive feedback loop among the variables:



In terms of competition, as predicted, the data indicate that market-driven firms perceive the highest level of competitive intensity. There is a significant difference in the average perceived level of competitive intensity between strategic groups in the ANOVA



analysis. The relationship between competitive intensity and MO is positive and statistically significant. This means that when firms must compete with other firms for the same customer base, they feel pressure to become more market-oriented. I predicted that as competition intensifies, firms might shy away from being entrepreneurial. However, this is not the case. The relationship between competitive intensity and EO is not significant in the data. This inconclusive finding seems to suggest that firms might have chosen different ways of coping with competition. It is possible that some firms might have resorted to safer strategies, or some might have chosen innovation, proactiveness, and risk-taking as their vehicle for competition. Of course, one cannot dwell too much on an inconclusive finding. Nevertheless, it raises some interesting issues that warrant further investigation.

Turbulence does not exhibit any significant influences in the data. The measurement quality of turbulence is less than satisfactory in terms of loading and reliability alpha. In hindsight, the conceptualization of turbulence is not well developed. Turbulence currently includes both market turbulence and technological turbulence. Market turbulence can mean a rapid change in customer taste or change in competitor mix. Therefore, the meaning of the construct becomes convoluted as a result of bundling all these dynamics into one composite variable. As changes in customers, competitors, or technologies develop, some managers might see threats, while others see opportunities. More theory development and empirical investigations are needed in future research to clarify how managers choose different strategies to cope with different types of turbulence.

Finally, I proposed that organizational characteristics play an important role in shaping the choice of strategic orientations. More specifically, I hypothesized that when a firm possesses a high tolerance for ambiguity (TFA), i.e., the firm is more comfortable dealing with incomplete information, it is more likely to be innovative and risk-taking, and, hence, more entrepreneurial-oriented. The data seem to support that proposition. However, the findings are limited because the concept was inadequately measured. It is interesting to observe, for example, that both the conservative group of firms and the market-driven group of firms exhibited low levels of TFA. Essentially, this supports the stipulation that MO has become a safer choice for firms that are not comfortable in making decisions under conditions of uncertainty. On the other hand, it requires a greater amount of TFA in order for firms to adopt an integrated approach.

## **5.2 Theoretical Contributions**

The findings in this dissertation provide an important contribution to theories in marketing strategy. At present, many firms are driving towards a singular strategic orientation because MO has been shown to offer robust and strong positive influences on performance (Griffith, Jacobs, and Richey (2006). Such singular focus on MO ignores other factors in strategy making, and may result in suboptimal performance.

Prior research has indicated that EO could potentially serve as an alternative and complementary strategic orientation option to MO (Atuahene-Gima and Ko 2001; Zhou et al., 2005). In this dissertation, I systematically investigated the similarities and differences between MO and EO. The empirical results are consistent with previous findings that suggest firms will have the best performance when MO is combined with an

innovative culture (Menguc and Auh 2006). More importantly, my investigation reveals that MO and EO have different implications on different aspects of organizational performance. While MO and EO have similar end goals and are correlated, they achieve their respective end goals via different routes. MO is more concerned with appealing to the customers. Market-driven firms take their cues from the external environment. They believe that as long as they can keep their customers happy, they will do fine. In contrast, entrepreneurial-driven firms have a very different perspective on competition. They are more innovative, proactive, and risk-taking. They are not as concerned with whether their customers will be happy or what their competitors are doing. They are more concerned with following their internal drive.

I am not arguing that MO is not important. On the contrary, the data suggest that MO has a more robust and stronger influence on performance. I am, however, proposing that there are alternative and complementary strategic orientations besides MO.

This dissertation attempts to extend our knowledge of the integration between MO and EO, and tries to understand what kinds of contextual factors potentially influence or steer managers' emphases on different strategic orientations. By reviewing the extant knowledge on possible antecedents to various organizational strategic orientations, I identified a number of industry and organizational factors that could potentially co-influence the organizational decision-making processes. Specifically, I hypothesize that in a munificent environment, where the industry has great growth potential, organizations are more likely to accumulate slack resources. Thus, they are buffered against potential scarcity and are more likely to pursue innovation and creativity. In other words, they will be more entrepreneurial-oriented. In an environment

that is characterized by a high level of competitive intensity, organizations are forced to be more competitive and calculative. In other words, they will be more market-oriented. In an environment that is characterized with high market and technological turbulence, organizations need to be both market-oriented and entrepreneurial, and adopt an integrated strategic orientation. Partially due to the under-development of the construct of turbulence and poor measurement instrument, this study did not find a statistically significant relationship between turbulence and strategy choice. However, this issue deserves further investigation.

This research also makes a positive contribution to the current debate over being customer-leading or customer-led (Connor 2007; Ketchen, Hult, and Slater 2007). The study's data indicate that, contrary to a dichotomous continuum between being customer-leading and customer-led, as suggested by Connor (2007), these two strategic orientations are likely to be on a two-dimensional plane, adhering to Ketchen et al.'s (2007) propositions. That is, firms can be concurrently customer-oriented and innovative.

Connor (2007) and Ketchen et al. (2007) also debate the merits of the resource-based-view (RBV) of firms. Connor (2007) implies that RBV is tautological; Ketchen et al. (2007) argues that, while the simplistic operationalization of RBV, which often stipulates direct links between resources and performance, might be tautological, an enriched-RBV that involves decision-making and building competitive advantages is not. This research provides empirical support for Ketchen et al.'s propositions. The data indicate that managerial decisions—in this case, the choice of combining MO and EO—are crucial in realizing the benefits of operant resources towards a better performance.

### 5.3 Managerial Implications

Many research efforts have been invested in the investigation of some of the proposed bivariate relationships between MO and performance, and EO and performance. This dissertation made an attempt to develop an integrated framework that delineates the different paths that entrepreneurs and managers might undertake under different contextual circumstances. An ancient Chinese military strategist, Sun Tzu, said that in order to win the wars, one must thoroughly understand not only the opponents (e.g., the customers, the competitors) but also the self (e.g., internal resource endowment, innovation, creativity) and the environment.

It might seem reasonable, in theory, to recommend that all managers adopt an integrated strategic orientation with high levels of both MO and EO. The study data suggest that integrated firms have, on average, out-performed firms in all other categories. It can be inferred that business owners and managers with high levels of both MO and EO have innovative, proactive, and risk-taking ways of utilizing market intelligence in their possession. Also, having closely monitored their customers' needs and competitors' actions, these business owners and managers would be more creative and proactive in offering meaningful innovations that are more likely to be successful in the marketplace.

However, not all companies have set out to pursuit MO. Instead, some choose to place their emphasis on certain aspects, perhaps because pursuing both strategic orientations simultaneously would cost more. It is up to the managers to carefully evaluate the external environment and internal organizational characteristics, and choose a type of combination strategic orientation that is most appropriate. In fact, the data show

that there is little performance difference between market-driven firms and entrepreneurial-driven firms. One factor that distinguishes these two groups is how much ambiguity their managers can tolerate. Being risk-averse is not necessarily a bad thing. Many risk-averse firms with a low tolerance for ambiguity have opted to follow a market-driven strategic orientation and are doing fine. At the same time, those risk-taking optimists, who perceive higher levels of munificence, have taken a more entrepreneurial-driven route. They are just as innovative as integrated firms, except that they are not so worried about what their competitors are doing and whether customers will reject or approve their newest innovations.

The sample of business owners and managers showed that, on average, they scored reasonably high on MO, indicating that customer-centric management philosophy is well established among the management community. However, these business owners and managers varied drastically in terms of their EO. This diversity represents an opportunity for improvement. As information technology develops, market intelligence about customers and competitors has become relatively easier and cheaper to obtain and share. As such, based on Barney's (1991) conceptualization the value of such resources should decline. The critical issue at hand is how to maximize the utility of such resources. This dissertation's findings suggest that the capability of deploying such resources more innovatively and proactively can become a new source for building sustainable competitive advantages.

While this model is not normative—it does not tell the business owners and managers what should be done—it describes positive relationships between MO, EO, and several contextual antecedents. Essentially, this model and data indicate that, on average,

business owners and managers tend to be more entrepreneurial under a munificent industry environment and more market-oriented under a competitive industry environment. It takes a great amount of tolerance for ambiguity for business owners and managers to adopt an integrated strategy (high on both MO and EO). As Ketchen et al.'s (2007) extended RBV elaborates, after firms have assessed the resources that they possess and the environmental factors, the business owners and managers must make decisions and choose competitive strategies in order to build competitive advantages. In the context of this research, the choice at hand is where to place their emphasis, either on MO or EO, or both. These positive and descriptive findings provide benchmarks and reference points for business owners and managers. Knowing what an "average manager" would do under a given circumstances, these business owners and managers can decide for themselves whether it is worthwhile to adopt an integrated strategic orientation.

#### **5.4 Limitations and Future Research**

One of the major limitations of this study was the low (8%) response rate. A low response rate has a negative impact on both the size and quality of the sample. A small sample size limits the power of detecting relationships. For example, the direct relationship between EO and financial performance was significant in uni-variate regression analysis, but such a relationship was reduced to being only marginally significant in path analysis and SEM when other variables were simultaneously considered. This problem has appeared in prior studies (Slater and Narver 2000). While Slater and Narver (2000) ponder potential alternative explanations, small sample size and low power are considered limiting factors. This study essentially replicated what Slater

and Narver (2000) found in terms of the relationship between EO and financial performance. Furthermore, a low response rate also introduces potential bias into the survey results. If the responding group has characteristics systematically different from the non-responding group, then data from the responding group cannot represent the entire sample or the population. I compared the responding group and the overall sample in terms of firm size and found no statistically significant difference. I also compared early respondents with late respondents in terms of firm size and their scores on MO and EO, and found no statistically significant differences. However, such post-hoc tests only provide the researcher comfort and confidence to proceed with further analyses; the fact still remains that a majority of the companies that I intended to sample did not respond to the survey. Hence, the resultant sample cannot be accurately described as a truly representative sample. It is at best a convenient sample without known systematic differences in characteristics from the population. Hence, the generalizability of the findings is limited. The researcher can only cautiously claim that the patterns of relationships found in the sample may be similar to what can be found in the population. As such, further validation is required. In order to increase response rate, the researcher has designed future research projects to incorporate a multi-modal data collection method that includes a mail survey, computer-aided telephone survey, and an on-line survey. While a multi-modal method would provide more options for respondents to participate, potentially increasing the response rate, it might introduce other unwanted biases, such as differences in data gathered by different means. Such biases would have to be closely examined in the future research.



Another limitation is a reliance on cross-sectional data. Cross-sectional data can provide a snap shot of one point in time. However, there is a gap between having an intention of becoming market-oriented or entrepreneurial-oriented and actually implementing it. Several scholars have acknowledged this gap (e.g., Gainer and Padanyi 2005; Kirca 2007). No research to-date has systematically investigated the strategies and processes of implementing MO or EO. From a survey-based cross-sectional data set, I was unable to separate managerial intentions and actual implementations, nor to detect the processes and procedures in-between. Furthermore, organizational strategic orientations change over time. The study data provided qualitative indications that differences exist between newer entrepreneurs and those who have been in the business for a number of years. Prior research has identified that companies continuously engage in a learning process (Baker and Sinkula 2007). Strategy evolves as managers learn from their successes and failures. No research to-date has produced a dynamic longitudinal model of organizational learning and strategy change in the context of strategic orientations. This study's framework only describes, at one point in time, how environment, strategy, and performance relate, but does not provide many insights into how companies should modify their strategic orientations as the environment changes. Ideally, it would be interesting to investigate the evolution of organizational strategies and the dynamic between strategic choices and the turbulent external environment. A longitudinal research design would be required in order to systematically track the strategy evolution over time.

A third limitation is the nature of hypotheses testing, where confirmation does not preclude the possibility of plausible alternative explanations. This dissertation focused on

model building, and so I constructed path models and SEM models based on the hypotheses. I made several modifications along the way, and arrived at a SEM model that fits the data reasonably well. I concluded that the data support the theoretical predictions. However, this does not conclusively determine that this explanation is the only explanation. In future studies, alternative models that consider other explanations should be constructed and compared.

Fourth, although I tried to use the best measurement scales available, several items did not load uni-dimensionally as intended. A number of things can be done in this regard in future studies. Following Churchill's (1979) paradigm, I need to conduct more scale development exercises and more rounds of pre-tests to improve the psychometric properties of the constructs of interest. On the other hand, perhaps some constructs were not meant to be uni-dimensional. Follow-up studies with multi-dimensional structural models may provide a fuller picture and deeper understanding of these variables and their inter relationships.

Finally, this dissertation is still limited by its scope of investigation. Organizational strategy formulation and evolution is affected by a large number of internal and external factors. While these factors could be macro-economic, cultural, social, or political, they could also be accidental, personal, or totally serendipitous. For example, would an organization prefer MO to EO under certain environmental constraints? Would internal organizational structural factors influence its strategy? How would organizational factors interact with external environmental factors? And more specifically relevant to entrepreneurship, individual characteristic, family situations, and personal experiences may also play roles in shaping organizational strategic orientation.

The scope of investigation for this study is limited by its sample. This study drew a sample from Canadian manufacturing companies. While drawing from a relatively homogeneous sample has its benefits, one cannot over extend the findings beyond the scope of limitations. In the future, more studies must be done, with samples drawn from industry sectors outside of manufacturing and companies outside of Canada, before one can express confidence in the generalizability of the findings.

The scope of investigation is also limited by the researcher's perspective. Only those factors that were relatively well established in the extant literature were included in the model. Two alternative research methods may serve to mitigate this issue in the future. One alternative is to introduce incrementally additional variables into the framework. Over time, the model will become more inclusive and comprehensive. A more radical alternative is to start fresh, and employ a grounded theory approach to let managers illustrate what is really going on in the real world based on their actual experiences.

### **5.5 Response to committee concerns**

During the review and exam processes, the members of the examination committee for this dissertation have raised several concerns and constructive recommendations. The following section briefly outlines the steps the researcher has taken in addressing these issues.

One of the major concerns is about the low response rate of 8%. The researcher has discussed the potential biases and limitation of this study as a result. More details have been provided illustrating the comparison between the respondent group and the

sampled group, and between the early respondents and late respondents, ensuring no systematic difference exist, and enhancing confidence in the data. Still, the implication and generalizability of the finding must be considered with sample limitations. The researcher has also discussed potential methods to increase sample size and response rate in future studies.

Another concern is about the relevance of the academic findings contained in this study to the real-world managerial practices. Using information learned in interviews with managers as anecdotal evidence, the researcher describes how managers must make decisions under ambiguous situations, and make trade-offs in where to invest resources. Furthermore, recent case studies of Microsoft have been cited as exemplars for strategic combinations.

There has been concern about the clustering of customer satisfaction and customer loyalty. While it is true that theoretical distinction exists between these two constructs, recent meta-analysis (Szymanski and Henard's 2001) reports high correlation in empirical findings (0.89). Prior studies in MO literature do not see why customer satisfaction and customer loyalty would behave differently as indicators of organizational outcome. Hence they are considered as a cluster (Jaworski and Kohli 1993; Kohli and Jaworski 1990). In this study, the specifics of customer satisfaction and customer loyalty are not a focus; no hypothesis has been proposed with respect to the differences between them. Hence, following the tradition in the MO literature, customer satisfaction and customer loyalty has been considered as a cluster.

Respondent bias, in the sense whether the respondent personal characteristics systematically influence responses to the survey, has been checked. No statistically significant difference was found between male respondents and female respondents.

## **5.6 Final Conclusion**

This study examined the relationship between MO and EO, their contextual antecedents, and their differential influences on performance outcomes. By proposing a two by two typology of strategic orientations, this study intended to identify the type of strategic orientations available to managers, the conditions under which managers choose which orientation, and the consequences of such decisions. This study found that MO asserts a positive influence on performance via customer satisfaction and loyalty, and EO bypasses customer satisfaction and loyalty and relates directly to financial performance. This study also found that firms that have adopted an integrated strategic orientation outperform firms in other groups.

This study empirically investigated several current issues that are being heavily debated among scholars, and contributes to a better understanding of the issues at hand. More specifically, the data indicates that MO has been well accepted by the business community and is still an important and effective strategic orientation for achieving superior organizational performance. Moreover, the data indicate that MO is not the only option. This study identified EO as a viable alternative strategic orientation. Furthermore, the empirical evidence supports the proposition that the choice is not restricted to one of the two dichotomies. Rather, multi-dimensional alternatives are available, and each have

different ways of influencing performance outcomes. Thus, this study illustrates a much richer picture of strategic orientations than prior research has depicted.

Finally, this study placed the organizational decision-making on strategic orientation in a context that includes a host of external environmental factors and internal organizational characteristics. Such a contextual approach brings academic research on strategic decision-making one step closer to the reality of managerial practice. While the present study has its acknowledged limitations, it illuminates, just a little bit, that “black box” of the managerial decision-making process, and paves the way for future studies.

## APPENDIX 1: THE PILOT STUDY QUESTIONNAIRE

### *Entrepreneurship and Market Survey*

This survey is a part of a dissertation research. The University has reviewed the protocols. Your participation is voluntary. All information will be kept anonymous and confidential. Your help is greatly appreciated.

		Strongly Disagree	Strongly Agree	Don't Know
1	Our principal business goal is to satisfy the needs of our customers.	1 2 3 4 5 6 7		<input type="checkbox"/>
2	We use customers as an important source of service ideas.	1 2 3 4 5 6 7		<input type="checkbox"/>
3	We constantly monitor our level of commitment to our customers.	1 2 3 4 5 6 7		<input type="checkbox"/>
4	Our strategy for competitive advantage is based on our understanding of our customers' needs.	1 2 3 4 5 6 7		<input type="checkbox"/>
5	We measure customer satisfaction systematically.	1 2 3 4 5 6 7		<input type="checkbox"/>
6	We regularly share information within our company concerning competitor strategies.	1 2 3 4 5 6 7		<input type="checkbox"/>
7	We respond rapidly to competitive actions that threaten us.	1 2 3 4 5 6 7		<input type="checkbox"/>
8	Our company regularly scans competitors' strengths and weaknesses.	1 2 3 4 5 6 7		<input type="checkbox"/>
9	In our company, information is shared among various functional areas	1 2 3 4 5 6 7		<input type="checkbox"/>
10	In our company, many resources are shared among various functional areas	1 2 3 4 5 6 7		<input type="checkbox"/>
11	In our company, all functional areas have integrated strategy.	1 2 3 4 5 6 7		<input type="checkbox"/>
12	In our company, all functions contribute to customer value.	1 2 3 4 5 6 7		<input type="checkbox"/>

***In general, the top managers of our company favour...***

- |    |   |               |  |
|----|---|---------------|--|
| 13 | A strong emphasis on the marketing of tried and true products or service. | 1 2 3 4 5 6 7 | A strong emphasis on R&D, techno-logical leadership, and innovation. |
|----|---|---------------|--|

***How many new lines of products/services has your company marketed in the past 5 years?***

- |    |            |               |            |
|----|------------|---------------|------------|
| 14 | No at all. | 1 2 3 4 5 6 7 | Very many. |
|----|------------|---------------|------------|

***The changes in our products/services, if any, have been***

- |    |                           |               |                         |
|----|---------------------------|---------------|-------------------------|
| 15 | Mostly of a minor nature. | 1 2 3 4 5 6 7 | Usually quite dramatic. |
|----|---------------------------|---------------|-------------------------|

***In dealing with the competitors, our company...***

- |    |   |               |   |
|----|---|---------------|---|
| 16 | Typically responds to actions, which competitors initiate.  | 1 2 3 4 5 6 7 | Typically initiates actions to which competitors then respond.  |
| 17 | We are very seldom the first business to introduce new products services, administrative techniques, operating technologies, etc. | 1 2 3 4 5 6 7 | We are often the first business to introduce new products/services, administrative techniques, operating technologies, etc. |
| 18 | Typically seeks to avoid competitive clashes, preferring a "live-and-let-live" posture.   | 1 2 3 4 5 6 7 | Typically adopts a very competitive "undo-the-competitors" posture.   |

***In general, the top managers of our company have...***

- |    |  |               |  |
|----|--|---------------|--|
| 19 | A strong proclivity for low risk projects with normal and certain rates of return. | 1 2 3 4 5 6 7 | A strong proclivity for high risk projects with chances of very high return. |
|----|--|---------------|--|

***In general, the top managers of our company believe that ...***

- |    |  |               |   |
|----|--|---------------|---|
| 20 | Owing to the nature of the environment, it is best to explore gradually via cautious, incremental behaviour. | 1 2 3 4 5 6 7 | Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives. |
|----|--|---------------|---|



*When confronted with decision making situations involving uncertainty, our company ...*

- 21 Typically adopts a cautious, "wait and see" posture in order to minimize the probability of making costly decisions. 1 2 3 4 5 6 7 Typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.

22 My Company is in \_\_\_\_\_ industry.

- |   | Very Low |   |   |   |   |   |   | Very High         | Don't Know               |            |
|---|----------|---|---|---|---|---|---|-------------------|--------------------------|------------|
| 23 The growth opportunity in our industry is...                                     | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 24 Competition in our industry is...  | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 25 Relative to our competitors, the customer satisfaction of our company is...      | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 26 Relative to our competitors, the financial performance of our company is...      | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
|   |          |   |   |   |   |   |   | Strongly Disagree | Strongly Agree           | Don't Know |
| 27 We meet with customers to determine what services they would need in the future. | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 28 We are quick in detecting the changes in out industry.                           | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 29 We monitor how these changes might affect customers.                             | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 30 We do in-house market research.  | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 31 Marketing managers often spend time discussing customers with other departments. | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 32 We have interdepartmental meetings regularly.                                    | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 33 Customer information is disseminated across business units.                      | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 34 Competitor information is disseminated across units.                             | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |
| 35 Customer complaints fall on deaf ears here.                                      | 1        | 2 | 3 | 4 | 5 | 6 | 7 |                   | <input type="checkbox"/> |            |

- 36 In our company, we are quick in responding to competitor's moves. 1 2 3 4 5 6 7 ☐
- 37 When we come up with a great marketing plan, we probably would not be able to implement it in a timely fashion. 1 2 3 4 5 6 7 ☐
- 38 The activities of the different departments in our company are well coordinated. 1 2 3 4 5 6 7 ☐

**Once again, thank you for you help. If you curious about the details of this research or the results please feel free to come to see me.**

## APPENDIX 2: THE MAIN STUDY QUESTIONNAIRE

### *Entrepreneurship and Marketing Survey*

**SECTION 1:** This section asks you about your organization's strategic orientation. If you strongly **disagree** with the statement, choose 1; if you strongly **agree** with the statement, choose 7.

		Strongly Disagree						Strongly Agree	Don't Know
1	Our principal business goal is to satisfy the needs of our customers.	1	2	3	4	5	6	7	<input type="checkbox"/>
2	We use customers as an important source of service ideas.	1	2	3	4	5	6	7	<input type="checkbox"/>
3	We constantly monitor our level of commitment to our customers.	1	2	3	4	5	6	7	<input type="checkbox"/>
4	Our strategy for competitive advantage is based on our understanding of our customers' needs.	1	2	3	4	5	6	7	<input type="checkbox"/>
5	We measure customer satisfaction systematically.	1	2	3	4	5	6	7	<input type="checkbox"/>
6	We regularly share information within our company concerning competitor strategies.	1	2	3	4	5	6	7	<input type="checkbox"/>
7	We respond rapidly to competitive actions that threaten us.	1	2	3	4	5	6	7	<input type="checkbox"/>
8	Our company regularly scans competitors' strengths and weaknesses.	1	2	3	4	5	6	7	<input type="checkbox"/>
9	In our company, information is shared among various functional areas	1	2	3	4	5	6	7	<input type="checkbox"/>
10	In our company, many resources are shared among various functional areas	1	2	3	4	5	6	7	<input type="checkbox"/>
11	In our company, all functional areas have integrated strategy.	1	2	3	4	5	6	7	<input type="checkbox"/>
12	In our company, all functions contribute to customer value.	1	2	3	4	5	6	7	<input type="checkbox"/>

**SECTION 2:** This section asks your company's strategic orientation differently. If you agree with the statements on the left-hand side, choose 1; if you agree more with the statements on the right-hand side, choose 7.

*In general, the top managers of our company favour...*

13	A strong emphasis on the marketing of tried and true products or service.	1	2	3	4	5	6	7	A strong emphasis on R&D, technological leadership, and innovation.
----	---	---	---	---	---	---	---	---	---

14 None at all. 1 2 3 4 5 6 7 Very many.

15 Mostly of a minor nature. 1 2 3 4 5 6 7 Usually quite dramatic.

16	Typically responds to the actions that the competitors initiated.	1 2 3 4 5 6 7	Typically initiates actions to which Competitors then respond.
----	---	---------------	--

17	We are very seldom the first business to introduce new products & services, administrative techniques, or operating systems.	1 2 3 4 5 6 7	We are often the first business to introduce new products/services, administrative techniques, operating technologies, etc.
----	--	---------------	---

18	Typically seeks to avoid competitive clashes, preferring a “live-and-let-live” posture.	1 2 3 4 5 6 7	Typically adopts a very competitive “undo-the-competitors” posture.
----	---	---------------	---

[illegible]

20 It is best to explore gradually via cautious, incremental behaviour. 1 2 3 4 5 6 7 Bold, wide-ranging acts are necessary to achieve the firm's objectives.

...

159

[illegible]

		Strongly Disagree				Strongly Agree				Don't Know
		1	2	3	4	5	6	7		
28	In our industry, the customers tend to look for new suppliers all the time.								<input type="checkbox"/>	
29	In our industry, the customers tend to be very price sensitive.								<input type="checkbox"/>	
30	New products are introduced in our markets quite frequently.								<input type="checkbox"/>	
31	The technology in our industry is changing very slowly.								<input type="checkbox"/>	
32	Technological changes provide big opportunities in our industry.								<input type="checkbox"/>	
33	It is very difficult to forecast where the technology in our industry will be in the next 2 to 3 years.								<input type="checkbox"/>	
34	Competition in our industry is cutthroat.								<input type="checkbox"/>	
35	It is difficult to maintain profit margins because competition responds quickly to market opportunities.								<input type="checkbox"/>	
36	It is relatively easy for competitors to compete in our markets.								<input type="checkbox"/>	

**SECTION 5:** *This following section deals with various operational practices in your company. There is no right or wrong answer. Different companies just operate in different styles. If you strongly disagree with the statement, choose 1; if you strongly agree, choose 7.*

		Strongly Disagree					Strongly Agree			Don't Know
		1	2	3	4	5	6	7		
37	Standard Operating Procedures are followed for most of the work we do in our company.								<input type="checkbox"/>	
38	Most of the work we do in our company is based on written documents (e.g., plans, budgets, schedules).								<input type="checkbox"/>	
39	Duties, authority, and accountability of employees in our company are based on policies, procedures, and job description.								<input type="checkbox"/>	
40	In our company, a person who wants to make his/her own decision would be quickly discouraged.								<input type="checkbox"/>	
41	In our company, even small matters have to be referred to someone higher up for a final answer.								<input type="checkbox"/>	
42	In our company, there can be little action taken until a supervisor approves it.								<input type="checkbox"/>	
43	Our company does not have people with advanced data analysis skills to analyze data/information.								<input type="checkbox"/>	
44	Our company has people who analyze market data/information to make effective decisions.								<input type="checkbox"/>	
45	The basic values of this company include learning as key to improvement.								<input type="checkbox"/>	
46	The sense around here is that employee learning is an investment, not an expense.								<input type="checkbox"/>	
47	Our culture is one that does not make employee learning a top priority.								<input type="checkbox"/>	
48	Our company does not place a high value on open-mindedness.								<input type="checkbox"/>	
49	Our company has a vision of what it is trying to achieve through the assimilation of new knowledge.								<input type="checkbox"/>	
50	Our company has a clear articulation of roles and responsibilities related to utilizing new knowledge.								<input type="checkbox"/>	
51	We have the necessary skills to utilize new knowledge.								<input type="checkbox"/>	

52	We have the technical skills to take advantage of new knowledge.	1	2	3	4	5	6	7	<input type="checkbox"/>
53	We have the managerial competence to take advantage of new knowledge.	1	2	3	4	5	6	7	<input type="checkbox"/>
54	It is well known who can best exploit new knowledge within the company.	1	2	3	4	5	6	7	<input type="checkbox"/>
55	It is well known who can solve problems associated with the utilization of newly acquired knowledge.	1	2	3	4	5	6	7	<input type="checkbox"/>
56	As a company, we are responsible for our successes.	1	2	3	4	5	6	7	<input type="checkbox"/>
57	We can do just about anything we really set our mind to.	1	2	3	4	5	6	7	<input type="checkbox"/>
58	As a company, we are responsible for our own failures.	1	2	3	4	5	6	7	<input type="checkbox"/>
59	The really good things that happen to us are mostly luck.	1	2	3	4	5	6	7	<input type="checkbox"/>
60	There's no sense planning a lot—if something good is going to happen it will.	1	2	3	4	5	6	7	<input type="checkbox"/>
61	We have little control over the bad things that happen to our company.	1	2	3	4	5	6	7	<input type="checkbox"/>
62	Most of our company's problems are due to poor industry conditions.	1	2	3	4	5	6	7	<input type="checkbox"/>
63	Our company prefers, and places emphasis on tasks that involve coming up with new solutions to problems.	1	2	3	4	5	6	7	<input type="checkbox"/>
64	We thrive in dealing with complex problems.	1	2	3	4	5	6	7	<input type="checkbox"/>
65	In our company, it is enough for us to know something gets the job done; we don't care how or why it works.	1	2	3	4	5	6	7	<input type="checkbox"/>
66	We only think as hard as we have to.	1	2	3	4	5	6	7	<input type="checkbox"/>
67	We try to be the best in our industry.	1	2	3	4	5	6	7	<input type="checkbox"/>
68	We work very hard.	1	2	3	4	5	6	7	<input type="checkbox"/>
69	It is important to us to have the best products and services.	1	2	3	4	5	6	7	<input type="checkbox"/>
70	We push ourselves to be "all that we can be".	1	2	3	4	5	6	7	<input type="checkbox"/>
71	We try very hard to improve on our performance.	1	2	3	4	5	6	7	<input type="checkbox"/>

- |    |   |   |   |   |   |   |   |   |                          |
|----|---|---|---|---|---|---|---|---|--------------------------|
| 72 | A problem has little attraction to us if we don't think it has a solution.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | <input type="checkbox"/> |
| 73 | There is a right way and a wrong way to do almost everything.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | <input type="checkbox"/> |
| 74 | We don't mind if a project never really finish when it keeps on leading to new discoveries.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | <input type="checkbox"/> |
| 75 | We don't like to work on a problem unless there is a possibility of coming out with a clear-cut and unambiguous answer. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | <input type="checkbox"/> |
| 76 | We like to try out new ideas, even if they turn out later to be a total waste of time.                                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | <input type="checkbox"/> |

---

**SECTION 6:** This section asks about your **perception** of your customers. Give your best estimates.

---

- |    |  |   |   |   |   |                      |   |   |  |  |  |                   |  |                          |
|----|--|---|---|---|---|----------------------|---|---|--|--|--|-------------------|--|--------------------------|
|    |  |   |   |   |   | Strongly<br>Disagree |   |   |  |  |  | Strongly<br>Agree |  | Don't<br>Know            |
|    |  | 1 | 2 | 3 | 4 | 5                    | 6 | 7 |  |  |  |                   |  | <input type="checkbox"/> |
| 77 | Our customers are satisfied with their relationship with our firm.                 |   |   |   |   |                      |   |   |  |  |  |                   |  |                          |
| 78 | Our customers are not satisfied with the products our company offers them.         | 1 | 2 | 3 | 4 | 5                    | 6 | 7 |  |  |  |                   |  | <input type="checkbox"/> |
| 79 | Our customers are satisfied with the service our company provides them.            | 1 | 2 | 3 | 4 | 5                    | 6 | 7 |  |  |  |                   |  | <input type="checkbox"/> |
| 80 | Our customers would repeat their purchases with our firm rather than a competitor. | 1 | 2 | 3 | 4 | 5                    | 6 | 7 |  |  |  |                   |  | <input type="checkbox"/> |
| 81 | Our customers would not recommend our company to others.                           | 1 | 2 | 3 | 4 | 5                    | 6 | 7 |  |  |  |                   |  | <input type="checkbox"/> |
| 82 | Our customers rely on us as their supplier.  | 1 | 2 | 3 | 4 | 5                    | 6 | 7 |  |  |  |                   |  | <input type="checkbox"/> |

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**SECTION 7:** This section asks about your **estimates** of your company's performance, relative to major competitors in your industry.

---

- |    |   |   |   |   |   |   |               |   |  |  |  |                |  |                          |
|----|---|---|---|---|---|---|---------------|---|--|--|--|----------------|--|--------------------------|
|    |   |   |   |   |   |   | Much<br>Lower |   |  |  |  | Much<br>Higher |  | Don't<br>Know            |
|    |   | 1 | 2 | 3 | 4 | 5 | 6             | 7 |  |  |  |                |  | <input type="checkbox"/> |
| 83 | Over the last 3 years, relative to major competitors, our company's overall <i>sales revenue</i> has been...              |   |   |   |   |   |               |   |  |  |  |                |  |                          |
| 84 | Over the last 3 years, relative to major competitors, our company's overall <i>return on investment (ROI)</i> has been... | 1 | 2 | 3 | 4 | 5 | 6             | 7 |  |  |  |                |  | <input type="checkbox"/> |



- 85 Over the last 3 years, relative to major competitors, our company's overall *return on assets (ROA)* has been... 1 2 3 4 5 6 7 ☐

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**LAST SECTION:**

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- 86 How many years has your company been in business? \_\_\_\_\_ years.
- 87 How many people does your company employ? \_\_\_\_\_ people.
- 88 Which department are you in charge of?  
\_\_\_\_\_
- 89 How many people does your department employ? \_\_\_\_\_ people
- 90 Approximate sales revenue of your company in last fiscal year \$ \_\_\_\_\_
- 91 Approximate expenditure in R&D as a percentage of revenue \_\_\_\_\_ %
- 92 Approximate expenditure in training and development as a percentage of revenue \_\_\_\_\_ %
- 93 What is your gender? \_\_\_\_\_ Male \_\_\_\_\_ Female
- 94 What is your age group?  
1) below 25      2) 26-35      3) 36-45      4) 46-55      5) 56-65      6) over 65

Any other comments?

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Would you be interested in receiving an abstract of the findings? Yes \_\_\_\_ No \_\_\_\_

If yes, what is your company name \_\_\_\_\_ email address? \_\_\_\_\_

**Thank you for your participation in this survey.  
Please return this questionnaire in the enclosed return envelop. Thank you.  
If you have any questions or comments, please me.**

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**APPROVAL CERTIFICATE**

16 December 2005

**TO:** David Di Zhang  
Principal Investigator (Advisor E. Bruning)

**FROM:** Wayne Taylor, Chair  
Joint-Faculty Research Ethics Board (JFREB)

**Re:** Protocol #J2005:155  
"Knowledge Orientation: The Concept and its Implication on  
Marketing Strategy"

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Please be advised that your above-referenced protocol has received human ethics approval by the **Joint-Faculty Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

**Please note:**

- if you have funds pending human ethics approval, the auditor requires that you submit a copy of this Approval Certificate to Kathryn Bartmanovich, Research Grants & Contract Services (fax 261-0325), including the Sponsor name, before your account can be opened.
- if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.



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## AMENDMENT APPROVAL

05 April 2007

**TO:** David di Zhang  
Principal Investigator

**FROM:** Wayne Taylor, Chair  
Joint-Faculty Research Ethics Board (JFREB)

**Re:** Protocol #J2005:155  
**"Integration of Market and Entrepreneurial Orientations"**

This will acknowledge your e-mail dated April 4, 2007 requesting amendment (change of project title) to the above-noted protocol.

**Original Title:** "Knowledge Orientation: The Concept and its Implication on Marketing Strategy"

**New Title:** "Integration of Market and Entrepreneurial Orientations"

Approval is given for this amendment. Any other changes to the protocol must be reported to the Human Ethics Secretariat in advance of implementation.