

# Market orientation and performance of export ventures: the process through marketing capabilities and competitive advantages

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**Abstract** Our study focuses on the *internal process* through which market orientation influences performance in export markets, and develops a model of market orientation–marketing capabilities–competitive advantages–performance relationships. Using survey data of 491 export ventures based in China, we find that marketing capabilities mediate the market orientation–performance relationship, while competitive advantages partially mediate the marketing capabilities–performance relationship. Moreover, coordination mechanism strengthens, and cost leadership strategy weakens, the effects of market orientation on new product development and marketing communication capabilities, respectively. Market turbulence attenuates the effect of market orientation on new product development capability while competitive intensity strengthens this effect.

**Keywords** Market orientation · Marketing capabilities · Competitive advantages · Performance · Export ventures

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## Introduction

Market orientation is a foundation and the central concept of the marketing discipline (Gebhardt et al. 2006; Kotler 2000). Many studies have examined the relationship between market orientation and performance (e.g., Jaworski and Kohli 1993; Narver and Slater 1990; Pelham 2000; Slater and Narver 1994), with general empirical support that market orientation enhances firm performance (c.f., Kirca et al. 2005). However, researchers have generated much debate on the exact role of market orientation and the process through which it influences performance; that is: “How does market orientation (actually) contribute to performance?” (Hult et al. 2005, p. 1173). As globalization and the rapid growth of international trade have made it imperative for firms, especially for those from emerging economies, to seek expansion opportunities, the application of market orientation in the export context has increasingly played a critical role in firms’ survival and success in international markets (Diamantopoulos et al. 2000; Murray et al. 2007). Its critical function in export markets is to enable firms to develop and market the appropriate goods and services that are valued by customers in export markets (Diamantopoulos et al. 2000; Narver and Slater 1990). Despite the significant relationship between market orientation and firm performance in export markets, it has received limited research attention (Akyol and Akehurst 2003; Cadogan et al. 1999; Diamantopoulos et al. 2000; Murray et al. 2007), especially in an emerging economy context. Moreover, the internal process through which market orientation influences performance in the export context is not well understood.

Based on the resource-based view (RBV) of the firm, Ketchen et al. (2007) have recently argued that market orientation as a resource only has potential value. Similarly,

DeSarbo et al. (2007) have stressed that a firm's ability to deploy resources through organizational capabilities may be more critical than the resources themselves in helping the firm obtain desirable performance. Equally important, in delineating why firms have differential performance, Porter (1991) has asserted that it is a firm's possession of competitive advantage that drives performance. Taking these debates together, since market orientation (i.e., as a resource) and performance are not directly related, it is imperative to focus on the process through capabilities and competitive advantages in examining the market orientation–performance relationship. Hence, only if a firm takes appropriate strategic actions to capitalize on market orientation can it create a competitive advantage in achieving higher performance (Ketchen et al. 2007). Previous studies have investigated the mediating role of innovation capabilities and competitive advantages in the market orientation–performance relationship (Han et al. 1998; Zhou et al. 2005, 2008). Yet, we still have limited knowledge in revealing the exact process through which market orientation influences firm performance.

We address critical gaps in both market orientation and RBV literature theoretically and empirically through capturing the important roles of marketing capabilities and competitive advantages using China as an emerging economy context. As recently reported by Batson (2010) in *The Wall Street Journal*, China overtook Germany as the world's top exporter in 2009, and it now accounts for almost 10% of global exports (World Factbook 2010). Examining the market orientation–performance relationship using both local Chinese and foreign export ventures in China may help increase the generalizability of our findings more than studies generated using domestic firms in a domestic context.

Specifically, we aim to provide three significant contributions to the marketing and strategic management literature. First, based on the debates on market orientation and RBV as a backdrop, we resolve existing deficiencies in the extant literature by capturing the *internal process* through which market orientation influences performance in export markets based on the following linkages: strategic resources–strategic action–competitive advantages–organizational performance (Ketchen et al. 2007). In Newbert's (2007) review of articles on RBV, surprisingly no empirical studies have examined the important role of marketing capabilities (i.e., strategic action) on performance, although it is widely recognized that marketing affects firm performance (Vorhies et al. 2009). Further, in Krasnikov and Jayachandran's (2008) meta-analysis of the firm capability–performance relationship, the results show that marketing capability has a stronger effect on firm performance than research-and-development and operations capabilities, thus reinforcing the importance of capturing the effect of marketing

capabilities on the market orientation–performance relationship. In our study, instead of examining the direct link between market orientation and performance, we investigate the mediating role of marketing capabilities (i.e., pricing, new product development, and marketing communication capabilities) on the market orientation–performance relationship. By taking strategic actions (i.e., market capabilities development) to capitalize on market orientation, firms create competitive advantages, which consequently enhance performance. Ketchen et al. (2007) have asserted that a major limitation of the extant literature on market orientation is that the role of competitive advantages has yet to be captured when examining the market orientation–performance relationship. In our study, we rectify such an omission by further examining the mediating role of competitive advantages (i.e., lower-cost and differentiation advantages) on the marketing capabilities–performance relationship.

Second, as internal processes through which market orientation influences performance are under-researched, we explicitly assess the internal operational connection between market orientation and performance to provide useful managerial implications. It is this internal operational component that differentiates firms' ability in capitalizing on their market orientation, resulting in marketing capabilities that contribute to desirable performance. Rather than the knowledge generated by market orientation itself, the source of competitive advantage via capability building is how knowledge is coordinated and integrated among functional units (Grant 1996). Thus, it is necessary to examine the moderating role of a firm's coordination mechanism in its use of market orientation knowledge (Atuahene-Gima 2005). As firms from an emerging economy would likely use a cost-based strategy (Aulakh et al. 2000), we also examine cost leadership strategy as another internal operational component that moderates the market orientation–marketing capabilities relationship.

Third, several studies have investigated the moderating effects of external environmental factors on the market orientation–performance relationship (Kirca et al. 2005). Gao et al. (2007) found that the impact of market orientation on performance could turn from positive to negative in the dynamic and turbulent context of China. Similarly, Zhou et al. (2007) concluded that the effectiveness of market orientation is contingent on environmental conditions in different global markets. Thus, the development of appropriate marketing capabilities, derived from market orientation, may be contingent on the demand condition and the level of competition in the dynamic export market. Further, firms from an emerging economy are generally less experienced in exporting, especially to customers in developed nations, so the relationship between a firm's market orientation and its marketing capabilities is

likely to be drastically influenced by both market and industry conditions. Therefore, it is of critical importance to examine the moderating roles of market turbulence and competitive intensity in influencing the market orientation–marketing capabilities relationship.

We develop a conceptual model that examines the market orientation–marketing capabilities–competitive advantages–performance relationships and empirically test these relationships in an emerging economy context. We contend that the differential ability of firms in an emerging economy to transform market orientation knowledge into marketing capabilities (i.e., pricing, new product development, and marketing communication capabilities) lies in their distinct coordination mechanism and cost leadership strategy, taking into consideration the level of market turbulence and competitive intensity. In addition, competitive advantages mediate the marketing capabilities–performance relationships. We present our conceptual model in Fig. 1.

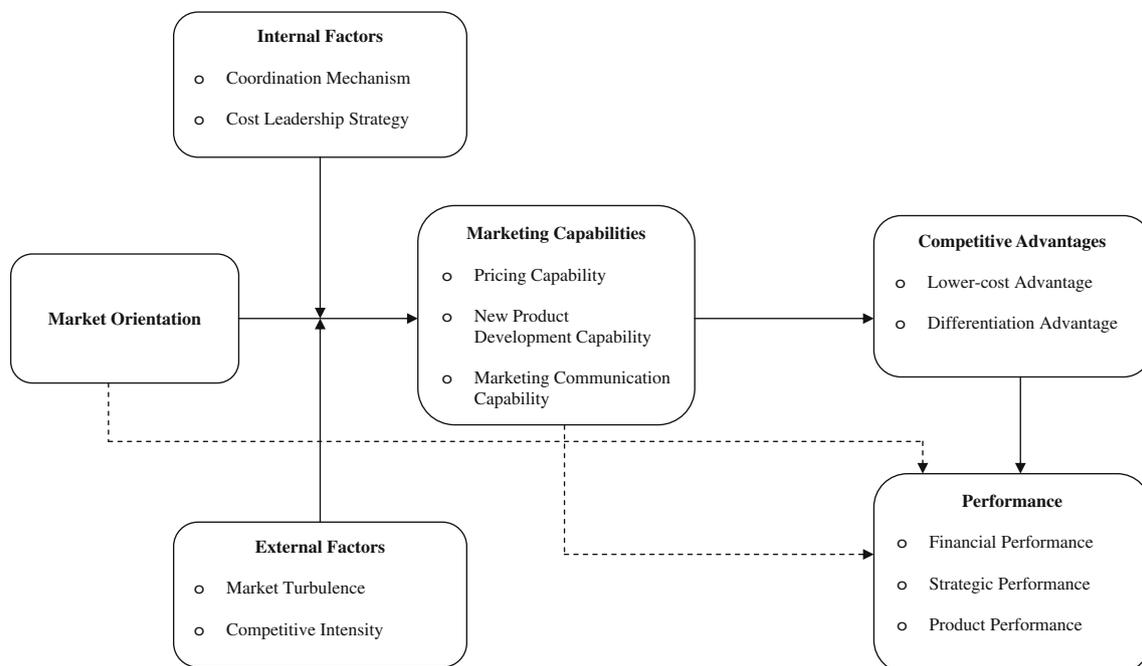
## Theory and hypotheses development

### A resource-based view of market orientation

The RBV addresses the origins of competitive advantage by arguing that the performance differences among firms result from resources that can be used to create idiosyncratic, inimitable internal capabilities (Amit and Schoemaker 1993; Atuahene-Gima 2005, p. 63; Barney 1991). A

resource is an observable (but not necessarily tangible) asset that can be valued and traded, while a capability is not observable (and hence necessarily intangible) and changes hands only as part of its entire unit (Makadok 2001). Capabilities are a firm’s accumulated knowledge and skills that enable the firm to utilize and enhance the value of resources. As Krasnikov and Jayachandran (2008, p. 2) have stressed, “[c]apabilities enable a firm to perform value-creating tasks effectively, and they reside in organizational processes and routines that are difficult to replicate. Capabilities are deeply rooted in these processes and therefore are embedded within organizations in the complex mesh of interconnected actions that follow managerial decisions over time.” Furthermore, marketing capabilities are based on market knowledge about customer needs and past experience in forecasting and responding to these needs by using market orientation (Day 1994). As such, marketing capabilities are developed based on knowledge that is tacitly held and difficult for rivals to copy (Krasnikov and Jayachandran 2008).

Following the behavioral perspective of market orientation and extending it in the export market context, market orientation consists of the generation, dissemination, and responsiveness of export market intelligence, which is focused on export customers, competitors, or environmental changes (Cadogan et al. 1999; Jaworski and Kohli 1993). The critical function of market orientation is to capture information about export customers’ current and future needs, competition in the export market, and exogenous



**Figure 1** Conceptual model of the relationships among market orientation, marketing capabilities, competitive advantages, and performance (the dotted lines represent direct effects that may be fully mediated).

market pressures including regulatory policies and technological changes. Market-oriented firms constantly collect relevant export market information, share the information among export staff and other decision makers throughout the organization, and quickly respond to the changes in the export market. The extant literature has provided empirical evidence to the relationship between market orientation and export performance (e.g., Akyol and Akehurst 2003; Diamantopoulos et al. 2000). However, market orientation is a precursor to marketing capability building (e.g., Atuahene-Gima 2005; Day 1994) in that market-oriented behaviors have only *potential* value. Indeed, unless a firm successfully develops capabilities, it cannot create a competitive advantage (Ketchen et al. 2007). Simply assessing the market orientation–performance relationship fails to capture the core concepts of the RBV, which include the strategic resource–strategic action–competitive advantage–organizational performance linkages (Ketchen et al. 2007). Based on the RBV as our theoretical foundation, we examine the mediating effects of (1) marketing capabilities on the MO–performance relationship, and (2) competitive advantages on the marketing capabilities–performance relationship.

The importance of resources and capabilities has received much research attention. Empirical studies have examined different types of firm capabilities, including strategic HR management capability (Huselid et al. 1997), R&D capability (Silverman 1999), forecasting ability (Makadok and Walker 2000), learning and developing ability (Luo 2002), and client and project specific capabilities (Ethiraj et al. 2005). Developing rare, valuable, and inimitable capabilities is a challenging process, and the complexity of the export environment further increases the level of information needed for firms. In our study, pricing, new product development, and marketing communication capabilities represent three major marketing capabilities possessed by firms located in China in serving their export market (Zou et al. 2003). In focusing on how marketing capabilities affect the market orientation–performance relationship, we further argue that due to the unique regulatory institutional environment in China, firms need to rely on certain, but not all, marketing capabilities. Defined as “the rules of the game” (North 1990; Scott 1995), institutions exhibit significant legitimacy pressures for firms and directly affect firms’ strategic choices and performance. Under the policy of two separate trading regimes in China established in mid-1980s, foreign firms were allowed to directly export their products manufactured in China, while domestic firms had to channel their exports through state trading companies (Naughton 1996). Although this restriction has been lifted gradually since China’s accession to WTO in 2001, the transition is a long process and the development of distribution capability not a

strategic priority for many export ventures in China (Gao et al. 2010). This is evidenced by the fact that, of the 491 firms in our sample, only 160 firms used distributors in exporting their products. Therefore, we did not include distribution capability in our model.

#### Mediating role of marketing capabilities and competitive advantages

Since market-oriented firms can generate and disseminate market intelligence about their customers and competitors’ activities and respond promptly, market orientation enables firms to develop marketing capabilities in the export market. Hence, as a precursor to capability building, market orientation has only *potential* value (Atuahene-Gima 2005; Day 1994) in contributing to desirable performance. Thus, to realistically evaluate the market orientation–performance relationship, it is imperative to include the development of marketing capabilities by investigating the internal process through which market orientation influences performance. Managers choose or adopt organizational structures, activities, processes, and strategies that reflect the specific conditions of their organizations (Galbraith 1973). Thus, it is not market orientation per se that affects performance, but rather using market orientation in developing marketing capabilities to improve performance. Therefore, we posit that various marketing capabilities mediate the market orientation–performance relationship.

Researchers have argued that capabilities are fundamental to the firm’s success in competing in both domestic and international markets (Dierickx and Cool 1989; Leiblein and Reuer 2004) in that they are the organizational processes through which resources are combined and transformed into value offerings, resulting in firms’ competitive advantages. In our study, we examine competitive advantages—lower-cost and differentiation advantages—as firms’ competitive advantages (c.f., Aulakh et al. 2000). Firms consider evaluation of changes in their competitive advantage as a measure of performance (Day and Wensley 1988). In this framework, superior skills and resources can be utilized to gain competitive advantages, either by having: (1) a lower relative cost position, or (2) a superior customer value/brand position. First, those firms pursuing a low-cost position seek the benefits of moving rapidly down the experience curve. Second, a superior customer value/differentiation advantage occurs when the firm is able to create something that is generally perceived as being unique from competitors’ offerings. A differentiated position is an advantage due to the increase in brand loyalty by customers and their resulting lower price sensitivity.

In terms of creating competitive advantages based on marketing capabilities development in the export context,

pricing capability enables firms to use pricing tactics to quickly respond to changes and enjoy higher revenues in the export market. Firms with new product development capability can effectively develop and manage new product and service offerings to meet export customers' needs. Marketing communication capability enables firms to use marketing communications to manage export customers' value perceptions. Firms with marketing communication capability are able to persuade consumers to have a positive perception of their products, consequently building a differentiated brand image. Therefore, these three marketing capabilities lead to competitive advantages in the export market and enhance firm performance. Hence, we hypothesize that competitive advantages mediate the marketing capabilities-performance relationship.

- H1: Marketing capabilities (i.e., pricing capability, new product development capability, and marketing communication capability) mediate the effect of market orientation on performance.
- H2: Competitive advantages (i.e., lower-cost and differentiation advantages) mediate the effect of marketing capabilities on performance.

#### Moderating effects of internal and external factors

Since market orientation has only *potential* value, realizing this potential in developing capabilities requires alignment with other important internal and external environmental factors (Hofer 1975; Ketchen et al. 2007). In examining the transformation of market orientation into marketing capabilities, one should avoid adopting a deterministic view in evaluating the market orientation–marketing capabilities relationship. Without exercising caution, such a view would lead to over-generalization of the market orientation benefits. Researchers have conceptualized environment as one of the key constructs for understanding organizational behavior and performance in that “the appropriateness of different strategies depends on the competitive settings of businesses” (Prescott 1986, p. 765). Hence, we propose that the impact of market orientation on marketing capabilities development varies across different levels of both internal and external environmental conditions (Atuahene-Gima and Murray 2004; Zeithaml et al. 1988). In our study, internal factors (coordination mechanism and cost leadership strategy) and external factors (market turbulence and competitive intensity) are theorized to moderate the relationship between market orientation and marketing capabilities.

We posit that coordination mechanism and cost leadership strategy act as moderators on the market orientation–marketing capabilities relationship. Coordination mechanism consists of inter-related themes of cooperation, teamwork, common work-oriented goals, and communication (Cadogan

et al. 1999; Narver and Slater 1990). Although market orientation helps firms develop marketing capabilities in the export market, the effect of market orientation on marketing capabilities is likely strengthened by its coordination mechanism. The reason is that the nature of export market knowledge is often complex and tacit, thus making it difficult to create and transfer it within the firm (Atuahene-Gima 2005; Galunic and Rodan 1998; Kogut and Zander 1992; Szulanski 1996). Likewise, Grant (1996) has emphasized that the transformation of knowledge into value-creating processes depends on the firm's knowledge integration mechanisms, such as coordination mechanism and cross-functional teams. Hence, coordination mechanism appears to be a key factor to the success of export market-oriented activities. The complexity of the export market and the rising demand for information make it imperative for a firm to transfer, integrate, and utilize export market intelligence within itself. High levels of within-organizational communication and cooperation of different functions create the necessary environment for market orientation activities to be performed more effectively.

- H3: Coordination mechanism strengthens the effect of market orientation on marketing capabilities (i.e., pricing capability, new product development capability, and marketing communication capability).

Business strategy represents the general direction of firms, and different types of business strategies affect the ways in which firms incorporate and articulate information from the environment (Matsuno and Mentzer 2000). For firms that pursue a cost leadership strategy, it “sets out to become *the* low-cost producer in its industry” (Porter 1985, p. 12). The source of cost advantage may include the pursuit of economies of scale, preferential access to raw materials and others. Firms from emerging economies generally adopt cost-based strategies to enhance performance because they possess comparative advantages in low costs of labor and raw materials (Aulakh et al. 2000). Firms pursuing a cost leadership strategy require the ability to match competitors' offerings at lower prices; consequently, pricing capability is of utmost importance to them when competing in the export market. Consequently, firms will pay more attention to collecting and analyzing pricing information and developing pricing capability. The strategic direction of firms will affect the type of marketing capabilities they will develop and rely on. Thus, the importance of different types of marketing capabilities may vary across firms, depending on firms' selected strategies (Krasnikov and Jayachandran 2008). Firms that are not pursuing a cost leadership strategy will rely more on developing new product development and marketing communication capabilities to achieve success in the export market. In summary, market orientation, as a precursor to

marketing capability building (Atuahene-Gima 2005; Day 1994), will lead to the development of different types of marketing capabilities, depending on firms' strategy directions. We expect that, for firms pursuing a cost leadership strategy, the effect of market orientation on pricing capability will be stronger, while market orientation's effects on new product development and marketing communication capabilities will be weaker.

H4: Cost leadership strategy strengthens the effect of market orientation on pricing capability, but weakens market orientation's effect on new product development and marketing communication capabilities.

We incorporate two external conditions (i.e., market turbulence and competitive intensity) that may influence the relationship between market orientation and marketing capabilities. When the export market is turbulent, as indicated by changing customer demands and preferences, firms can satisfy their customers only by adapting their goods and service offerings in response to the changes. Marketing products in an uncertain environment also requires a huge amount of market information. Market orientation helps firms collect market intelligence in a timely manner (Jaworski and Kohli 1993; Slater and Narver 1994) so as to enable firms to develop pricing, new product development, and marketing communication capabilities to respond to changes and uncertainties. However, market orientation may not be effective when the market is highly turbulent. Empirical findings have provided evidence of the dark side of market orientation in a highly turbulent environment. Voss and Voss (2000) reported that customer orientation is negatively related to performance in the theater industry because customer preferences are too difficult to predict. Grewal and Tansuhaj (2001) found that the effect of market orientation on performance is negative after an economic crisis when market demand changes dramatically. Gao et al. (2007) showed that the effect of customer orientation turns from positive to negative when market uncertainty increases to a high level in the Chinese context. Therefore, in a highly turbulent export market, predicting consumers' needs becomes very difficult and responding to the changes through new product development may not be swift enough and thus less fruitful. Instead, firms may attract customers by offering low-priced products and by persuading customers through different types of promotional activities.

H5: Market turbulence strengthens the effect of market orientation on pricing and marketing communication capabilities, but weakens the effect on new product development capability.

The level of competitive intensity is indicated by the number of competitors and the frequency and intensity of

using certain marketing techniques (e.g., advertising, pricing activities) to gain market share (Jaworski and Kohli 1993; Slater and Narver 1994). When competition is low, the effect of market orientation is not very salient because customers do not have many product alternatives. In contrast, facing a high level of competition, firms need to respond to their competitors' aggressive actions. Therefore, they have to be market-responsive in monitoring competitors, developing their own competitive strategies, and anticipating and responding to competitors' actions (Gatignon and Xuereb 1997). In a highly competitive export environment, information about competitors becomes more valuable, and the need for high levels of market orientation to collect market intelligence is more critical. Market orientation enables firms to better monitor competitors' actions and develop marketing capabilities to respond to the high level of competitive intensity. Therefore, we expect that the effects of market orientation on marketing capabilities become more salient as the level of competitive intensity increases in the export market.

H6: Competitive intensity strengthens the effect of market orientation on marketing capabilities.

## Method

### Research context and sampling

We collected primary data from a multiple-industry survey of export ventures in China. With its rapid economic growth and transition to a market-based economy, China has become one of the most important export markets in the world. The worldwide exporting volume was US\$12.11 trillion in 2009, and China's exports reached US\$1.194 trillion, constituting 9.9% of the world exports (World Factbook 2010). China is one of the largest trading partners for the major economies in the world, including the US and EU. Given its significant role in world trade, China provides an excellent research context to study the market orientation–marketing capabilities–competitive advantages–performance relationship.

A sample of 1,314 firms located in Beijing, Shanghai, Jiangsu, and Guangdong was drawn from the *2002 Directory of Exporters in China*. We developed a questionnaire using the back-translation process. Then, we pilot-tested the preliminary version of the questionnaire to determine the face validity, clarity, and the relevance of the measures, and we revised some items accordingly to reduce potential ambiguities. We commissioned a national market-research company for the data collection. We required the market-research company to contact export firms via phone calls before scheduling on-site interviews

and identify key informants who had knowledge of and access to the type of data needed for the study. Using on-site interviews, trained interviewers scheduled appointments, presented the key informants with the questionnaire, answered general questions, and collected the completed questionnaire. Following the strategy used in previous studies (cf. Stump and Heide 1996) to minimize the potential for retrospective biases, we asked informants to concentrate on one major product that was currently exported by their firm in responding to the survey.

We obtained usable responses from a total of 491 export ventures with a response rate of 37%. Our sample consists of 240 Chinese and 251 non-Chinese firms (i.e., 65 US, 64 European, 61 Japanese, and 61 Hong Kong firms). All foreign firms had a majority ownership and control in their subsidiaries. The average foreign sales percentage of the sample was 64% (s.d.=35%). On average, the firms exported to 8.71 countries (s.d.=11.06), with 8.08 years of export experience (s.d.=6.18). They on average exported 44.8% to Asia/Australia, 25.6% to US/Canada, 19.2% to Europe, 2.6% to South America, 2.4% to Central America/Mexico, and 5.4% to Africa/Middle East. The respondents who were senior managers of export ventures had been with their firms on average for 7 years. They had on average 5 years of experience in exporting operations, which suggests a high level of knowledge competency.

We assessed potential non-response bias through comparing responding and non-responding firms on firm characteristics of export experience, export sales revenue, total sales revenue, export sales revenues percentage, and the number of export countries. The results showed no significant difference between responding and non-responding firms ( $t$ -values ranged from  $-0.37$  to  $0.78$ ), which suggests that non-response bias is unlikely to exist in our study. Furthermore, of the 491 firms surveyed, we randomly selected 48 firms and interviewed two respondents for each firm to reduce random errors of measurement by using the multi-informant technique (Van Bruggen et al. 2002). This concurs with Atuahene-Gima and Murray's (2004) study in which they sought to control for common method bias by encouraging respondents to seek multiple responses to the questionnaire. Then, we computed the  $r_{WG(j)}$  index to test the inter-respondent reliability of measures (James et al. 1984; LeBreton et al. 2005). The  $r_{WG(j)}$  values ranged from  $0.78$  to  $0.91$ , well above the  $0.70$  benchmark (George 1990). Therefore, we used the mean scores of the two respondents to measure the aggregate perceptions for these 48 export ventures in our analysis. We conducted a Harman one-factor test that assesses the potential problem of common method bias (Podsakoff and Organ 1986). A factor analysis of all these constructs resulted in a solution with 14 factors, which accounted for 73.57% of the total variance, and the first factor accounted

for only 26.17% of the variance. We also employed the confirmatory factor analyses (CFA) approach, in which all the items were modeled as the indicators for a single factor representing method effects (Mossholder et al. 1998). The results suggest unsatisfactory model fit ( $\chi^2(902)=7839.28$ ,  $p<.00$ ; general fit index (GFI)=.49, Tucker-Lewis index (TLI)=.40, comparative fit index (CFI)=.42; root mean square error of approximation (RMSEA)=.13). Therefore, common method bias is not a serious problem for our data. We further applied the test proposed by Lindell and Whitney (2001). We included one item as the method marker variable regarding firms' motivation in penetrating foreign markets, which was not related to the constructs in our model (Verhoef and Leeflang 2009). The item was "we penetrate foreign markets because our major competitors are expanding internationally." The calculated correlations between this variable and the constructs in our model, ranging from  $0.02$  to  $0.08$ , are not significant. This result reinforces that no evidence of common method bias exists.

#### Measures of constructs

For all the constructs in our study, we measured all the items (see the Appendix) using a 5-point scale. We adopted the measure of market orientation in export markets developed in previous studies (Cadogan et al. 1999; Cadogan et al. 2002). The three components of market orientation are: export intelligence generation, export intelligence dissemination, and export intelligence responsiveness. *Export intelligence generation*, measured by five items, includes a firm's activities in creating intelligence about customers, competitors, technology, and other environmental changes, of which one item was dropped during item purification due to a low factor loading (see the Appendix for the dropped item). *Export intelligence dissemination* has five items, which assess a firm's activities in sharing export market intelligence among export staff and the whole firm, of which one item was subsequently dropped during item purification due to a low factor loading (see the Appendix for the dropped item). *Export intelligence responsiveness* consists of three items that represent a firm's ability to design and respond to the generated intelligence.

We developed measurement of the three marketing capabilities, based on Zou et al.'s (2003) study. We measured *pricing capability* by three items. We defined pricing capability as the extent to which export ventures can use pricing skills to respond to competitors' actions and customer changes, and communicate pricing information to customers. *Product development capability*, measured by four items, indicates firms' ability to manage new product development process and develop new products for the export market. Using three items, we measured *marketing*

*communication capability* as the extent to which export ventures can effectively manage marketing communication programs and use marketing skills to reach customers in the export market.

We adapted the measurement of *competitive advantages* (*lower-cost* and *differentiation advantages*) from previous studies (Morgan et al. 2004; Zou et al. 2003). We measured *lower-cost advantage* using three items to reflect the extent to which export ventures enjoy lower costs and consequently higher profitability than major competitors. Using three items, we measured *differentiation advantage* as the extent to which export ventures enjoy higher levels of brand awareness, attitude, and brand loyalty relative to major competitors because branding reflects key aspects of differentiation advantage.

We measured *coordination mechanism* using six items, based on previous studies (Diamantopoulos et al. 2000; Jaworski and Kohli 1993). It consists of interrelated themes of cooperation, teamwork, common work-oriented goals, and communication. We adopted the measurement of *cost leadership strategy* from Aulakh et al.'s (2000) study, which consists of two items to assess firms' emphasis on achieving lower costs than competitors through production of economies of scale. We developed the measurement of market turbulence and competitive intensity by following Jaworski and Kohli's (1993) study. We measured *market turbulence* by a two-item scale to capture the extent to which the preferences and demands of customers in the export market tend to change over time. *Competitive intensity*, consisting of five items, refers to the level of competition and competitive behavior of participating firms in the export market.

We developed multiple performance measures based on previous studies (Morgan et al. 2004; Zou et al. 1998). We measured *financial performance* by three items: profit level, sales volume, and growth rate. *Strategic performance* captures firms' strategic goals in the export market with three items of competitiveness, strategic position, and global market share. We further measured *product performance* relative to three major competitors using three items on product innovations, and the success rate and the pace of bringing new products to the marketplace. We also included five control variables. *Firm type* is a dummy variable indicating whether an export venture was foreign-controlled. *Export scope* measures the number of countries in which a focal export venture sold products, and *export experience* measures the number of years for which it had operated in the export market. *Psychic distance*, measured by three items, assesses the difference in culture, language, and customers and values of customers (Bello and Gilliland 1997). *Firm size* is measured by the number of employees of export ventures with logarithm transformation.

## Analysis and results

### Reliability and validity

We refined the measures and assessed the reliability and validity of constructs by following a two-step approach (Anderson and Gerbing 1988). We ran exploratory factor analyses, followed by CFA, to verify the construct structures. We estimated a CFA measurement model including market orientation, marketing capabilities, internal and external factors, control variables, and performance. The overall fitness indices suggest good fit for the construct model ( $\chi^2(943)=1905.77$ ,  $p<.00$ ; GFI=.86, TLI=.92, CFI=.93, RMSEA=.05). The factor loadings for each individual indicator on its respective constructs are statistically significant ( $p<.001$ ), and there is no evidence of cross-loading, supporting the dimensionality and convergent validity of the constructs. The composite reliabilities of each construct range from .74 to .93, exceeding the usual .70 benchmark (Bagozzi and Yi 1988). We further assessed the discriminant validity of the latent constructs in two ways. First, the correlation of two constructs is less than the square root of the average variance extracted (AVE) estimates of the two constructs (Fornell and Larcker 1981). Second, we collapsed each possible pair of constructs into a single construct and compared its fit with that of the original model (Anderson and Gerbing 1988). In each case, the chi-square difference tests show that a two-factor unconstrained model provides better fit, showing an adequate level of discriminant validity. Overall, the results suggest that the measurement model fits the data well and the constructs exhibit sufficient measurement properties for further analyses. We report the descriptive statistics and correlations in Table 1.

### Estimation and results

We examined the mediating effect of marketing capabilities and competitive advantages by following the analysis strategy of Baron and Kenny (1986), implemented through a series of structural equation models reported in Tables 2, 3 and 4. We estimated two structural models of the relationships among market orientation, marketing capabilities, and performance (see Table 2), and the models fit the data well. We treated market orientation as a second-order construct with three first-order intelligence-based factors. Model 1 suggests that market orientation has significant effects on all three indicators of performance ( $p<.001$ ). The results in Model 2 show that market orientation is significantly related to the three marketing capabilities ( $p<.001$ ). Pricing capability is significantly related to performance ( $p<.05$  for financial performance and strategic performance), and new product development capability significantly affects performance ( $p<.001$  for strategic performance and product

**Table 1** Descriptive statistics and correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Market orientation	1.00																		
2. Pricing capability	.41***	1.00																	
3. New product development	.39***	.51***	1.00																
4. Marketing communication capability	.47***	.47***	.62***	1.00															
5. Lower-cost advantage	.26***	.25***	.29***	.35***	1.00														
6. Differentiation advantage	.31***	.22***	.36***	.34***	.36***	1.00													
7. Coordination mechanism	.59***	.36***	.31***	.36***	.25***	.29***	1.00												
8. Cost leadership strategy	.28***	.36***	.41***	.41***	.30***	.19***	.29***	1.00											
9. Market turbulence	.13**	.25***	.32***	.27***	.15**	.04	.14**	.14**	1.00										
10. Competitive intensity	.16***	.24***	.21***	.26***	.11*	.04	.21***	.17***	.40***	1.00									
11. Foreign venture	.08	-.03	.05	.02	.10*	.18***	.03	.08	-.13**	-.15**	1.00								
12. Export scope	.04	-.01	.09	.04	.09*	.10*	-.03	.02	.00	.06	-.26***	1.00							
13. Export experience	-.08	-.07	.01	-.08	.01	.03	-.02	-.10*	-.03	.08	-.26***	.22***	1.00						
14. Psychic distance	.07	.11*	.14**	.15***	.12**	.13**	.06	-.06	.26***	.13**	-.07	.04	-.05	1.00					
15. Firm size	.00	-.02	.02	.06	.07	.19***	-.04	.01	.01	.13**	-.07	.04	-.05	.02	1.00				
16. Financial performance	.24***	.31***	.35***	.30***	.38***	.34***	.24***	.28***	.16**	.06	.10*	.06	-.05	.06	.07	1.00			
17. Strategic performance	.25***	.38***	.49***	.41***	.35***	.44***	.20***	.33***	.15**	.10*	.12**	.16***	-.01	.12*	.13**	.66***	1.00		
18. Product performance	.18***	.25***	.46***	.30***	.25***	.30***	.17***	.17***	.21***	.11*	.04	.07	-.02	.09*	.06	.38***	.46***	1.00	
Mean	3.71	3.68	3.55	3.52	3.33	3.42	4.19	3.67	3.33	3.55	.51	8.71	8.08	3.19	2.54	3.39	3.06	3.24	
S.D.	.57	.78	.86	.87	.64	.88	.68	.86	.96	.82	.50	11.06	6.18	.87	.70	.80	.96	.94	

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

**Table 2** Structural model of market orientation, marketing capabilities, and performance

Model 1		Model 2						
Market Orientation–Performance		Market Orientation–Marketing Capabilities–Performance						
Financial performance	Strategic performance	Product performance	Pricing capability	New product development capability	Marketing communication capability	Financial performance	Strategic performance	Product performance
.38*** (3.93)	.40*** (4.26)	.31*** (3.78)	.63*** (4.21)	.61*** (4.19)	.66*** (4.35)	.08 (.85)	.02 (.27)	.03 (.34)
–	–	–	–	–	–	.17* (2.08)	.18* (2.44)	–.03 (–.45)
–	–	–	–	–	–	.26** (3.18)	.37*** (4.99)	.59*** (7.17)
–	–	–	–	–	–	.05 (.66)	.08 (1.09)	–.07 (–.92)

**Model Fit**  
 Model 1:  $\chi^2$  (48)=103.85,  $p < .00$ ; GFI=.97, TLI=.97, CFI=.98; RMSEA=.05.  
 Model 2:  $\chi^2$  (209)=468.32,  $p < .00$ ; GFI=.93, TLI=.95, CFI=.96; RMSEA=.05.

Standardized coefficients are reported with *t*-values in parentheses

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

**Table 3** Structural model of marketing capabilities, competitive advantages, and performance

Model 3		Model 4					
Marketing Capabilities–Performance		Marketing Capabilities–Competitive Advantages–Performance					
Financial performance	Strategic performance	Product performance	Lower-cost advantage	Differentiation advantage	Financial performance	Strategic performance	Product performance
.19** (2.68)	.19** (2.86)	–.03 (–.36)	.12 (1.43)	.00 (.01)	.16* (2.23)	.16* (2.54)	–.04 (–.57)
.27*** (3.38)	.37*** (5.12)	.59*** (7.32)	.10 (1.08)	.26*** (3.43)	.21** (2.64)	.29*** (4.18)	.55*** (6.80)
.08 (1.20)	.09 (1.37)	–.06 (–.85)	.30*** (3.78)	.19** (2.85)	–.04 (–.62)	–.03 (–.43)	–.12 (–1.71)
–	–	–	–	–	.33*** (4.13)	.22*** (3.39)	.11 (1.64)
–	–	–	–	–	.13* (2.27)	.25*** (4.78)	.13* (2.35)

**Model Fit**  
 Model 3:  $\chi^2$  (155)=377.87,  $p < .00$ ; GFI=.93, TLI=.95, CFI=.96; RMSEA=.05.  
 Model 4:  $\chi^2$  (271)=610.21,  $p < .00$ ; GFI=.92, TLI=.94, CFI=.95; RMSEA=.05.

Standardized coefficients are reported with *t*-values in parentheses

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

**Table 4** Structural model of market orientation, marketing capabilities, competitive advantages, and performance

Model 5									
Market Orientation–Marketing Capabilities–Competitive Advantages–Performance									
	Pricing capability	New product development capability	Marketing communication capability	Lower-cost advantage	Differentiation advantage	Financial performance	Strategic performance	Product performance	
Market orientation	.63*** (4.15)	.61*** (4.13)	.66*** (4.28)	.35* (2.42)	.36** (2.86)	-.09 (-.74)	-.16 (-1.52)	-.06 (-.57)	
Pricing capability	–	–	–	.01 (.13)	-.12 (-1.48)	.18* (2.25)	.20** (2.87)	-.02 (-.26)	
New product development capability	–	–	–	.05 (.48)	.20** (2.62)	.21** (2.71)	.31*** (4.34)	.56*** (6.82)	
Marketing communication capability	–	–	–	.18* (1.98)	.06 (.72)	-.03 (-.27)	.02 (-.29)	-.10 (-1.34)	
Lower-cost advantage	–	–	–	–	–	.38*** (4.11)	.25*** (3.48)	.14 (1.72)	
Differentiation advantage	–	–	–	–	–	.14* (2.34)	.26*** (4.97)	.13* (2.39)	
<b>Model Fit</b>									
Model 5: $\chi^2 (341)=747.60, p<.00; GFI=.91, TLI=.94; CFI=.95; RMSEA=.05.$									

Standardized coefficients are reported with *t*-values in parentheses  
 \*\*\*  $p<.001$ , \*\*  $p<.01$ , \*  $p<.05$

performance;  $p<.01$  for financial performance). However, there is no significant relationship between marketing communication capability and performance. Further, the effect of market orientation loses its significance when marketing capabilities are included in the model. As expected, the links from market orientation to performance are indirect through marketing capabilities, thereby suggesting that marketing capabilities mediate the effects of market orientation on performance. Therefore, we obtained strong evidence for the mediating effects of marketing capabilities on the market orientation–performance relationship, thus supporting H1.

We tested the mediating effect of competitive advantages on the marketing capabilities–performance relationship using two models (see Table 3). The findings in Model 3 suggest that pricing and new product development capabilities have significant effects on performance. Model 4 shows that new product development capability is significantly related to differentiation advantage ( $p<.001$ ), and marketing communication capability significantly affects the two types of competitive advantages ( $p<.001$  for lower-cost advantage and  $p<.01$  for differentiation advantage). The effect of pricing capability on lower-cost advantage is close to the .10 level but fails to be significant. Lower-cost advantage has positive effects on performance ( $p<.001$ ) except for product performance, and differentiation advantage is also significantly related to performance ( $p<.05$  for financial performance and product performance;  $p<.001$  for strategic performance). Moreover, when competitive advantages are included in the model, the effects of marketing capabilities on performance indicators are weakened. Therefore, competitive advantages partially mediate the marketing capabilities–performance relationship, providing partial support for H2. We estimated the full Model 5 of the market orientation–marketing capabilities–competitive advantages–performance relationship and obtained consistent results.

Although the unit of analysis is at different levels, we further employed a firm-level objective performance measure to test our product-level models. We collected the measures of return on assets (ROA) 1 year later through the database provided by the marketing research firm. For the 491 export ventures in our sample, we were able to obtain the data of ROA for 271 firms. The objective measure of ROA is significantly related to the subjective performance indicators ( $p<.01$  for strategic performance;  $p<.05$  for financial performance and product performance). We re-estimated the models, and the results were consistent with the patterns reported in Tables 2, 3 and 4, which provides strong support for the robustness of our findings.

Hierarchical moderated regression was employed for testing hypotheses of moderating effects (Aiken and West 1991). We tested the effects of market orientation on

marketing capabilities (i.e., pricing, new product development, and marketing communication capabilities as dependent variables). The independent variables were market orientation, coordination mechanism, cost leadership strategy, market turbulence, and competitive intensity. We mean-centered relevant variables before creating the interaction terms.

It was hypothesized in H3 that coordination mechanism strengthens the effect of market orientation on marketing capabilities. The results in Table 5 show that the interaction terms between coordination mechanism and market orientation are significant for new product development capability ( $\beta=.08, p<.05$ ) and marketing communication capability ( $\beta=.10, p<.01$ ). Hence, we find partial support for the moderating effect of coordination mechanism on the market orientation–marketing capabilities relationship; therefore, H3 is partly supported.

As shown in Table 5, the interaction terms between cost leadership strategy and market orientation are negatively related to new product development capability ( $\beta=-.07, p<.10$ ) and marketing communication capability ( $\beta=-.05, p<.10$ ). Therefore, cost leadership strategy weakens the effects of market orientation on new product development and promotion capabilities, supporting H4.

In terms of the moderating effect of external factors, the results show that market turbulence negatively moderates the effect of market orientation on new product capability

( $\beta=.11, p<.01$ ), thus H5 is supported. Moreover, the relationship between market orientation and new product development capability is positively moderated by competitive intensity ( $\beta=.06, p<.10$ ), partly supporting H6. It should be noted that while some moderating effects are statistically significant, the additional explanatory power of the moderator variables in the models was relatively meager. Theoretical and managerial implications will be discussed below.

As for the effects of control variables, the results suggest that foreign-invested export ventures have a higher level of new product development capability. Export scope, measured by the number of destination countries, is positively related to new product development capability. Moreover, psychic distance has significant positive effects on new product development and marketing communication capabilities, suggesting that the cultural context in the export market represents a profound institutional factor that has a significant impact on the development of marketing capabilities of export ventures.

**Discussion**

As a pivotal construct in the marketing field, market orientation has attracted significant attention of marketing

**Table 5** Estimation results for market orientation interaction terms

Independent Variables	Pricing Capability		New Product Development Capability		Marketing Communication Capability	
Market orientation (MO)	.25*** (5.13)	.26*** (5.23)	.23*** (4.83)	.20*** (4.09)	.33*** (7.03)	.30*** (6.36)
Coordination mechanism (CM)	.11* (2.15)	.09† (1.73)	.04 (.89)	.08 (1.56)	.05 (1.07)	.09† (1.86)
Cost leadership strategy (CL)	.24*** (5.67)	.24*** (5.54)	.29*** (6.99)	.29*** (6.96)	.27*** (6.93)	.26*** (6.57)
Market turbulence (MT)	.10* (2.32)	.10* (2.20)	.23*** (5.27)	.24*** (5.51)	.13** (3.16)	.13** (3.18)
Competitive intensity (CI)	.09* (1.98)	.09* (2.02)	.02 (.50)	.02 (.50)	.08* (1.98)	.08* (2.00)
Foreign-invested venture	-.07 (-1.63)	-.06 (-1.50)	.08* (2.13)	.08* (2.01)	.01 (.25)	.01 (.28)
Export scope	-.04 (-.84)	-.04 (-.84)	.08 (1.95)	.08* (2.06)	.01 (.17)	.01 (.30)
Export experience	-.03 (-.66)	-.03 (-.66)	.08 (1.88)	.08 (1.95)	-.04 (-.90)	-.03 (-.81)
Psychic distance	.06 (1.34)	.05 (1.23)	.08* (2.03)	.09* (2.14)	.10* (2.49)	.10** (2.63)
Firm size	-.02 (-.57)	-.02 (-.49)	-.02 (-.37)	-.02 (-.57)	.05 (1.23)	.05 (1.21)
Interaction effects						
MO × CM	–	-.04 (-.94)	–	.08* (1.80)	–	.10** (2.33)
MO × CL	–	-.01 (-.22)	–	-.07† (-1.64)	–	-.05† (-1.30)
MO × MT	–	.02 (.48)	–	-.11** (-2.72)	–	-.01 (-.24)
MO × CI	–	.03 (.78)	–	.06† (1.59)	–	.03 (.65)
Adjusted R <sup>2</sup>	.26	.26	.31	.33	.36	.37
ΔR <sup>2</sup>	–	.00	–	.02	–	.01
F-value change	–	.51 (4 d.f.)	–	3.28* (4 d.f.)	–	1.76† (4 d.f.)

Standardized coefficients are reported with *t*-values in parentheses; one-tailed tests are used for hypothesized effects

\*\*\*  $p<.001$ , \*\*  $p<.01$ , \*  $p<.05$ , †  $p<.10$

researchers. “[A]s export market development has become more a matter of survival than choice for many firms that face challenging economic conditions (O’Cass and Julian 2003)” (Hultman et al. 2009, p. 1), export marketing represents a significant research area in the marketing discipline. Despite the increasing importance of exporting as a strategic option for firms, market orientation in the export context has received limited research attention, especially on the process through which market orientation influences performance. In our study, we examined the mediating role of (1) marketing capabilities in the market orientation–performance relationship, and (2) competitive advantages in the marketing capabilities–performance relationship. We further investigated how internal and external factors moderate the effects of market orientation on the development of marketing capabilities. Thus, by including all the core elements in the RBV and developing a model of market orientation–marketing capabilities–competitive advantages–performance, we contribute to the extant literature in marketing in the following respects.

First, since market orientation emphasizes the integration of organizational efforts to respond effectively to customers’ needs, it should have a positive effect on business performance. However, Ketchen et al. (2007) have cautioned that simply assessing the direct link between market orientation and performance omits other core concepts (i.e., strategic actions and competitive advantages) in the RBV. Similarly, in the literature of applying market orientation to export markets, no studies have been conducted to examine the process through which market orientation influences performance. By focusing on the mediating role of marketing capabilities, we found that pricing, new product development, and marketing communication capabilities mediate the effects of market orientation on performance. Firms can generate valuable knowledge and information from market orientation activities. Yet, firms have to rely on capabilities to develop, combine and transform resources into value offerings for customers to enhance firm performance (Makadok 2001; Morgan et al. 2004; Teece et al. 1997). Our results suggest that market orientation enhances performance through marketing capabilities development. Therefore, it is crucial to include marketing capabilities when examining the market orientation–performance relationship. Moreover, to develop a more comprehensive framework on how market orientation contributes to firm performance, the effect of competitive advantages needs to be captured (Ketchen et al. 2007). In our market orientation context, we investigated the role of competitive advantages (lower-cost and differentiation advantages) and found that competitive advantages partially mediate the marketing capabilities–performance relationship. Our study reveals the internal process of the market orientation–marketing capabilities–competitive advantages–performance relationship, in

which firms take strategic actions to capitalize on market orientation, develop marketing capabilities, and then create competitive advantages to enhance performance in the export market context. Thus, including those previously omitted, yet critical, variables of marketing capabilities and competitive advantages contributes to a better understanding of how market orientation realistically influences the performance of export ventures.

Second, we further investigated the organizational mechanism and strategy that affect how firms deploy market orientation in developing marketing capabilities. Market-oriented firms follow specific processes in generating valuable information, disseminating information throughout the organization, and changing product offerings to enhance customer values in the export market. Consequently, firms can better serve export customers because of the information advantage derived from market orientation activities. However, how to capitalize on market orientation and utilize the information generated by market orientation represents an enormous challenge for firms. We found that coordination mechanism somewhat strengthens the effects of market orientation on new product development and marketing communication capabilities. Thus, it may be desirable to complement market orientation by coordination mechanism to augment its strategic value in developing marketing capabilities (Atuahene-Gima 2005; Grant 1996). Moreover, the results show that cost leadership strategy appears to weaken somewhat the effects of market orientation on new product development and marketing communication capabilities. Export ventures from emerging economies usually adopt low-cost, labor-intensive, and low-priced approaches. Pricing capability is of great importance to them when competing in export markets by providing customer value at lower costs. Therefore, while market orientation plays a critical role in export ventures, whether firms can realize market orientation’s potential value on capability building may depend on how successful they are in deploying and utilizing knowledge from market orientation activities.

Third, researchers have proposed that industry and market environment can affect the strength of the market orientation–performance relationship (Day and Wensley 1988; Jaworski and Kohli 1993; Slater and Narver 1994). We examined the moderating effects of internal and external factors on the market orientation–marketing capabilities relationship. We obtained evidence for the proposed moderating role of the internal and external factors included in our study. The results suggest that market turbulence may attenuate the effect of market orientation on new product development capability while competitive intensity may strengthen this effect. In addition, the effect of market orientation on pricing capability may also be influenced by either market turbulence or competitive intensity. Therefore,

the value of market orientation on capability building could be contingent on the characteristics of the exporting market. Compared with domestic markets, the exporting environment is relatively more turbulent and complex. Therefore, it is imperative to investigate the impact of environmental forces to uncover the effects of market orientation on different types of marketing capabilities.

#### Managerial implications

Although managers have generally been advised to be market-oriented, our study cautions that it is not market orientation per se that directly influences performance. Our findings underscore the importance of paying more managerial attention to the underlying process through which market orientation influences performance. Market orientation acts as an impetus that affects firms' marketing capabilities development and competitive advantages, which consequently have effects on performance. Yet, market orientation itself may not help firms attain desirable performance, without their efforts in transforming market orientation into different types of marketing capabilities (i.e., pricing, new product development, and marketing communication capabilities) and then into competitive advantages (i.e., lower-cost and differentiation advantages). Therefore, managers of export ventures should not only focus their efforts on adopting export market-oriented behaviors and acquire export market intelligence, but also devote attention to the underlying managerial process in order to realize the potential value of market orientation. Managers need to understand the comprehensive relationship of market orientation–marketing capabilities–competitive advantages–performance so that they can monitor the internal process and focus their efforts on developing key marketing capabilities and competitive advantages.

Our findings also confirm the general axiom that no strategy is universally superior, regardless of the environmental or organizational context (Venkatraman 1989). We draw managers' attention to the idea that the critical role of market orientation on marketing capabilities development may vary across the different levels of internal and external factors. Our research suggests that cost leadership strategy and the coordination mechanism may influence the effects of market orientation on marketing capabilities. The external environment also may moderate the market orientation–capabilities relationship. Thus, marketing capabilities development may be dependent on an alignment between market orientation and both internal and external environmental conditions. Managers should be aware of the complex and contingent processes of capabilities development to fully comprehend the impact of market orientation on performance through different types of marketing capabilities.

#### Limitations and directions for further research

Our study has a number of limitations, which also represent fertile directions for future research. First, we examined the critical role of market orientation on marketing capabilities development but did not incorporate the impact of other strategic resources. Future studies should investigate other types of firm resources (e.g., experiential and financial resources) to understand the process of capability development more thoroughly (Morgan et al. 2004). Second, in our study, market orientation was conceptualized as a purely responsive market orientation. Hence, we did not differentiate between responsive market orientation that addresses expressed needs and proactive market orientation that aims at latent needs (Narver et al. 2004). Third, although we have used existing scales in the literature to measure pricing and marketing communication capabilities, the measures used in our study may not have captured those capabilities sufficiently as the nature of these two capabilities is complex. Future research should attempt to capture the domain of the constructs with much richer and more detailed items.

Fourth, we tested the market orientation–marketing capabilities–competitive advantages–performance relationship using survey data from export ventures, which limits the generalizability of our findings to the domestic marketing context. However, as Cadogan et al. (2009, p. 84) have argued, “market-oriented behavior's nomological network of relationships to other constructs (e.g., business success) is not context free.” They further asserted that, “[t] here may be additional contexts in which context-specific models would provide an improvement on traditional non-context-specific models of market orientation's consequences” (Cadogan et al. 2009, p. 84). Despite our significant contributions on the market orientation–performance relationship, future research can extend our study to other research contexts.

Finally, coalignment is a dynamic and never-ending task, thus firms are continually “shooting at a moving target of coalignment” (Thompson 1967, p. 234). In our study, we relied on survey data to test our model. Although we re-estimated the model using an objective measure of a lagged ROA and obtained support for the causal relationship, the lack of panel data prevented us from assessing how export ventures transform resources into capabilities over time and how the capability development and deployment affect performance dynamically. The development of capabilities requires continuous investment of resources, and capabilities evolve over time because of the learning effect and deliberate investment (Ethiraj et al. 2005; Teece et al. 1997). Future studies employing a longitudinal analysis will help provide a dynamic perspective of alignment and further contribute to this stream of research.

## Appendix

### Measurement items

	Loading <sup>a</sup>
<b>Market Orientation</b> (5 = strongly agree, 1 = strongly disagree)	
<i>Export Intelligence Generation</i> CR <sup>b</sup> =.87, AVE <sup>c</sup> =.62	
1. We periodically review the likely effect of changes in our export environment (e.g., technology and regulation).	.67
2. In this company, we generate a lot of information concerning trends (e.g., regulation, technological developments, politics, and economy) in our export markets.	.93
3. We generate a lot of information in order to understand the forces that influence our overseas customers' need and preferences.	1.00
4. We constantly monitor our level of commitment and orientation to serving export customer needs.	.76
5. We are slow to detect fundamental shifts in our export environment (e.g., technology, regulatory, economy). (dropped)	
<i>Export Intelligence Dissemination</i> CR=.86, AVE=.68	
1. Information about our export competitors' activities often reaches relevant personnel too late to be of any use. <sup>d</sup>	.77
2. Important information concerning export market trends (regulatory, technology) is often discarded before it reaches decision makers. <sup>d</sup>	.96
3. Too much information concerning our export competitors is discarded before it reaches decision makers. <sup>d</sup>	1.00
4. Information that can influence the way we serve our export customers takes forever to reach export personnel. <sup>d</sup>	.91
5. Important information concerning our major export customers is disseminated right down to the shop floor. (dropped)	
<i>Export Intelligence Responsiveness</i> CR=.91, AVE=.64	
1. If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.	.91
2. We are quick to respond to significant changes in our competitors' price structures in foreign markets.	1.00
3. We rapidly respond to competitive actions that threaten us in our export markets.	.96
<b>Marketing Capabilities</b> (5 = strongly agree, 1 = strongly disagree)	
Relative to your firm's major competitors:	
<i>Pricing Capability</i> CR=.80, AVE=.56	
1. We respond quickly to competitors' pricing tactics.	1.00
2. We use pricing skills to respond quickly to any customer change.	.99
3. We communicate pricing structures and levels quickly to customers	.98
<i>New Product Development Capability</i> CR=.87, AVE=.73	
1. We manage new products for export well.	.77
2. We develop new products for export to exploit R&D investment.	.80
3. We speedily develop and launch new products for export.	1.00
4. We manage overall new product development systems for export market well.	.84
5. We successfully launch new products for exports.	.98
<i>Marketing Communication Capability</i> CR=.93, AVE=.81	
1. We skillfully use marketing communications.	.94
2. We use marketing communication skills and processes well.	1.00
3. We effectively manage marketing communication programs.	.91
<b>Competitive Advantages</b> (5 = much higher, 1 = much lower)	
Relative to your firm's major competitors:	
<i>Lower-cost Advantage</i> CR=.83, AVE=.62	
1. Production cost per unit. <sup>d</sup>	.97
2. Selling price to end-users overseas. <sup>d</sup>	.54
3. Channel margins given.	1.00
<i>Differentiation Advantage</i> CR=.88, AVE=.72	
1. Brand awareness.	.97
2. "Share of mind".	.81
3. Brand personality.	1.00

**Internal Factors** (5 = strongly agree, 1 = strongly disagree)

*Coordinating Mechanism* CR=.91, AVE=.64

- 1. Employees responsible for Product A's exports and those in other functional areas help each other out. .80
- 2. In our company, there is a sense of teamwork. .96
- 3. There is a strong collaborative working relationship between those who are responsible for Product A's exports and those who do not. .98
- 4. Functional areas in this company work together in the same direction. 1.00
- 5. The activities of our business functions (e.g., marketing/sales, manufacturing etc.) are integrated in pursuing in a common goal. .98
- 6. We resolve issues and conflicts through communication and group problem-solving. .88

*Cost Leadership Strategy* CR=.74, AVE=.59

Your firm's international strategy for Product A in its export markets can be described as

- 1. having lower costs for Product A than our major competitors. .68
- 2. achieving economies of scale for Product A. 1.00

**External Factors** (5 = strongly agree, 1 = strongly disagree)

*Market Turbulence* CR=.74, AVE=.60

- 1. Our export customers' product preferences change quite a bit over time. .72
- 2. Our export customers tend to look for new products all the time. 1.00

*Competitive Intensity* CR=.82, AVE=.60

- 1. Competition in our export market is cutthroat. .74
- 2. There are many "promotion wars" in our export market. 1.00
- 3. Anything that one competitor can offer in our export market, others can match readily. .97
- 4. Price competition is a hallmark of our export market. .89
- 5. One hears of a new competitive move in our export markets almost every day. .95

**Control Variable** (5 = strongly agree, 1 = strongly disagree)

*Psychic Distance* CR=.87, AVE=.70

- 1. The difference in the culture of our export customers. .84
- 2. The difference in the customs and values of our export customers. .97
- 3. The difference in the language of our export customers. 1.00

**Performance**

Export Performance (5 = strongly agree, 1 = strongly disagree)

*Financial Performance* CR=.78, AVE=.55

- 1. has been very profitable. .65
- 2. has generated a high volume of sales. .87
- 3. has achieved rapid growth. 1.00

*Strategic Performance* CR=.88, AVE=.71

- 4. has improved our global competitiveness. 1.00
- 5. has strengthened our strategic position. .94
- 6. has significantly increased our global market share. .95

*Product Performance* CR=.85, AVE=.66

Compared with three major competitors (5 = much higher, 1 = much lower)

- 1. number of successful new products. .98
- 2. speed of getting new products to the market. 1.00
- 3. product innovations. .81

**Overall Model Fit:**  $\chi^2(943)=1905.77, p<.00; GFI=.86, TLI=.92, CFI=.93; RMSEA=.05.$

<sup>a</sup> Fixed factor loading

<sup>b</sup> Composite reliability

<sup>c</sup> Average variance extracted

<sup>d</sup> Items are reverse-coded

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