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Winning through innovation and marketing: Lessons from Australia and Vietnam

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ABSTRACT

We examine the role of innovation and marketing, two functional capabilities that have the capacity to play a major role in creating superior marketplace performance in firms. Our study of the two capabilities and firms' marketplace performance also takes into account the contribution of entrepreneurial orientation (EO) and market orientation (MO) to our focal functional capabilities and marketplace performance. The results of a study of firms in Australia and Vietnam show innovation capability, marketing capability mediate the effects of the firm's MO on its marketplace performance. The results also show that the interaction of innovation and marketing capabilities significantly influences firms' marketplace performance more than they do individually. Finally, our results show that MO partially mediates the relationship between EO and innovation and marketing capabilities.

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1. Introduction

The marketing literature has highlighted the importance of business orientations (e.g. entrepreneurial orientation and market orientation) and firm capabilities (e.g. innovation and marketing) in creating and maintaining superior marketplace performance for firms (Jaworski & Kohli, 1993; Lumpkin & Dess, 1996; Matsuno, Mentzer, & Özsomer, 2002; Morgan, Vorhies, & Mason, 2009; Song, Hanvanich, & Calantone, 2005). However, managers face decisions about what business orientations and firm capabilities they use to compete, especially when seeking to achieve superior marketplace performance. Drawing on the resources-action-performance framework (Ketchen, Hult, & Slater, 2007), we propose that entrepreneurial orientation, market orientation, innovation capability, and marketing capability, when configured correctly complement each other, and are in fact sources of competitive advantage.

First, firms should stimulate innovation through the devlopment and application of innovation capability. Competing on the basis of innovation is the key to growth in increasingly competitive business environments (Chandrashekaran, Mehta, Chandrashekaran, & Grewal, 1999; Marinova, 2004). Innovative firms effectively use this capability to constantly align themselves with changing market needs, in their efforts to capitalize on market opportunities more effectively than their rivals.

Second, successful firms conduct innovation and marketing activities simultaneously en route to superior marketplace performance. This complementarity between the capability to innovate and to market the firms offering is of paramount importance. While innovation enables firms to create value (the creation of customer base), marketing helps to capture value (the protection of customer base as valuable intangible asset) (Berry, 2002; Berthon, Hulbert, & Pitt, 1999). Importantly, to successfully commercialize new products, firms need complementary marketing know-how (Hill & Rothaermel, 2003; Teece, 1986). Although the inherent complementarity between innovation and marketing has been acknowledged (e.g., Drucker, 1954; Mooran & Slotegraaf, 1999), research to date has not extensively explored the effects innovation, marketing, and their interaction have on marketplace performance (Moller, Rajala, & Westerlund, 2008).

Third, firms should create an entrepreneurial foundation that leverages primary drivers of superior performance, such as innovation and marketing capabilities (Ostrom et al., 2010). We believe that creating entrepreneurial orientation and market orientation (MO) is of paramount importance "because of the greater necessity of direct firm-customer interactions" (see Kirca, Jayachandran, & Bearden, 2005, p.37). The behavioral approach views MO as the generation and dissemination of, and responsiveness to market intelligence (Kohli & Jaworski, 1990; Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009). This important market-based asset enables firms to achieve superiority in marketplace performance (Day, 1994; Hult & Ketchen, 2001; Kirca et al., 2005; Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009). While we identify MO here as being important, fundamental questions related to MO still remain. Such questions largely focus on whether MO is necessary in the development of a firm's marketing capability, and innovation capability? And how MO and entrepreneurial

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orientation are linked to a firm's capabilities, and how these orientations and capabilities should be configured en route to superior marketplace performance? Remarkably, these fundamental questions have not been addressed in any empirical study to date.

In this paper, we propose two key theoretical conjectures. First, MO and entrepreneurial orientation are two crucial steps for firms' en-route to superior marketplace performance, yet they play different roles in the development of marketing and innovation capabilities. Specifically, entrepreneurial orientation reflects the firm's predisposition to accept innovativeness, take risks and adopt a proactive posture in the conduct of business through a deeply rooted set of beliefs and behaviors which guide the firm's attempt to compete in its chosen markets. However, we raise the contention here that to be effective, entrepreneurial orientation must be manifested through MO, such as collecting, disseminating, and responding to market intelligence. Second, we believe that marketing capability and innovation capability are primary market-linking capabilities that help realize the value of market-based knowledge (MO) and help realize the firms' entrepreneurial orientation. Importantly, marketing capability and innovation capability are complementary processes that contribute to superior marketplace performance of firms.

Our paper proceeds as follows: First, we explain the underpinnings of our theoretical contentions, and develop specific hypotheses focusing on the relationships between entrepreneurial orientation, MO, capabilities and marketplace performance. Subsequently, we discuss the research procedures used to gather the data to test the hypotheses. Next, we present the analytical procedures and results. The final section discusses the findings, contributions and implications of the study and outlines future research on the focal constructs.

2. Theoretical contentions and hypotheses

Drawing on the resources–actions–performance framework suggested by Ketchen et al. (2007), we propose a theoretical framework (see Fig. 1) that integrates entrepreneurial orientation (EO), market orientation (MO), innovation capability, marketing capability, and their interaction (resources and actions), and marketplace performance (performance). This framework is rooted in the resource-based view (Amit & Schoemaker, 1993; Barney, 1991), which defines a firm resource as "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness" (Barney, 1991, p. 101). Some argue that resources and capabilities are intertwined, yet distinct concepts (Amit & Schoemaker, 1993; Hoopes, Madsen, & Walker, 2003; Makadok, 2001). Capabilities refer to a firm's capacity to deploy resources, usually in combination, using organizational processes to

affect a desired outcome (Amit & Schoemaker, 1993). While resources are tradable, non-specific to the firms, and produce no effects without organizational processes, capabilities are deeply embedded in organizational processes and the ownership of a capability cannot easily be transferred from firm to firm (Hoopes et al., 2003; Makadok, 2001). Capabilities are the glue that brings firm resources together and enables them to be deployed advantageously (Day, 1994).

A body of work has developed in the domain of entrepreneurship involving entrepreneurial management processes, focusing on the practices and decision-making approaches managers adopt to act entrepreneurially (Lumpkin & Dess, 1996). Different terms (e.g. entrepreneurial proclivity, entrepreneurial orientation and entrepreneurial management) have been used interchangeably to reflect this managerial phenomenon (Lumpkin & Dess, 1996; Matsuno et al., 2002; Pellissier & Van Buer, 1996; Stevenson & Jarillo, 1990). A closer look at the extant literature, however, shows that innovativeness, risk taking, and proactiveness are the three underlying dimensions embedded in these terms (see Matsuno et al., 2002). This study uses the term entrepreneurial orientation which is defined as "the organization's predisposition to accept entrepreneurial processes, practices, and decision making, characterized by its preference for innovativeness, risk taking, and proactiveness" (Matsuno et al., 2002, p. 19). Building on the works of Slater and Narver (1995) and Matsuno et al. (2002) a firm appears to gain market orientation's full potential when possessing an underlying foundation of an entrepreneurial orientation, as well as specific functional capabilities.

We further contend that while possessing a higher degree of entrepreneurial orientation, it is not sufficient for firms to achieve superior marketplace performance. Customers do not purchase a firm's product/service simply because the firm possesses a MO or are entrepreneurial, instead they are attracted by and stay with firms that are able to act on the developed knowledge about customers' needs to serve them better (Hult, Ketchen, & Slater, 2005). Guided by entrepreneurial orientation, MO provides firms with know-what knowledge resources upon which to develop their market-linking capabilities in their attempts to serve their markets better than competitors.

As such, the unique contribution of EO–MO is that it provides to firms' a rare, valuable, and inimitable business orientation, which is however, lessened in the absence of deployment capabilities (Menguc & Auh, 2006; Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009). A more market-oriented firm is able to identify and deploy distinctive capability–capability combinations more efficiently than others who are less market-oriented because it is also driven by EO.

As market-oriented firms place the highest priority on staying close to the customer (Slater & Narver, 1998; Zhou, Li, Zhou, & Su, 2008), they should possess marketing and innovation capabilities to satisfy customers' current needs and create new offerings that target
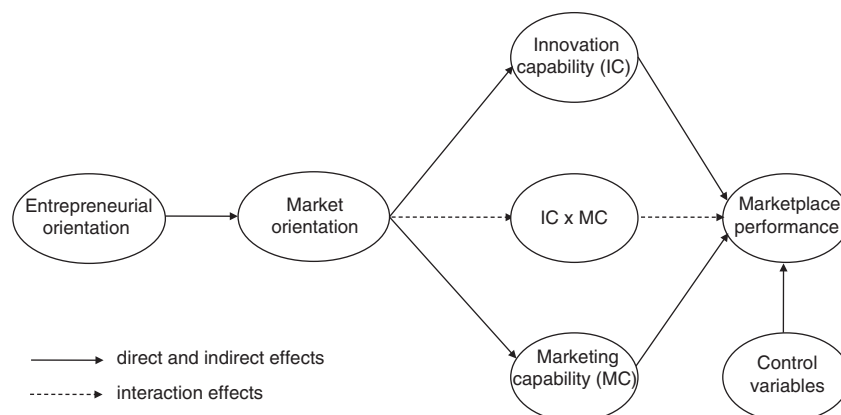

Fig. 1. Theoretical framework and hypotheses.

latent needs. Marketing and innovation capabilities are distinctive capabilities that align with EO–MO for firms to satisfy the customers' current and latent needs (Kumar, 2002; Nelson, 1991; Ritter & Gemunden, 2004; Verona & Ravasi, 2003). In this study, we define innovation capability as a firm's interrelated organizational processes for performing innovation activities related to offerings, production process, management and market (Han, Kim, & Srivastava, 1998; Hurley & Hult, 1998; Weerawardenaa & O'Cass, 2004). Marketing capability is defined as a firm's interrelated organizational processes for performing marketing activities such as product offering, pricing, channel management, marketing communications, marketing planning, and marketing implementation (Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009; Song et al., 2005).

Building on the well established view that firms with EO are innovative, risk taking, and proactive, we adopt the position here that information gathering and analysis are critical to the successful development and execution of innovation based strategies (Matsuno et al., 2002) and thus the adoption or possession of EO. Indeed, entrepreneurial firms need to learn on, adapt to the environment, execute actions quickly, and manage risks through scanning the marketplace for a high level of know-what knowledge (Becherer & Maurer, 1997; Grinstein, 2008). The execution is the platform that is the key to enacting EO through MO via the manifestation of capabilities (innovation and marketing). As such, a positive relationship between entrepreneurial orientation and market orientation should exist.

2.1. EO, MO and firm capabilities

The extant literature has indicated that realizing the potential value of MO depends on how this know-what knowledge resources being exploited through a firm's strategic actions (Ketchen et al., 2007). Recent meta-analysis studies on MO show that strategic actions in the areas of innovation and marketing are essential to fully realize the value of MO (Grinstein, 2008; Kirca et al., 2005; Liao, Chang, Wu, & Katrichis, 2011). In particular, firms manifest their MO via the development of innovation and marketing capabilities (Atuahene-Gima, 1996; Dutta, Narasimhan, & Rajiv, 1999; Han et al., 1998; Slater & Narver, 1995; Zhou, Yim, & Tse, 2005). Indeed, MO provides knowledge about the market upon which firms can develop appropriate marketing and innovation routines and practices to link the firm and the customer. In this sense, MO connects EO to market-linking capabilities. To be effective, EO must manifest in firms' MO (e.g., gathering, disseminating to information and responding). In this sense, EO serves as the driver of MO, which then serves as the organizing mechanism that enables firms to develop specific capabilities such as innovation and marketing (to exploit the full potential of their MO).

Some argue that MO is inherently entrepreneurial (Matsuno et al., 2002). Indeed, entrepreneurial and market-oriented firms strive to satisfy customers' current and latent needs, pursue market expansions, and capitalize on emerging opportunities (Grinstein, 2008). However, we believe that EO and MO are intertwined but distinct constructs. While EO refers to the firm's degree of innovativeness, risk taking, and proactiveness, MO emphasizes the need for the entire firm to gather, share, and respond to customers' current and latent needs. The potential value of MO should be considered together with other important business orientations and firm capabilities (Hult & Ketchen, 2001; Zhou et al., 2005). In particular, a market-oriented firm "can achieve maximum effectiveness only if it is complemented by a spirit of entrepreneurship" and appropriate organizational processes (e.g. innovation and marketing capabilities) for operationalizing the value of MO (Slater & Narver, 1995; p. 63). As such, we hypothesize that:

H1. Firms MO mediate the relationship between EO and a) innovation capability, and b) marketing capability.

2.2. MO, firm capabilities and marketplace performance

The extant literature on MO has moved past the establishment of the direct effect of MO on firm performance focusing more on how MO works to enhance performance (Han et al., 1998; Liao et al., 2011; Zhou et al., 2008). In this research, we are interested in three specific performance outcomes that are representative of the firms' marketplace performance. These deal with the degree to which the mid-range, concurrent, market-related performance goals of the firm is achieved. RBV theory indicates that mid-range performance will be improved via the firms' capability to deploy resources. Previous studies indicate that firms that are able to realize market share and sales growth, and improve their market position without sacrificing profitability, should see increased financial performance in subsequent periods (Vorhies et al., 2009). While realizing the growing use of non-financial performance indicators (e.g. customer loyalty, firm reputation), we place our emphasis on financial performance indicators for the following reason. Essentially, financial indicators provide information about past performance, while non-financial indicators are about future performance (Ambler & Roberts, 2008; ASB, 2007; Kaplan & Norton, 1996). As such, the two types of performance indicators are likely to be negatively related because non-financial performance indicators focus on future investments, and financial performance indicators represent current and historical performance (Juma & Payne, 2004; Kong, 2008).

We believe that MO influences marketplace performance in three ways: via developing innovation capability, marketing capability, and their complementary combination. First, successful firms manifest their MO via innovation. MO enhances a firm's innovativeness because it emphasizes continuous and proactive understanding not only current but also latent needs of customers (Kirca et al., 2005; Slater & Narver, 1999). Recent meta-analysis studies show that MO ties to a variety of innovation activities such as creativity, innovativeness, and product development (Han et al., 1998; Hurley & Hult, 1998; Im, Hussain, & Sengupta, 2008; Menguc & Auh, 2006). We extend the extant literature by proposing that market-oriented firms that outperform others are those that direct the resource necessary to meet customers' expressed and latent needs and create the customer base via developing innovation capabilities. Being innovative doesn't necessarily mean a firm invents something radical or even totally new; they may simply introduce an innovation in their offering that is new to their industry (Bitner & Brown, 2008). In this sense, MO plays a pivotal role in developing innovation capabilities to achieve superiority in marketplace performance (Atuahene-Gima, 1996). As such, we hypothesize that:

H2. Firms' innovation capability mediates the relationship between MO and marketplace performance.

Second, successful firms also manifest their MO via marketing. In effect the "marketing function can and should coexist with a market orientation and that the effectiveness of a market orientation depends on the presence of" (Moorman & Rust, 1999; p. 180) a strong marketing. Recent research shows that MO is tied to a variety of marketing activities such as channel collaboration, marketing strategy, relationship marketing, internal marketing (Hyvonen & Tuominen, 2007; McGuinness & Morgan, 2005; Santos-Vijande, Sanzo-Perez, Alvar-Gonzalez, & Vazquez-Casielles, 2005). We extend the extant literature by proposing that market-oriented firms that outperform others are those that direct the resources necessary to link firms with customers to protect the customer base via developing marketing capabilities. Market-oriented firms develop higher levels of marketing capabilities, in the areas of product, pricing, channel management, marketing communication, marketing planning, and marketing implementation, than their less market-oriented competitors and significantly outperform their competitors in terms of on marketplace

performance (Vorhies, Harker, & Rao, 1999). In this context, MO plays a pivotal role in developing marketing capabilities to achieve superiority in marketplace performance. As such, we hypothesize that:

H3. Firms marketing capability mediates the relationship between MO and marketplace performance.

Third, successful firms should manifest their MO via the complementarity between innovation and marketing capabilities. "Capabilities are complementary when the returns to one capability are affected by the presence of another" (Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009; p. 286). We expect a performance-enhancing complementary relationship between innovation and marketing capabilities. Indeed, creating new customers and maintaining current customers are the two key tasks for managers. The first task can be done via innovation capabilities, while the second via marketing capabilities. To be successful, firms need to do the two tasks simultaneously as either innovation or marketing in isolation is not sufficient for business success. As such, we hypothesize that:

H4. The innovation-marketing capability interaction mediates the relationship between MO and firms marketplace performance.

3. Research procedures

3.1. Samples and data collection

We collected data from B2B firms operating in Australia and Vietnam. While the two samples were selected on a convenience basis, variations in economic development that might affect marketing and innovation-related characteristics in achieving superior firm performance were considered as an important criterion. Therefore, we selected Australia as an example of a developed economy and Vietnam as a transitional and developing economy. Australia has been ranked 16th overall in the world's most competitive economies according to The Global Competitiveness Report 2010–2011, while Vietnam is seen as an emerging economy with a growth rate of 9% over the last decade placing it second in Asia, after China (World Economic Forum, 2010).

Extant research on EO and MO has been conducted in some developing economies, especially in Asia Pacific region. To our understanding, no empirical research on EO and MO has been investigated in Vietnam. Among developing countries in the Asia-Pacific region, Vietnam has been considered an emerging economy with growth potential and a new dragon in Asia (Batra, 1997; Shultz & Pecotich, 1997; Vietnam Development Gateway, 2006). Furthermore, with the globalization of markets, international market expansion and outsourcing of many firms, increasing diversity of environments and contexts in which marketing and consumption behavior is being studied has been shown in a small body of research (Douglas & Nijssen, 2003). Given the importance of EO and MO in high growth economies such as now exists in many parts of Asia and the emerging focus on doing business in Asia, an understanding of the inter-relationships among EO, MO, innovation, marketing, and marketplace performance in developing economy contexts as Vietnam is worthy of investigation. Further, developing global generalizations of marketing knowledge has received increasing attention (Burgess & Steenkamp, 2006; Deshpande & Farley, 2004; Ellis, 2006). While knowledge of marketing phenomena derives almost exclusively from research conducted in developed countries, developing economies present significant departures from the assumptions of theories originating in developed countries that have the potential to challenge conventional wisdom.

Finally, we are interested in examining whether the linkages between MO, EO, marketing and innovation capabilities and marketplace performance are consistent across developing and developed economies. In a small but important body of cross-national research

some scholars have found that certain firm characteristics has a pattern of consistently positive effects on performance (Deshpande & Farley, 2004; Ellis, 2006). On this point we are interested in examining if a given level of MO, EO and our focal capabilities provide lesser or greater benefits to firms in developing versus developed economies in their pursuit of performance outcomes.

To collect data, we followed a similar procedure to that of Atuahene-Gima, Slater, and Olson (2005) and Ngo and O'Cass (2009) and adopted a self-administrated survey of senior managers in marketing and non-marketing positions. Firms were selected on the basis of their size (e.g. medium-sized 20 to 200 fulltime employees and large-sized with more than 200 fulltime employees), and firm type being manufacturing firms. We selected a convenience sample of 1000 Australian manufacturing firms from a professional research company (Business Database supplier). The survey was completed by 300 respondents, for a response rate of 30%. Similarly, we selected a convenience sample of 1000 Vietnamese manufacturing firms listed in a Government Business Directory. The survey was completed by 259 usable responses, resulting in a response rate of 25.9%. Overall, the Australian sample had 29% of firms that were engaged in exporting, 70% were medium sized firms and the specific respondent profiles were 30% marketing executives and 70% non-marketing executives. The Vietnamese sample had 44% of firms engaged in exporting, and 69% were medium sized firms and 59% of respondents were marketing executives and 41% non-marketing executives.

To explore for differences in response between marketing and non-marketing executives, we performed analyses for the groups of respondents in the Australian and Vietnamese samples. Following Jaworski and Kohli (1993), the difference in the ratings of the two types of respondents for each item of marketing-related constructs (e.g. market orientation and marketing capability) were computed. The absolute differences (ranged between 0.03 to 0.52 and 0.03 to 0.58 for the Australian and Vietnamese samples, respectively) and the average absolute differences (0.27 for the Australian sample, and 0.33 for the Vietnamese sample) for all items were less than 1.0. Given that all constructs include multiple items, each rated on a 7-point scale, the noted differences were extremely small and indicated the lack of a systematic bias in one direction or another in the responses between marketing and non-marketing respondents.

With respect to non-response bias, we followed the procedures suggested by Armstrong and Overton (1977). Chi-square tests show no significant differences between those firms who responded early and those who responded late with respect to measures of our hypothesized constructs at the 5% significance level. Further, a test was conducted to see if there were differences between early respondents and late respondents in terms of variables relevant to the hypothesis. The average values found by the survey of the first 10% of respondents were compared with those of the last 10% of respondents using a t-test. The results of the t-test showed no statistical significance between the two groups in terms of the means for items. As such both tests indicate that nonresponse bias should not be a concern in this study.

We measured market orientation (MO) using nine items adapted from Jaworski and Kohli (1993) and Matsuno et al. (2002). Respondents indicated the extent to which they agreed or disagreed with the statements with 1 indicating *strongly disagree* and 7 *strongly agree*. We measured entrepreneurial orientation (EO) via six items adapted from Covin and Slevin (1989), Hansen, Deitz, Tokman, Marino, and Weaver (2011), and Matsuno et al. (2002). We measured innovation capability with five items developed from the work of Aragón-Currea, Carcia-Morales, and Cordón-Pozo (2009), Agarwal and Selen (2009), Chiesa, Coughlan, and Voss (1996), and Weerawardenaa and O'Cass (2004). Respondents indicated via seven-point scales with end poles 'much worse than competitors' and 'much better than competitors' as anchors. We measured marketing capability with six items adapted from Atuahene-Gima (1993) and Vorhies and Morgan (2005) using seven-point scales with

anchors of 'much worse than competitors' and 'much better than competitors'. Firm performance was measured using three items adapted from Moorman and Rust (1999), Ramaswami, Srivastava, and Bhargava (2009), Song et al. (2005) and Vorhies and Morgan (2003). Seven-point scales were used with 'very low' and 'very high' anchors for firm performance in relation to the stated objectives of the business unit.

3.1.1. Control variables

We measured market type and firm size as controls for market and firm heterogeneity. To measure market type we used a categorical measure assessing whether firms were domestically focused only in their operations or had international business operations (as well as domestic) (Bernard & Jensen, 1999; Delgado, Farinas, & Ruano, 2002; Wagner, 2007). We measured firm size using the number of full-time employees (Atuahene-Gima & Murray, 2007).

Table 1 reports the measures and results of the reliability analyses for the two samples. All the indicators in the outer-measurement models had acceptable bootstrap critical ratios (>1.96) with loadings (0.50 to 0.90 in the Australian sample and 0.53 to 0.95 in the Vietnamese sample) equal to and greater than the recommended 0.5 (Hulland, 1999), thus demonstrating adequate individual item reliabilities. Only one item in the Vietnamese sample demonstrates a marginal but useable loading of 0.54 in the risk tasking component of EO and the AVE for this component was .54. The average variance extracted (AVEs)

Table 1
Measurement model results.

Components and manifest variables	Loading	
	Australian model	Vietnamese model
Entrepreneurial orientation (EO)	AVE = .57 CR = .89	AVE = .41 CR = .79
(adapted from Covin & Slevin, 1989; Hansen et al., 2011, Matsuno et al., 2002;		
7-point scale 1 ="strongly disagree" and 7 ="strongly agree")		
Innovativeness (INNOV)	AVE = .78 CR = .88	AVE = .90 CR = .95
We offer a broad range of new products and/or services	0.88	0.95
We develop new products and/or services	0.90	0.95
Risk taking (RISK)	AVE = .71 CR = .83	AVE = .54 CR = .69
We are always willing to take risks	0.82	0.54
We continually search for new market opportunities	0.87	0.87
Proactiveness (PROACT)	AVE = .79 CR = .88	AVE = .64 CR = .78
We often influence changes and create uncertainties in our markets	0.89	0.81
We locate ourselves in the marketplace as a first-in player (pioneer)	0.88	0.79
Market orientation (MO)	AVE = .58 CR = .93	AVE = .55 CR = .92
(adapted from Jaworski & Kohli, 1993; Matsuno and Mentzer, 2000;		
7-point scale 1 ="strongly disagree" and 7 ="strongly agree")		
Intelligence Generation (IG)	AVE = .67 CR = .86	AVE = .73 CR = .89
We generate information about our customers (e.g., feedback on delivered products and/or services, needs, product/service preferences).	0.81	0.88
We generate information about our competitors (e.g., competitive products and/or services, pricing, promotion campaigns, strategic moves).	0.85	0.88
We generate information about our suppliers (e.g., manufacturing process, industry practices, clientele).	0.81	0.81
Intelligence Dissemination (ID)	AVE = .77 CR = .91	AVE = .76 CR = .91
We disseminate information about customers (e.g., feedback on delivered products and/or services, needs, product/service preferences) throughout the business via a range of communication tools (e.g., circulated documents, cross-functional meetings).	0.86	0.88
We disseminate information about competitors (e.g., competitive products and/or services, pricing, promotion campaigns, strategic moves, etc.,) throughout the business via a range of communication tools (e.g., circulated documents, cross-functional meetings).	0.90	0.89
We disseminate information about suppliers (e.g., manufacturing process, industry practices, clientele, etc.,) throughout the business via a range of communication tools (e.g., circulated documents, cross-functional meetings).	0.88	0.85
Responsiveness (RESP)	AVE = .72 CR = .88	AVE = .70 CR = .87
We respond to information about customers that it generated and/or disseminated.	0.84	0.87
We respond to information about competitors that it generated and/or disseminated.	0.87	0.79
We respond to information about suppliers that it generated and/or disseminated.	0.84	0.84
Innovation capability (IC)	AVE = .62 CR = .89	AVE = .53 CR = .84
(developed from Aragón-Currea et al., 2007, Argwal and Selen, 2009, Chiesa et al., 1996, Weerawardenaa & O'Cass, 2004;		
7-point scale 1 ="much worse than competitors" and 7 ="much better than competitors"		
Product innovations	0.71	0.67
Production process innovations	0.65	0.43
Managerial innovations	0.84	0.78
Market innovations	0.88	0.85
Organizational innovations	0.84	0.81
Marketing capability (MC)	AVE = .54 CR = .87	AVE = .61 CR = .90
(adapted from Atuahene-Gima, 1993; Vorhies & Morgan, 2005; Song et al., 2005;		
7-poin scale 1 ="much worse than competitors" and 7 ="much better than competitors")		
Incorporating customer needs into marketing programs	0.50	0.69
Developing pricing programs	0.63	0.69
Developing distribution systems	0.73	0.79
Developing marketing communication programs	0.79	0.79
Marketing planning skills	0.83	0.85
Implementing marketing activities	0.85	0.87
Firm marketplace performance (FP)	AVE = .73 CR = .89	AVE = .72 CR = .88
(adapted from Moorman & Rust, 1999; Vorhies & Morgan, 2003; Ramaswami et al., 2009; Song et al., 2005;		
7-point scale 1 = "very low" and 7 = "very high")		
Total sales	0.90	0.83
Market share	0.85	0.89
Gross profit	0.80	0.82

Note: All loadings are significant at p<0.05.

values for all constructs were uniformly acceptable ranging from 0.53 to 0.90 for both samples, with the exception of entrepreneurial orientation (Vietnamese sample), which demonstrates a marginal but acceptable AVE value of 0.41 (see Green, Barclay, & Ryans, 1995). The overall AVE for EO is lower because of the three components and specifically the item we are willing to take risks in the risk taking component.

We decided not to omit this item for three reasons. First, while this item has a low but acceptable component loading, the loading is significant with a t-value of 3.35. Second, eliminating this item would increase the AVE of the construct but affect content validity (Ping, 2004). To maintain the content validity of entrepreneurial orientation, we kept this item. Third, we applied the criterion suggested by Fornell and Larcker (1981) that the square root of AVE of a construct should exceed its highest correlation with other constructs. In particular, the square root of AVE of entrepreneurial orientation (0.63) is higher than the highest correlation of entrepreneurial orientation with other constructs (0.39 with innovation capability).

3.2. Data equivalence

To ensure data equivalence, we first conducted forward and backward translations to ensure comparable versions of the survey in English and Vietnamese. The English version of the survey was translated to Vietnamese by a professional certified translation company. The Vietnamese version was then translated backward to English by another professional certified translation company. A comparison between the two translated versions was made for conceptual equivalence, resulting in the final version of the survey. To maximize translation equivalence, the same bilingual researcher was involved in the forward and backward translation process as an auditor.

Second, in the context of cross-nation research, some suggests that a cross-national difference is reflected in variation in the reliability of the underlying measurements employed in the analysis (Davis, Douglas, & Silk, 1981). Following this suggestion, we assessed measurement equivalence calculating Cronbach alphas and their 95% confidence intervals. We found evidence to support measurement equivalence as the Cronbach alphas fall in the overlapping ranges of the two samples (Mintu-Wimsatt & Grahan, 2004).

3.3. Validity and reliability of measures

To ensure the content and face validity, we conducted in-depth interviews with twelve marketing academics and five senior marketing executives to discuss the items of the survey for comprehension, logic, relevance, and representativeness of the underlying constructs. The composite reliabilities are all greater than 0.70 for two samples (Bagozzi & Yi, 1988). We also tested for discriminant validity of the five constructs by comparing the square root of the AVEs and all corresponding correlations (Fornell & Larcker, 1981). As shown in Table 2, discriminant validity is evident as the square root of the AVEs of the constructs was greater than all corresponding correlations of the constructs for both samples.

We tested for common method bias as follows: First, we conducted a Harmon's single-factor test, which reveals that no single factor accounted for the majority of the variance for both samples. Second, we used the marker variable technique recommended by Lindell and Whitney (2001) and Maholtra, Kim, and Patil (2006). Job title (marketing versus non-marketing executives) was selected as a marker variable to control for common method variance (Australian sample: $r_M = 0.07$ $p = 0.39$; Vietnamese sample: $r_M = 0.10$ $p = 0.20$). The mean change in correlations of the key constructs ($r_U - r_A$) when partialling out the effect of r_M in the Australian and Vietnamese samples were 0.04 and 0.07, respectively, providing no evidence of common method bias.

Table 2
Reliabilities and discriminant validity.

Constructs	1	2	3	4	5
Australian sample					
1. Entrepreneurial orientation	**0.75** (0.89)				
2. Market orientation	0.45	**0.76** (0.93)			
3. Innovation capability	0.58	0.45	**0.79** (0.89)		
4. Marketing capability	0.49	0.56	0.65	**0.73** (0.87)	
5. Firm performance	0.27	0.21	0.33	0.33	**0.85** (0.89)
Vietnamese sample					
1. Entrepreneurial orientation	**0.63** (0.79)				
2. Market orientation	0.33	**0.74** (0.92)			
3. Innovation capability	0.39	0.56	**0.73** (0.84)		
4. Marketing capability	0.35	0.47	0.63	**0.78** (0.90)	
5. Firm performance	0.34	0.29	0.36	0.34	**0.85** (0.88)

All correlations are significant at 0.01; diagonal entries are square root of AVE and composite reliabilities in bracket. Bold values in the table are square root of AVE. The recommended threshold of AVE is 0.5.

4. Hypothesis testing

We used Partial Least Squares (PLS) to test hypotheses H_1–H_4. We also included market type and firm size as controls for market and firm heterogeneity. We dummy-coded firms as international (active) or domestic focused only firms. Firm size was the logarithm of the number of total fulltime employees. In H_{1a} and H_{1b}, we hypothesized MO is a mediator of the relationship between entrepreneurial orientation and (a) innovation capability and (b) marketing capability. We followed Baron and Kenny's (1986)[2] procedure and estimated Models 1 and 2 in testing H_{1a} and H_{1b}. With respect to the Australian sample, as shown in Table 3, entrepreneurial orientation positively influences innovation capability (Model 1, $\beta = 0.59$ t-value = 14.77), marketing capability (Model 1, $\beta = 0.51$ t-value = 12.28), and MO (Model 2, $\beta = 0.45$ t-value = 9.22). MO also positively influences innovation capability (Model 2, $\beta = 0.24$ t-value = 4.43) and marketing capability (Model 2, $\beta = 0.43$ t-value = 7.93). Comparing Model 1 and Model 2, we found that the positive effects of entrepreneurial orientation on innovation capability and marketing capability in Model 1 become weaker ($\beta = 0.59$ vs. $\beta = 0.48$; and $\beta = 0.51$ vs. $\beta = 0.31$, respectively) in Model 2. Thus, MO partially mediates the effects of entrepreneurial orientation on innovation capability, and marketing capability, supporting H_{1a} and H_{1b}. Similarly, we found partial mediation role of MO in the Vietnamese model as shown in Table 4.

In H_2, H_3 and H_4, we hypothesized that innovation capability (IC), marketing capability (MC), and the interaction between the two capabilities (IC × MC)[3] mediate the effect of MO on firms' marketplace performance. For the Australian sample, as shown in Table 3, MO, innovation capability, marketing capability, and IC × MC positively influence firm performance (Model 3, $\beta = 0.19$ t-value = 3.06; Model

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[2] To establish mediation, four conditions must hold: (1) the independent variable must affect the dependent variable; (2) the independent variable must affect the mediators; (3) the mediators must affect the dependent variable; and (4) when mediators enter the model, the contribution of a previously significant independent variable must drop substantially for partial mediation and become insignificant for full mediation.

[3] Prior to the creation of the interaction term, mean centering of variables was undertaken too reduce the risk of multicollinearity and make for a better interpretation (Aiken and West, 1991). The variance inflation factors are less than the benchmark of 6 (Hair et al., 1998), suggesting that multicollinearity among variables is not a concern.

Table 3
Australian sample's structural equation parameter estimates (t-value).

Independent variables	Endogenous variables											
	Hypotheses 1a and 1b					Hypothesis 2			Hypothesis 3		Hypothesis 4	
	Model 1		Model 2			Model 3	Model 4		Model 5		Model 6	
	IC	MC	MO	IC	MC	Firm performance	IC	Firm performance	MC	Firm performance	IC×MC	Firm performance
Entrepreneurial orientation (EO)	0.59** (14.77)	0.51** (12.28)	0.45** (9.22)	0.48** (9.55)	0.31** (5.43)	–	0.47** (9.14)	–	0.31** (5.61)	–	0.42** (8.86)	–
Market orientation (MO)	–	–	–	0.24** (4.43)	0.43** (7.93)	0.19** (3.06)	0.25** (4.36)	0.05 (0.79)	0.43** (8.26)	0.03 (0.43)	0.36** (6.90)	0.01 (0.12)
Innovation capability (IC)	–	–	–	–	–	–	–	0.30** (4.39)	–	–	–	–
Marketing capability (MC)	–	–	–	–	–	–	–	–	–	0.29** (3.87)	–	–
IC×MC	–	–	–	–	–	–	–	–	–	–	–	0.37** (5.51)
Controls												
Firm size (log)	–	–	–	–	–	0.23** (3.79)	–	0.22** (3.66)	–	0.20** (3.37)	–	0.21** (3.72)
Market type (1 = international)	–	–	–	–	–	0.09 (1.42)	–	0.11 (1.99)	–	0.09 (1.49)	–	0.11 (1.78)
R-square	0.35	0.26	0.21	0.39	0.39	0.09	0.39	0.16	0.39	0.15	0.44	0.19

Sobel t-test	Test of increases in R^2 (ΔR^2) of innovation capability (IC), marketing capability (MC) and firm performance
Hypothesis 1a: SE$_{indirect\ effect}$ = 0.028; z-score = 3.93, p<0.01	$\Delta R^2_{Model\ 1-2\ IC}$ = 0.04* (F$_{Model\ 1-2\ IC,\ 1,\ 297}$ = 19.48 > F$_{critical}$ = 3.84)
Hypothesis 1b: SE$_{indirect\ effect}$ = 0.032; z-score = 6.01, p<0.01	$\Delta R^2_{Model\ 1-2\ MC}$ = 0.13* (F$_{Model\ 1-2\ MC,\ 1,\ 297}$ = 63.30 > F$_{critical}$ = 3.84)
Hypothesis 2: SE$_{indirect\ effect}$ = 0.024; z-score = 3.07, p<0.01	$\Delta R^2_{Model\ 3-4}$ = 0.07* (F$_{Model\ 3-4,\ 1,\ 295}$ = 24.58 > F$_{critical}$ = 3.84)
Hypothesis 3: SE$_{indirect\ effect}$ = 0.036; z-score = 3.49, p<0.01	$\Delta R^2_{Model\ 3-5}$ = 0.06* (F$_{Model\ 3-5,\ 1,\ 295}$ = 20.82 > F$_{critical}$ = 3.84)
Hypothesis 4: SE$_{indirect\ effect}$ = 0.031; z-score = 4.28, p<0.01	$\Delta R^2_{Model\ 3-6}$ = 0.10* (F$_{Model\ 3-6,\ 1,\ 295}$ = 36.42 > F$_{critical}$ = 3.84)

** p<0.01.
 * p<0.05.

4, β = 0.30 t-value = 4.39; Model 5, β = 0.29 t-value = 3.87; Model 6, β = 0.37 t-value = 5.51). Comparing Model 3 to Model 4, Model 5 and Model 6, we found that the positive effect of MO on firm performance in Model 3 becomes insignificant in Model 4 (β = 0.19 vs. β = 0.05), Model 5 (β = 0.19 vs. β = 0.03), and Model 6 (β = 0.19 vs. β = 0.01). Thus, innovation capability, marketing capability, and the

Table 4
Vietnamese sample's structural equation parameter estimates (t-value).

Independent variables	Endogenous variables											
	Hypotheses 1a and 1b					Hypothesis 2			Hypothesis 3		Hypothesis 4	
	Model 1		Model 2			Model 3	Model 4		Model 5		Model 6	
	IC	MC	MO	IC	MC	Firm performance	IC	Firm performance	MC	Firm performance	IC×MC	Firm performance
Entrepreneurial orientation (EP)	0.44** (8.16)	0.41** (6.31)	0.39** (6.77)	0.25** (5.18)	0.26** (3.84)	–	0.25** (4.70)	–	0.26** (3.86)	–	0.28** (5.14)	–
Market orientation (MO)	–	–	–	0.49** (8.09)	0.39** (7.34)	0.29** (4.64)	0.49** (8.62)	0.12 (1.52)	0.39** (6.42)	0.16* (2.34)	0.46** (10.03)	0.11 (1.48)
Innovation capability (IC)	–	–	–	–	–	–	–	0.29** (3.23)	–	–	–	–
Marketing capability (MC)	–	–	–	–	–	–	–	–	–	0.28** (3.69)	–	–
IC×MC	–	–	–	–	–	–	–	–	–	–	–	0.32** (3.80)
Controls												
Firm size (log)	–	–	–	–	–	0.18** (2.58)	–	0.19** (2.82)	–	0.19* (2.53)	–	0.18** (2.69)
Market type (1 = international)	–	–	–	–	–	0.07 (1.04)	–	0.07 (1.14)	–	0.07 (1.04)	–	0.07 (0.90)
R-square	0.20	0.17	0.15	0.40	0.30	0.13	0.39	0.18	0.29	0.19	0.39	0.20

Sobel t-TEST	Test of increases in R^2 (ΔR^2) of innovation capability (IC), marketing capability (MC) and firm performance
Hypothesis 1a: SE$_{indirect\ effect}$ = 0.037; z-score = 5.22, p<0.01	$\Delta R^2_{Model\ 1-2\ IC}$ = 0.20* (F$_{Model\ 1-2\ IC,\ 1,\ 256}$ = 85.33 > F$_{critical}$ = 3.84)
Hypothesis 1b: SE$_{indirect\ effect}$ = 0.030; z-score = 5.00, p<0.01	$\Delta R^2_{Model\ 1-2\ MC}$ = 0.13* (F$_{Model\ 1-2\ MC,\ 1,\ 256}$ = 47.54 > F$_{critical}$ = 3.84)
Hypothesis 2: SE$_{indirect\ effect}$ = 0.047; z-score = 3.03, p<0.01	$\Delta R^2_{Model\ 3-4}$ = 0.05* (F$_{Model\ 3-4,\ 1,\ 254}$ = 15.49 > F$_{critical}$ = 3.84)
Hypothesis 3: SE$_{indirect\ effect}$ = 0.034; z-score = 3.22, p<0.01	$\Delta R^2_{Model3-5}$ = 0.06* (F$_{Model\ 3-5,\ 1,\ 254}$ = 18.81 > F$_{critical}$ = 3.84)
Hypothesis 4: SE$_{indirect\ effect}$ = 0.042; z-score = 3.51, p<0.01	$\Delta R^2_{Model3-6}$ = 0.07* (F$_{Model\ 3-6,\ 1,\ 254}$ = 22.23 > F$_{critical}$ = 3.84)

** p<0.01.
 * p<0.05.

interaction between the two capabilities fully mediate the relationship between MO and firm performance, supporting hypotheses H_2, H_3 and H_4. As shown in Table 4, we found similar results in the Vietnamese sample.

The Sobel (1982) test[4] also showed that the mediating variables (MO, innovation capability, marketing capability, IC×MC [interaction]) carried the effect of the independent variables (entrepreneurial orientation and MO) on the endogenous variables (innovation capability, marketing capability, and firm performance). Furthermore, we also examined the contributions of MO, marketing capability, innovation capability, and IC×MC [interaction] to the explanatory power of Model 2, Model 4, Model 5, and Model 6. We tested this using the procedure suggested by Chin et al. (2003) and adopted by Sarkar, Echambadi, and Harrison (2001) and Eggert, Ulaga, and Schultz (2006). As shown in Tables 3 and 4, increases in R^2 of innovation capability, marketing capability and firm performance attributable to the mediating effect are statistically significant at 0.05 for both samples. We also followed the procedure suggested by Tenenhaus, Vinzi, Chaltelin, and Lauro (2005) to assess the fit of both outer-measurement and inner-structural models to the data simultaneously.[5]

5. Discussion and implications

While our initial theoretical foundation did not discount the fact that MO is important, we premised our study on the view that fundamental research questions related to MO still remain unanswered. As such, this paper sought to focus on whether MO is necessary in the development of a firm's marketing and innovation capabilities. We also sought to examine how MO and EO are linked to a firm's capabilities, and how these orientations and capabilities should be configured to provide the firm with the greatest chance of achieving superior marketplace performance.

To address the research questions and undertake our examination of the above issues we premised this study on two key theoretical conjectures. First, MO and EO are two crucial steps for firms' en-route to superior marketplace performance, yet they play different roles in the development of marketing and innovation capabilities. Specifically, entrepreneurial orientation reflects the firm's predisposition to accept innovativeness, take risks and adopt a proactive posture in the conduct of business through a deeply rooted set of beliefs and behaviors which guide the firm's attempt to compete in its chosen markets. However, we raise the contention here that to be effective, entrepreneurial orientation must be manifested through MO, such as collecting, disseminating, and responding to market intelligence. Second, we believe that marketing capability and innovation capability are primary market-linking capabilities that help realize the value of market-based knowledge (MO) and help realize the firms' entrepreneurial orientation. Importantly, marketing capability and innovation capability are complementary processes that contribute to superior marketplace performance of firms.

The findings of this paper provide several important implications to the marketing theory and the literature. First, despite a significant amount of research on the relationship of MO to performance, the extant literature has been silent on the individual and complementary impacts of innovation and marketing on the implementation of EO and MO. This is important given the acknowledged importance of MO especially as outlined by Ketchen et al. (2007) and Zhou et al. (2008) who denote that MO has 'potential' performance advantages and EO by Matsuno et al. (2002) who show EO's performance influence is positive when mediated by MO but negative or nonsignificant when not mediated by MO. We add to this body of research by examining the intervening impacts of innovation, marketing, and their complementary in the context of developed and developing economies. Importantly, in this study in relation to these points we show that capabilities perform two vital roles, one being related to their interaction (i.e., complementarity) in influencing marketplace performance; another as mediators of the MO-marketplace performance connection and MO as a partial mediator of EO-capability. On this point, the work of Han et al. (1998), Mooran and Slotegraaf (1999) and Song et al. (2005) provided us with our initial foundations and the opportunity to extend their contributions. Further, we also extend the work of Matsuno et al. (2002) and show that EO and MO have special relationships with firm capabilities and their marketplace performance, via a fit as mediational role.

In this context, we raise the contention that while they do constitute an advantage independently, their interaction contributes more significantly to the creation of a significant advantage because of their complementarity (cf. Day, 1994; Song et al., 2005). These characteristics are individually necessary, but not sufficient for creating a position in the market that yields enhanced performance (c.f Day & Wensley, 1988). Our results also support the work of Hult and Ketchen (2001) and Matsuno et al. (2002) on the importance of incorporating EO and MO when seeking to understand important performance (outcomes) and including action components. We argue that the results provide credence to the contention that, EO, MO and innovation capability along with marketing capability allow a firm to recognize market shifts (i.e., dynamism) and pursue such shifts through a high level of EO. Our findings suggest that MO is an important market-based asset that affect performance, but its potential value should be complemented with EO, innovation, and marketing capabilities. To achieve superiority in marketplace performance, market-oriented and entrepreneurial firms should develop market-linking deployment mechanisms in the areas of innovation and marketing.

In relation to our theory and results, the work of Ketchen et al. (2007), Matsuno et al. (2002) and Morgan, Slotegraaf, and Vorhies (2009), Morgan, Vorhies, and Mason (2009) indicates that realizing the advantage of EO and MO depends on 'action' components that co-align with MO. As such, taking this point and using the view of Venkatraman and Prescott (1990) our findings extend the literature and we show that a model of fit-as-moderation and fit-as-mediation provides an enhanced understanding of the dynamic connections between EO, MO (market sensing-linking) and marketplace performance via innovation capability and marketing capability, especially their (IC×MC interaction) complementarity.

Our study supports recent theory extensions by providing evidence that the interaction of innovation capability and marketing capability provide complementary benefits to firm performance. This finding further contributes to recent studies on resource-capability combinations (e.g., Menguc & Auh, 2006; Moorman & Rust, 1999; Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009; Song et al., 2005). We extend this work by focusing on capability–capability effects and show that capability–capability combinations are vital factors influencing marketplace performance. Our findings follow a similar line of evidence to that of Moorman and Rust (1999) and Song et al. (2005); however, we focus specifically on innovation-marketing capability interactions, where these researchers focus on marketing and technology

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[4] Sobel (1982, 1988) provided an approximate significance test for the indirect effect that include three variables ($X_1 \rightarrow X_2 \rightarrow X_3$) as follows: a and b are the path coefficients for the direct effects of $X_1 \rightarrow X_2$ and $X_2 \rightarrow X_3$, respectively. SE_a and SE_b are denoted as the standard errors. The standard error of the indirect effect (the product ab) is: $SE_{ab} = SQRT[(b^2 SE_a^2 + a^2 SE_b^2 + SE^{a2} * SE_b^2)]$

[5] PLS does not optimize any global scalar function as is used in covariance based SEM (see LISREL or AMOS), leading to a lack of an index for global validation of the model (e.g. χ^2-based indices). The goodness-of-fit index (GoF) represents an operational solution to this problem and acts as a global fit index for validating a PLS path model (Tenenhaus et al., 2005). The GoF is a compromise between communality and redundancy in which the communality index measures the quality of the measurement model for each construct and the redundancy index measures the quality of the structural model for each endogenous construct taking into account to the measurement model (Tenenhaus et al., 2005). The GoF is computed by taking the square root of the product of the average communality of all constructs and the average R^2 value of the endogenous constructs as: $GoF = \sqrt{communality \times R^2}$.

and do not compare developing and developed economies as key issue as we do.

Unlike previous research, our study focuses on examining the potential value of EO and MO via firms' functional capabilities. The resource advantage perspective argues that not all firms are able to transform market-based knowledge generated via the implementation of MO into economic rent (Day, 1994; Hunt & Morgan, 1995). Our study shows that MO when complemented with other firms' resources and capabilities (e.g. EO, innovation, and marketing capabilities) produces greater improvement in firm performance. Overall, our findings contribute to an emerging stream of research on how resource–capability and capability–capability combinations explain differential effects on performance between firms.

While, we focus firstly on the individual impacts of capabilities, we primarily focused on the increased value of capability–capability interactions in enhancing marketplace firm performance. In this context, extant studies have focused mainly on narrowly construed capabilities, especially in marketing, innovation or technology (Han et al., 1998; Moorman & Rust, 1999; Song et al., 2005). Following related work, we predicted and found that the interaction of two important capabilities (marketing and innovation) is present in enhanced marketplace performance. This is a new finding and extends previous work focusing on individual capabilities and the few studies focusing on interaction of marketing and other capabilities such as technology (c.f., Song et al., 2005), especially with our focus on and thus supports the call by Bitner and Brown (2008) and Song et al. (2005).

Our results are consistent with the proposed effect of interactions of firm capabilities (complementary, mediational role and their performance enhancing role). Specifically, firms were more likely to exhibit superior performance when they had both high levels of innovation capability and marketing capability. Although the view that both marketing and innovation capabilities contribute to performance is not new, the interaction (complementary) of them is, especially in their role as mediators of the EO–MO and MO-performance outcomes for firms.

Our results provide managers with an important managerial implication that to effectively implement EO and MO, firms need to develop and manage innovation, marketing capabilities, and their complementary. Overall, our model provides the foundation for a simple but powerful managerial guideline and theoretical basis for achieving superior marketplace performance via the cultivation of complementary capability sets in a rich manner and without a significant oversimplification. Importantly, capability theory claims that complementary capability sets provide the basis for superior performance, but this has largely been untested. Thus we modeled the interactions of innovation and marketing on marketplace performance in firms' as well as their individual and mediating roles and this gives both a practical and theoretical foundation for marketing managers and scholars.

The precept that EO and MO enhance the achievement of superior performance has over many years gained widespread support. However, the manner in which this is achieved and through what mechanisms remains somewhat unclear and contentious (Gebhardt, Carpenter, & Sherry, 2006; Hult et al., 2005; Morgan, Slotegraaf, & Vorhies, 2009; Morgan, Vorhies, & Mason, 2009). While the potential of capabilities has been identified, largely via their independent potential, the joint potential of the two capabilities we focus on has eluded practitioners and academics. The synthesis of the two does not appear prevalent in the literature and to-date little attention has been paid to their connection with MO and performance. The synthesis (complementarity) between innovation and marketing capabilities yields added benefits compared with the individual independent contributions to marketplace performance and their role with both EO and MO. Therefore, firms need to strategically develop and manage these capabilities with consideration of both the level of EO, MO and marketplace performance possibilities to achieve superiority in both.

Furthermore, in relation to EO, MO and capabilities, EO and MO should be cultivated and managed to ensure their appropriate behavioral manifestations through functional capabilities. Just as MO should be managed with marketing and innovation capabilities in mind, so to should EO be managed with MO in mind! In this sense being driven by EO and MO alone does not appear strategically sound in achieving marketplace superiority there is a requirement for both to be fostered and managed carefully.

6. Limitations and directions for future research

Our study is subject to several limitations. First, findings on the relationships among EO, MO, innovation, marketing, and marketplace performance are limited by the cross-sectional nature of the data. A longitudinal study is warranted to examine the sequential impacts among these focal constructs. Second, our study focuses mainly on innovation and marketing as the two key firm capabilities. Further research may consider complementary impacts of other firm capabilities such as operations (Krasnikov & Jayachandran, 2008), brand management, and customer relationship management capabilities (Morgan, Slotegraaf, & Vorhies, 2009). Third, as Eisenhardt and Martin (2000) note, the performance implication of firm capabilities is contingent on the velocity of markets. Future research may explicate the market and technological conditions that influence the relative impact of firm capabilities and their complementarities on firm performance. Finally, the generalizability of our findings is limited by the data from Australian and Vietnamese industries that might possess some idiosyncrasies. We encourage further research to test our model in other developed–developing economies.

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