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The effects of perceived industry competitive intensity and marketing-related capabilities: Drivers of superior brand performance

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ABSTRACT

Since the early 1990s the theoretical and practical issues associated with organizational capabilities have been a major research focus in marketing. However, there has been little focus simultaneously on industry environment and internal competitive capability development. A manager's perception of his/her industry environment has the potential to impact the firm's marketing-related capability development through their strategic responses to their perception of the environment. This paper advocates that managers (i.e., firms) perceiving their industry environment as turbulent will develop superior market learning and marketing capabilities. Market learning will assist in the process of building superior marketing capabilities. Both capabilities lead to higher brand performance. To explore these issues a study was designed to measure perceived industry competitive intensity, market learning and marketing capabilities. Data were gathered from senior managers of commercial firms and the results largely support the hypothesized theoretical relationship that industry competitive intensity influences market learning activity and marketing capability development. Interestingly, the study findings suggest that market learning impacts brand performance through marketing capability. The findings significantly contribute to the debate on the influence of the competitive environment on a firm's internal capability development which suggests the need for further research to examine the industry competitive intensity–internal capabilities–firm performance relationship.

The role of industry environment on a firm's competitive capability development is an important area in the strategic marketing literature. Some of the widely used marketing texts suggest the need to scan the external environment in designing effective marketing strategies (e.g. Kotler, Chandler, Brown, & Adam, 2003). Similarly, the strategic marketing literature reflects a growing interest in the role of the environment in marketing strategy formation. For example, Gruca and Sudharshan (1995) proposed a framework for competitive environment and choice of market entry strategies. Similarly, McKee, Varadarajan and Pride (1989) examined the impact of market dynamics on a firm's strategic orientation, and Slater and Narver (1994) examined the moderating effect of competitive environment on the market orientation–performance relationship. Parallel with these attempts, there has been a substantial debate in the strategic management literature on the role of the competitive environment on firm performance, which spans several decades. The industrial organization (IO) and resource-based views (RBV) that have dominated the competitive strategy literature over the last few decades have traditionally produced competing explanations for the persistence of unequal returns (Powell, 1996) and are seen as being at odds with each other. It has been suggested that, in fact, the two alternate views may complement each other in explaining a firm's performance (Mahoney & Pandian, 1992; Amit & Schoemaker, 1993). However, the empirical studies examining these complementarities have been limited (Mauri & Michaels, 1998) and some researchers have suggested that this inadequacy has been caused by an over emphasis on firm-level factors.

There is a sense that the ebb and flow of strategy research may have swung excessively towards firm-centered analyses and has tended to ignore industry competitive intensity (Levinthal, 1995). Importantly, Porter's (1985) industry structure framework that was the central feature of the environmental model has attracted little empirical attention (Powell, 1996). However, the proponents of the RBV argue that much of the empirical literature informed by Porter's (1985) framework has chosen to focus on analyzing the environment–performance relationship, placing little emphasis on the impact of idiosyncratic firm attributes on firm performance (Barney, 1991). Addressing this inadequacy there have been recent attempts to

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examine the role of various constructs that may help further understand the industry structure (perceived industry competitive intensity) performance relationship. For example, Weerawardena, O'Cass and Julian (2006) examined the role of industry structure on learning capabilities, innovation and performance. They found that industry environment primarily impacts market-focused learning. Further, O'Cass and Ngo (2007a) identified competitive intensity as influencing a firm's strategic type and characteristics that drive superior brand performance. They argue that the heterogeneity of firm characteristics can be explained not only by competitive intensity, but also by the strategic type (i.e., posture) adopted by the firm, representing the strategy–firm characteristics fit (O'Cass & Ngo, 2007a).

Overall, research pursuing this path has been limited, particularly in the sense that past research has failed to examine how the competitive environment impacts a firm's abilities to develop a greater understanding about its customers and competitors and how such knowledge enables them to serve their customers better. In other words little effort has been expended on trying to understand if and how the competitive industry environment impacts on a firm's market learning capability and marketing capability development and in turn on brand performance.

Addressing the gap in the literature, this paper examines the role of competitive environment on a firm's market learning, marketing capabilities and brand performance. Market learning captures learning from customer preference changes and competitor behavior whereas marketing capability captures the firm's capacity to integrate the marketing mix elements to reach the target market effectively. Drawing on the organizational learning theory and the capability view of competitive strategy we argue that firms perceiving their environment as turbulent will tend to develop superior market learning and marketing capabilities allowing them to achieve greater brand performance.

To explore the above issues the paper firstly, focuses on the complementarities between the environmental model and the RBV as the conceptual background, with a view to developing a conceptual framework that explores the role of industry competitive intensity in a firm's marketing-related capability development. Secondly, the conceptual framework and hypotheses are presented. Thirdly, the methods used to test the hypotheses are discussed, followed by the study's findings. The paper concludes by discussing the implications for marketing theory and practice, identifying the limitations of the study and providing directions for further research.

1. Industry competitive intensity versus firm resources: capability determinants

Classical industrial organizational scholars have largely assumed that a firm's management can influence neither industry conditions nor its own performance (Spanos & Lioukas, 2001). This deterministic view, which is also known as the environmental model, suggests that a firm's strategy is constrained by an industry's structural forces and assigns a limited role to a firm's key decision makers (Bain, 1956). However, the modified framework advanced by Porter (1990, 1991) departs markedly from the traditional industrial organization literature in a number of important ways (Spanos & Lioukas, 2001). One of the most important differences is that Porter (1991) views the market environment as partly exogenous and partly subject to influences by the firms' actions. Porter (1991) chose to focus on the role of a firm's activities and positioning as a fruitful avenue for the development of a dynamic theory of strategy. For Porter (1991), a successful firm is one with an attractive relative position, which can arise from either the selection of a cost base lower than the competition or from the firm's ability to differentiate its offerings and command a premium price that exceeds the accumulation of extra costs (Spanos & Lioukas, 2001). This view reflects a departure from the traditional industrial organizational economics and accommodates the 'strategic choice' view advanced by Hrebiniak and Joyce (1985) and Child (1972).

The emergence of the resource-based view (RBV) marked a shift in the emphasis of business level strategy from 'industry-driven' to 'internal strength-based' strategies. The RBV suggests that the strategic resources possessed by the firm determine its competitive advantage. In this area early contributors to the RBV defined resources to include, all assets, capabilities, organizational processes, firm attributes, information, knowledge, and the like, controlled by a firm that enable it to conceive and implement strategies that improve efficiency and effectiveness (Barney, 1991). Although this definition views capabilities as a resource, subsequent contributors to the RBV highlight the need to distinguish capabilities from resources to provide a better explanation of value creation and service delivery (Teece, Pisano, & Shuen, 1997). For example, Mahoney and Pandian (1992), building upon the work of Penrose (1955), argue that a firm achieves rents not because it has more or better resources, but because the firm's distinctive capabilities allow it to make better use of its available resources. Unlike resources, capabilities are based on developing, carrying, and exchanging information through the firm's human capital (Amit & Schoemaker, 1993). The capability-based view of competitive advantage suggests that a firm can achieve a sustainable competitive advantage (SCA) through distinctive capabilities possessed by the firm (Grant, 1991; Prahalad & Hamel, 1990; Hayes, Pisano, & Upton, 1996). The development of capability theory has been primarily founded upon the resource-based view, which takes an "inside-out" perspective to offer an explanation for firm success (Day, 1994a). Businesses must possess and utilize specific processes, which are necessary to transform resources into valuable outputs (Day, 1994a; Vorhies & Morgan, 2005). Capabilities, manifested in such business processes, are something beyond resources, which are valuable inputs for businesses to develop and maintain competitive advantage (Srivastava, Fahey, & Christensen, 2001).

Researchers advocating the view that the environmental model compliments firm-level factor-based strategies suggest that the two views constitute two sides of the same coin (Spanos & Lioukas, 2001; O'Cass & Ngo, 2007a). Intuitively, value creation stems from the fit of internal capabilities to the strategy pursued, and of strategy to the competitive environment (Barney & Griffin, 1992). However, the primary focus of past research has been the role of industry competitive intensity on firm performance. Studies by Schmalansee (1985), Wernerfelt and Montgomery (1988) and Rumelt (1991) have produced consistent findings, where industry competitive intensity could account for between 17 and 20 percent of the variance in financial performance (Powell, 1996). For example, Schmalansee (1985) found that the remaining 80 percent of unexplained performance variance suggested the existence of non-industry variables not explored in his research (Powell, 1996). These studies, in general, point to the need for research into the mediating constructs shaping the industry competitive intensity–firm performance relationship. We conjecture that industry competitive intensity impacts upon firm performance through the marketing-related capabilities of the firm. These capabilities reflect the firm's capacity to learn from markets and apply the knowledge gained to the effective use of marketing tools.

During the last decade several researchers have explored what could be described as the theoretical links between industry competitive intensity (termed originally industry structure) and firms' capability building activities. This 'competition leads to competence' approach (Barnett, Greve, & Park, 1994; Levinthal & Myatt, 1994) suggests that, as firms learn how to overcome specific competitive challenges, they develop potentially valuable resources and capabilities. These resources and capabilities, in turn, can give these firms important competitive advantages in subsequent competitive settings — advantages that are not available to firms that did not have to respond to the original competitive threats, and thus did not develop the relevant competencies (Barney & Zajac, 1994). Levinthal

and Myatt (1994) argue that a firm operating within a competitive industry tends to make several strategic choices related to its survival and growth, in that such "choices provide managerial direction over the evolutionary path that the firm's capability set takes" (Levinthal & Myatt, 1994, p.46). Further, Barnett et al. (1994), in what they label as the 'naïve evolutionary model' suggest that organizational learning is strengthened by competition, in that when "an organization competes with others to achieve its objectives, results are more likely to fall short of expectations. This can cause current practices in the organization to be inadequate and in this sense an organization that faces competition is more likely to refine current routines or to make innovations and this process often leads to performance enhancing capabilities" (Barnett et al., 1994, p.12).

2. Theoretical development and hypotheses

Based on the foregoing discussion we advance the view that firms operating within an industry characterised as highly competitive, dynamic and or turbulent learn through positive feedback effects. We further posit that, in a dynamic environment, firms tend to undertake greater learning, challenging their current practices with the aim of exploring innovative ways of serving their customers. Learning is seen as a purposive quest for innovativeness in dynamic industry environments. Building on this notion we suggest that firms within a highly competitive industry tend to actively learn from the market. Similarly, we conjecture that firms perceiving their immediate environment as highly competitive, tend to build and nurture superior marketing capabilities. Whilst market learning captures learning from both customers and competitors, marketing capability captures a firm's capacity to integrate marketing tools effectively. A logical consequence of market-focused learning is enhanced capacity of the firm to design an effective marketing mix to reach its customers better. This suggests that firm's that excel in market learning excel in marketing capabilities as well. In this conceptualization, market learning provides a meaningful link between industry competitive intensity and firm-specific capabilities and brand performance.

The conceptual framework presented in Fig. 1 incorporates four constructs, namely, industry competitive intensity, market learning capability, marketing capability and brand performance. The model is deeply rooted in the market-driven firm paradigm which is well-established in the strategic marketing literature (Jaworski, Kohli, & Sahay, 2000; Day, 1994a,b). We argue that this paradigm can be viewed in terms of two stages. First, 'market sensing' (Day, 1994a) or learning from markets and the second, integrating the market knowledge to build superior marketing capabilities which is at the heart of deploying tools of marketing to serve the customers better. The theoretical conjecture advanced here suggests that managers who perceive their firms operating within a competitively intense industry environment will have a greater tendency to develop distinctive capabilities in market learning and marketing. Market learning enables the firm to develop superior marketing capabilities. Both market learning and marketing capabilities enable firms to achieve better brand performance. Importantly, on these issues O'Cass and Ngo (2007b) identify that the challenge facing managers today is to achieve congruence between firm and environment to enhance brand performance.

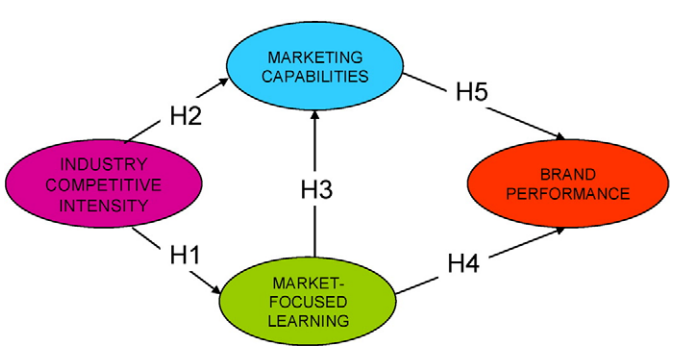

Fig. 1. Conceptual framework.

2.1. Conceptualising industry competitive intensity

Porter's (1985) theoretical framework of what was labeled as industry structure is based on the foundation built in industrial organization view by Bain (1956) and Scherer (1980). However, within Porter's (1985) theoretical contention an analysis of competition in an industry not only relates to the behavior of existing firms, but also includes the structure of the industry's environment (Pecotich, Hattie, & Low, 1999). The notion of industry competitive intensity is hypothesized to comprise five competitive forces: threat of entry, threat of substitute products, power of buyers, power of suppliers and rivalry among existing firms that are present in a firm's environment (Pecotich et al., 1999; Weerawardena et al., 2006; O'Cass & Ngo, 2007a). This view uses managerial perceptions to capture the industry competitive intensity the firm operates within and the prior research that has examined industry effects and firm performance have used perceptual measures (e.g. Powell, 1996). The strategic management literature suggests that managers develop strategies after observing and enumerating environmental trends. "It is expected that industry competitive intensity as described by Porter's (1985) five forces model should be the same for all in the industry yet perceptions of managers within that industry may vary and not strictly correspond to reality" (Pecotich et al., 1999, p. 419). Thus, the key here is how a manager perceives and interprets the five forces. Recently, focusing on the impact of competitive environment and using the notion of five forces as the key foundations of competitive intensity, O'Cass and Ngo (2007a) argued that a prominent schema for managers to represent their own industry's intensity across the five forces is achieved via the use of industry competitive intensity. They concluded that it is the managers' perception of the intensity of these forces that is of paramount importance in impacting strategy development and firm characteristics. Arguing that firms could be grouped together according to how they see the forces. Their study showed that perceived competitive intensity does in fact influence key firm characteristics.

2.2. Market-focused learning capability

Whilst the importance of market learning in a firm's marketing strategy has been widely discussed in the literature, a similar interest has been shown on the need to conceptualize and measure it in the form of a capability. Such a capability will have the potential to contribute to the competitive strategy of the firm (Day, 1991; Sinkula, 1994; Weerawardena, 2003a). The organizational learning literature suggests that there are four learning activities, which constitute an overall organizational learning process (Huber, 1991; Sinkula, 1994; Slater and Narver, 1995). These activities are *knowledge acquisition* (the development or creation of skills, insights, relationships), *knowledge sharing* (the dissemination to others of what has been acquired by some), *knowledge utilization* (integration of learning so that it is assimilated, broadly available, and can also be generalized to new situations) and *unlearning* (the review and renewal of existing knowledge and communicate changes within the firm). Several researchers have advocated conceptualizing organizational learning capability using these four learning processes (Day, 1991; Sinkula, 1994). For example, Day's (1994a) fourteen-item inventory for 'assessing market learning competency' expands on the four learning activities, where the four processes constitute the process model of

organizational learning that has been widely embraced by strategic marketing researchers over the last decade (Bell, Whitwell, & Lukas, 2002) and provides the foundation for the conceptualization of market-focused learning capability in this study.

Taking the notion of industry competitive intensity we contend that it can viewed as a precursor to market opportunity and it is argued that the greater the uncertainty and change (dynamism) within an industry the greater the market opportunity which exists within that industry (Dean, Meyer, & Castro, 1993). In a dynamic industry environment firms tend to undertake greater learning from the marketplace. When environments are dynamic, managers have a greater need for market information (Menon & Varadarajan, 1992; Vorhies, 1998) and thus must have a greater ability to learn from the marketplace. In most organizations, market intelligence gathering is a key source of environmental information (Kohli & Jaworski, 1990; Menon & Varadarajan, 1992). Sinkula (1994) identified five reasons which make market-based organizational learning unique in the creation of knowledge. First, it is a core competency pertaining to external foci and it is less visible than most internally focused organizational learning competencies. Second, market-based learning results in fundamental bases of competitive advantage. Third, the market information that resides in organizational memory is typically more difficult to access. Finally, market-based learning is unique in that market-based learning is more equivocal. We define market-focused learning capability as the capacity of the firm relative to its competitors, to acquire, disseminate, unlearn and use market information for organizational change. This definition extends the concept of market orientation in that managers perceiving their industry's competitive intensity as dynamic tend to build and nurture distinctive market learning capabilities (see Fig. 1).

Building on our earlier conceptualization of perceived industry competitive intensity we conjecture that what matters in strategy formation is the way managers perceive the competitiveness in the immediate industry environment. We advance the view, that managers perceiving their industry environment as competitive will make a concerted effort to understand the environment. They will attempt to understand their customers better and monitor what competitors are doing. Therefore we argue that perceived industry environment leads to increased market-focused learning. Thus,

H1. Perceived industry competitive intensity has a positive and significant effect on the market-focused learning capability of a firm.

2.3. Marketing capability

During the last decade, attention has been given to the exploration of the links between industry environment and firm capability building activities. One of the approaches in this area is the 'competition leads to competence' approach (Barnett et al., 1994; Rao, 1994; Levinthal & Myatt, 1994), which suggests that, as firms learn how to overcome specific competitive challenges, they develop potentially valuable capabilities. These capabilities, in turn, can yield important competitive advantages — advantages not available to firms that did not have to respond to competitive threats by developing relevant capabilities (Barney & Zajac, 1994).

Extending this view Weerawardena et al. (2006) argue that in the context of the nexus between industry structure and firm characteristics a competitive industry environment forces the development of a knowledge base, which will enable the firms within it to exploit the emerging market opportunities. To this end while they focus on organizational learning as a capability we contend here that their arguments are also valid in the context of marketing capability. To this end we argue that a competitive industry environment can cause firms to pursue innovative ways of creating superior value for their customers by requiring the development of distinctive capabilities (Weerawardena et al. (2006), especially marketing capabilities.

This view of arguing for the generic impact of environment on capability development is built on the premise that all capabilities posses common underlying characteristics. As such, capabilities are effect complex bundles of knowledge, skills and abilities embedded within firm business processes operating at various levels within firms (Krasnikov & Jayachandran, 2008). As such, capabilities are built upon the processes developed by firms by bringing people and resources together in repeated efforts (Vorhies, Harker, & Rao, 1999). On this point Amit and Schoemaker (1993) advocate that capability refers to the organizational capacity to deploy resources, generally in combination, using organizational processes to affect a desired end. Importantly, Day (1994a) notes that it is impossible to enumerate all possible marketing capabilities because they generally vary among businesses owing to the nature of the business environment. In this context marketing capabilities are defined here as integrative processes designed to apply the collective knowledge, skills, and resources of the firm to the market-related needs of the business, enabling the business to add value to its goods and services and meet competitive demands (Day, 1994a).

Over the last few decades there have been several attempts to examine the effect of industry competitiveness on the operation of the firm. Some researchers suggest that industry competitiveness will impact on various functional units, such as marketing (Ruekert, Walker, & Roering, 1985). Vorhies (1998) provides a detailed discussion on the impact of environmental turbulence on the development of marketing capabilities suggesting that firms experiencing environmental turbulence tend to build and nurture marketing capabilities. More turbulent environments were shown to be related to the development of a strategic orientation that relied on well-developed marketing skills (Miller, 1988; Miller, Drogue, & Touse, 1988). O'Cass and Ngo (2007a) argue that environmental characteristics appear to play an important role in determining the degree of marketing capability development. To this end they contend that in relation to marketing, firms that perceive the competitive environment as stable and predictable may not have to develop marketing capability, while those who perceive competitive intensity as high may push themselves to undertake more marketing activities. Therefore, businesses that observe and serve the marketplace as a stable environment are likely to have less need to develop marketing capabilities, compared to businesses in unstable markets (O'Cass and Ngo, 2007a).

The foregoing discussion suggests that competitive industry environment impacts on the marketing capabilities of the firm. Building on the theoretical relationship in hypothesis 1 above we conjecture that firms perceiving their industry environment as competitive tend to build and nurture marketing capabilities. Thus,

H2. Perceived industry competitive intensity has a positive and significant effect on the marketing capabilities of a firm.

Having a better understanding of the markets served enhances a firm's capacity to undertake superior marketing programs aimed at creating added value for its targeted customers. In this context, benchmarking which is widely adopted as a market-based learning approach has been recommended as a marketing capability improvement tool (Brownlie, 2000; Day, 1994a). Vorhies and Morgan (2005) found that benchmarking leads to superior marketing capabilities. Learning influences organizational behavior by action-oriented use, which is the direct application of knowledge to solve a problem, and knowledge enhancing use, which influences managerial perspectives on problems (Menon & Varadarajan, 1992). Learning activities may result in enhanced capabilities (Levinthal & Myatt, 1994).

Approaches to target marketing (Kotler et al., 2003) suggest that understanding market characteristics is a prerequisite for the effective use of marketing mix strategies to reach the desired market segment. The role suggested here is analogous to Porter's (1990) discussion of demand factors associated with industry performance across nations. One of the

key factors cited was the level of customer sophistication which impacts the marketing capability building activity of the firm (Levinthal & Myatt, 1994). Therefore, it can be argued that market-focused learning enhances the marketing capability of the firm as shown in Fig. 1.

H3. Market-focused learning has a positive and significant effect on the marketing capabilities of a firm.

2.4. Brand performance

Moving from the influence of industry competitive intensity, attention is now focused on the impact of market-focused learning and marketing capability on aspects of firm performance. Whilst much of the discussion of performance has been at a macro organizational level (i.e., firm performance), it is argued that a critical perspective is drawn from a firm's product performance and in marketing terms we contend that this relates to the marketed brands of a firm (i.e., micro performance). The importance of building a strong brand as a primary goal of many organizations has been recognised in the marketing literature for quite some time (e.g. Perrier, 1997a,b; Keller, 2001; Hoeffler & Keller, 2002). The central logic of this view is that an organisation that builds a strong and successful brand will create stronger earnings, and will be more stable in its marketplace performance. Brand performance can also be seen in the brand achieving the organization's established objectives for it in the marketplace. As such, brand performance is defined as the relative measurement of the brand's success in the marketplace (O'Cass & Ngo, 2007b).

Learning from markets is cited as a key to innovation and greater firm performance (Slater & Narver, 1995; Weerawardena, 2003a; Li & Calantone, 1998). The literature on the market-driven firm paradigm suggests that market-driven firms stand out through their ability to continuously sense and act on events and trends in their markets (Jaworski & Kohli, 1993; Slater & Narver, 1996). The literature examining market learning and brand performance suggests that organizations that pursue market learning are more likely to possess strong brands. The central logic underlying this argument is that the intelligence created about the brand via the customers-mindset is one of the most valuable assets that organizations can possess from the investment in previous marketing programs (Keller, 2001). Importantly, this market intelligence system is the hallmark of market orientation. Recent studies examining the market orientation–brand performance relationship (O'Cass & Ngo, 2007b) suggest that managers feel market orientation provides a unifying focus, better coordination and reviewing of products. However, the notion of products is quite generic and what organizations own and managers manage are brands. As such, it is the enactment of specific behaviours that emanate from and are characteristic of market orientation that impacts the ability to deliver superior value to consumer through the organizations' brand offering. To be effective, organizations should constantly scan the horizons for new opportunities to satisfy their customers (Levitt, 1960), and thus learning appears as a requisite ingredient to marketplace success. Thus,

H4. Market-focused learning has a positive and significant effect on of a firm's brand performance.

Moving from learning capability to marketing capability sees some similarity in that distinctive marketing capabilities appear to enable firms to out-perform competitors by reaching target markets more effectively. Although competing firms may focus on similar market needs, the idiosyncratic way in which each group of individuals within each firm integrates knowledge creates many unique ways of solving similar customer needs (Vorhies & Harker, 2000). As noted by Doyle (1989) successful brands reflect 'getting there first' innovations in many ways: develop new positioning concepts, develop new distribution channels, develop new market segments and exploit gaps created by sudden environmental changes. "Building an effective, differentiated customer proposition is the core requirement for building a successful brand" (Doyle, 2001, p.267) which requires marketers to perceive new ways of delivering superior value to customers. This work can best be summarized in the work of Vorhies (1998) that marketing capabilities lead to organizational effectiveness and in more recent work by Vorhies and Morgan (2005) which found that marketing capabilities lead to superior business performance.

Extensive research has shown that marketing capability contributes to the commercial success of the products and services marketed by the firm (Song & Parry, 1996, 1997; Weerawardena, 2003b; Day, 1994a,b; O'Driscoll et al., 2000; Shantanu, Om, & Surendra, 1999; Hooley et al., 1999). For example, Hopkins and Bailey (1971) found that inadequate market analysis and insufficient efforts in sales, distribution or promotion tended to lead to product failure. Whereas, extensive marketing efforts have been shown to lead to product success (Rothwell, 1992) and adequate performance in all marketing activities was a key determinant of product success according to Cooper and Kleinschmidt (1987). 'Marketing capability of a firm is reflected in its ability to differentiate products and services from competitors and build successful brands' and 'firms with strong brand names can charge premium prices in foreign markets to enhance their profitability as well' (Kotabe, Srinivasan, & Aulakh, 2002, p.82). Importantly, capabilities appear to be drivers of marketplace success for firms and we contend here that capabilities yield a competitive advantage (Song & Parry, 1997). As such, adequate performance of all marketing activities is a key determinant of success (Spanos & Lioukas, 2001; Dutta et al., 1999; Song and Parry, 1997), and thus it is argued that marketing capability leads to brand performance (see Fig. 1) with superior performance in sales growth, market share increases and profitability of a firm's brand. Overall, we conjecture that a unique or superior product may be a necessary, but is not a sufficient condition for superior brand performance. The product brand and the associated value offer has to be effectively communicated and the product taken to the target market which reflects the importance of marketing performance. Thus,

H5. Marketing capability has a positive and significant effect on of a firm's brand performance.

3. Method and measures

3.1. Research approach

The study was based on the design and administration of a survey of CEOs of firms drawn from IncNet Business Database. This database is a National database of firms and the sampling frame were randomly drawn from a list provided by the professional database supplier. Although the selection of the sample was based primarily on convenience, we considered variations in firms across the manufacturing and service sector as a suitable environment to test the theory. In this study CEOs were identified and used as the key informants for completing the surveys. CEOs have been used as key informants in similar research on competitive strategy (Li and Calantone, 1998). Although some researchers have advocated the use of multiple informants (Hogarth & Makridakis, 1981), others have found that CEOs provide data that is as reliable and valid as multiple informants (Zahra & Covin, 1993). Also, data on strategy gathered from respondents below the CEO level have been argued to have validity issues because such managers generally do not have access to information about how the total system operates (Snow & Hrebniak, 1980). CEOs possess the most comprehensive knowledge of the characteristics of their organization, its strategy and performance

(Snow & Hrebniak, 1980). The sample of 1000 CEOs came from a cross-section of industries, with the predominant industries being; manufacturing in the light industries, metal-working, electronic, chemical and services industries and a small number of mining and agricultural firms.

3.2. Measures

3.2.1. Industry competitive intensity

Industry competitive intensity was measured via a 25 item scale adapted from the industry structure (industruct) scale originally developed by Pecotich et al. (1999) and subsequently refined by O'Cass and Ngo (2007a). Our measure was operationalized as a Type II formative model, in which competitive intensity was treated as a latent variable formed by five reflective indicators including intensity of rivalry, supplier power, threat of new entrant, threat of substitute, and buyer power (O'Cass & Ngo, 2007a). These five factors taken together explain the perceived competitive intensity of an industry via key structural characteristics such as power of buyers, supplier power, competitiveness, potential entrants and threat of substitutes. A seven-point scale anchored by 1 'strongly disagree' and 7 'strongly agree' was used in the current study.

3.2.2. Market learning capability

Market learning was measured via the 6-item scale developed by Weerawardena (2003a). The market learning measure captures the extent that the firm undertakes learning via the acquisition of knowledge on consumer preferences and competitor behavior. A seven-point scale anchored by 1 'very low' and 7 'high' and 1 'not effective' and 7 'very effective' was used in the current study.

3.2.3. Marketing capability

Marketing capability was measured via a 7-item scale developed by Weerawardena (2003b) and Weerawardena and O'Cass (2004). The measure captures the capacity of the firm to use its marketing tools to reach its target market effectively and focuses on the firm's capability to undertake key marketing functions. A seven-point scale anchored by 1 'never' and 7 'extensively' and 1 'limited' and 7 'extensive' was used in the current study.

3.2.4. Brand performance

Brand performance was measured by three items, asking respondents to rate the overall performance of their identified brand rated on a 7-point scale from 1 very poor to 7 very good and the relative market share of the brand and the sales growth of the brand rated on seven-point scales (1 far below–7 far above, and 1 very poor–7 very good).

To ensure sufficient variance in the constructs, respondents were instructed to complete the entire questionnaire in reference to a key brand (single brand) within their firm.

4. Results

In total 247 useable surveys were returned and used in the subsequent analysis. The data were initially analysed via measures of central tendency and dispersion. To test the measures (outer models) and hypotheses, PLS a variance-based path modelling technique, which allows the examination of theory and measures simultaneously, was used. As a multivariate, variance-based technique PLS estimates path models involving latent constructs indirectly observed by multiple indicators. PLS focuses on the explanation of variance using ordinary least squares, this technique is suited for the investigation of relationships in a predictive rather than a confirmatory fashion (Fornell & Bookstein, 1982) as outlined in Fig. 1. In this study the primary concern is with maximizing the prediction of dependent endogenous constructs by exogenous constructs including industry competitive intensity to market-focused learning–marketing capability and marketing focused learning–marketing capability to brand performance. PLS also assisted in avoiding the necessity of a large sample size and has been used in similar research to this study by for example O'Cass and Julian (2003) who achieved a sample size of 293 which is comparable to this study with 247 respondents. Furthermore, PLS is not sensitive to the assumptions of normality, thus circumventing the necessity for the multivariate normal data and as the preliminary analysis indicated that some items had moderate to high levels of skew and kurtosis indicating PLS was suitable procedure (O'Cass & Ngo, 2007a)[2].

Also, as PLS is not based on distributional assumptions, providing definite statistics tests are contrary to the soft modelling philosophy, the evaluation of the model is as such, not based on any single statistical indices, but uses a number of indices (Falk and Miller, 1992). These indices are used and assessed based on their ability to explain the data congruence with hypotheses. As a result, a number of specific indices were used to assess the hypotheses (see: Fornell & Cha, 1994). The indices used here are *r*-squared, average variance explained (AVE), average variance accounted (AVA), regression weights and loadings and critical ratios for the inner model were also assessed. As the hypotheses are one-tailed, to reject a null hypothesis at the 0.05 level the observed *t*-value should be greater than 1.645 and 0.01 at 1.96. Further, two sets of linear relations specify the model: the outer model relationships between the latent and the manifest variables; and the inner model where the hypothesised relationships (H1–H5) between the latent variables are specified.

As indicated above the issue of whether the construct, competitive intensity, should be modelled as a formative or reflective model and a first-order–second order configuration was an important consideration. For sometime now, attention has been devoted to developing latent constructs where the measurement items reflect the observed variation in the constructs (reflective). However, an alternative measurement approach is where the indicators are assumed to cause the latent (formative) construct. As such, the choice between formative and reflective models indicates the direction of causality and on this point Jarvis, Mackenzie and Podsakoff (2003) argue the essential decision rules for determining the measurement model is the covariance among indicators. Based on the work of O'Cass and Ngo (2007a) and analysis of industry competitive intensity (and its key components: intensity of rivalry, supplier power, threat of new entrant, threat of substitute, and buyer power) a weak covariance among five second order constructs was established. In this sense, we argue that in the cross-section of industries, industry competitive intensity is characterized by distinct forces, which are not necessarily related to each other. In effect intensity of rivalry, supplier power, threat of new entrant, threat of substitute, and buyer power cause industry competitive intensity. Therefore, the individual forces are reflected by the indicators as in a Type II model (see O'Cass and Ngo, 2007a,b; Hulland, 1999; Jarvis et al, 2003). As such, we attempt to advance the operationalization of industry competitive intensity by specifying the construct as a second order factor having first-order factors as formative indicators and the first-order factors themselves have reflective indicators.

The theoretical formulation of the constructs was established and the outer model tests were conducted with the results presented in Table 1. Table 1 provides the factor loading derived from PLS graph for the Type II first-order–second order construct of perceived industry competitive intensity. The first order constructs for market-focused learning, marketing capability, and brand performance explained between 60% and 81%. The second order factors (constructs) variance

[2] This study follows similar procedures outlined in the literature by a number of scholars who also studied various aspects of either strategy or capability and performance issues, with similar sampling procedures and sample sizes and all adopted PLS for data analysis (see for example, Slotegraaf & Dickson 2004; White et al 2003; O'Cass and Ngo, 2007a).

Table 1
Preliminary analysis outer model measures.

Constructs	Component loadings
Industry competitive intensity (Type II configuration)	
Competition (AVE 0.67, reliability 0.91)	
Firms compete intensely	.76
Competitive moves have noticeable effects	.82
Price competition	.81
Price cutting	.82
Competition is intense, fierce	.84
Suppliers (AVE 0.48, reliability 0.82)	
Suppliers are important in industry	.62
Suppliers can raise prices or reduce quality	.62
Suppliers are powerful	.83
Suppliers can gain concessions	.75
Small number of suppliers contribute a large proportion of inputs	.63
New entrants (AVE 0.50, reliability 0.82)	
New entrants risk strong reaction	.66
Industry can prevent new entrants	.77
Retaliation by established firms on new entrants	.80
New entrants spend heavily to overcome existing brand loyalties	.65
Small scale entrants face considerable cost disadvantages	.60
Substitutes (AVE 0.55, reliability 0.83)	
Considerable pressure from cheaper substitutes	.77
Strong competition from substitutes	.76
Substitute products limit profitability	.80
Products serve function easily serve by others	.66
Large numbers of substitutes	.69
Buyers (AVE 0.57, reliability 0.86)	
Buyers are highly concentrated	.70
Buyers are mainly wholesalers or retailers	.59
Buyers are powerful	.84
Buyers demand concessions	.79
Small number of buyers form large proportion of sales	.78
Marketing capabilities (AVE 0.60, reliability 0.92)	
Sales people	.66
Distribution	.78
Promotion and advertising	.84
Market research	.75
Product differentiation	.75
New product introduction	.81
Marketing success	.78
Marketing capability allows firm to compete	.80
Market-focused learning (AVE 0.77, reliability 0.96)	
Collects information about markets	.95
Searches for innovative ideas through market information	.95
Knowledge about market segments	.96
Knowledge of competitors	.96
Shares information with employees	.83
Uses customer and competitor information in innovations	.81
Capability to learn allows firm to compete	.77
Brand performance (AVE 0.81, reliability 0.93)	
Overall brand performance	.91
Market share of brand	.88
Sales growth of brand	.95

explained ranged between 48% and 67%, with loadings ranging from .59 to .96, and composite reliabilities of between .82 and .96 as indicated in Table 1[3].

While the average variance extracted (AVE) for all constructs was uniformly acceptable, the AVE for the supplier component of industry competitive intensity was below the generally accepted .50, however it is consistent with similar benchmarks reported in the marketing literature, where accepted AVE values have been reported at above 0.4 (see: Green, Barclay, & Ryans, 1995; O'Cass, 2002). Further, the between blocks correlation coefficients of the residuals of the manifest variables were all relatively low suggesting that the blocks are distinctly defined (Falk & Miller, 1992).

Assessing measurement validity is important and on this issue Fornell and Larcker (1981) argue convergent validity is achieved if the average variance explained (AVE) in items by their respective constructs is greater than the variance unexplained (i.e., AVE>0.50). Therefore, in order to assess the constructs convergent validity, the squared multiple correlations from the factor analysis were initially examined. All constructs and their second order factors using both methods had an average variance explained (AVE) greater than or equal to 0.50 (except for supplier power), therefore meeting the recommended criteria for convergent validity.

To assess convergent validity, composite measures were computed for the constructs, and an assessment of discriminant validity as recommend by Gaski and Nevin (1985) and O'Cass (2002) was undertaken. If the correlation between two composite constructs is not higher than their respective reliability estimates, then discriminant validity is argued to exist. Therefore, construct correlations were examined and compared to the reliabilities calculated in the preliminary data analysis. Correlations ranged from .30 to .72 and the reliabilities ranged from 0.96 to 0.82. The comparison of individual correlations between constructs revealed that no correlations were higher than their respective reliabilities, and as such, discriminant validity is argued to exist. Further, all constructs exhibit discriminant validity if each correlation is less than 1 by an amount greater than twice its respective standard error (Bagozzi & Warshaw, 1990). An examination of the standard error in PLS bootstrap outputs revealed that all constructs pass this test also. Thus, adequate discriminant validity is present for all constructs.

Given acceptable convergent and discriminant validity, the test of the structural model constitutes an assessment of the nomological validity of the constructs (Cohen, 1988).

5. Hypotheses testing and results

With respect to the predictive relevance of individual paths, the strength and significance of individual paths were computed, providing results for the tests of the hypotheses. The beta coefficients, -values (critical ratios), individual variance for each path, along with R^2 for each endogenous construct are reported in Table 2. The predictive relevance of the structural model was assessed via the average variance accounted for (AVA). All indices were computed on the basis of 200 bootstrapped estimates.

The focus here is on the inner model results where the hypothesized relationships between the latent variables specified as H1–H5. Evaluation of the relationships was via statistical results that attempt to explain the data, congruence with the hypotheses and precision. An examination of the results for the hypotheses was undertaken via R^2, average variance accounted for (AVA), and regression weights and bootstrap critical ratios (t-values).

In Table 2, the AVA for the endogenous variables is of an acceptable magnitude in the inner model at 0.52. Defined as the ratio between estimate and standard errors, the critical values greater than 1.64 and

Table 2
Descriptive statistics and correlations.

Constructs	Mean	SD	1	2	3
1. Industry competitive intensity	***NA***	NA	NA		
2. Marketing capability	4.92	1.02	***(.60)***		
			.23		
3. Market-focused learning	5.01	1.16	.26	***(.77)***	
				.72	
4. Brand performance	5.16	1.07			***(.81)***
			.25	.52	.41

Note: The diagonal elements are the AVEs (italicized and bolded). The lower-left triangle elements are correlations among the constructs (unweighted mean of the items for each construct). NA = not applicable.

[3] As suggested by Podsakoff and Organ (1986), Harmon's one-factor test was conducted to examine the extent of the potential bias because the data was collected from single sources. The central premise of Harmon's one-factor test is that all items, presumably measuring a variety of different constructs, are subjected to a single factor analysis, and this resulted in no single factor representing the data.

1.96 are statistically significant at 90% and 95% respectively. As such, the bootstrap critical ratios provide an indication of magnitudes above the acceptable benchmarks for all the paths. To generate the critical ratios the bootstrapping procedure was executed using 500 bootstrapped samples with sub-samples of 200 cases per sample. In hypothesis 1, industry competitive intensity was predicted to positively impact market-focused learning. The results support hypothesis 1 at the 0.01 level with β .43 (t 4.84, p.01). In hypothesis 2, industry competitive intensity was predicted to positively impact marketing capability. The results support hypothesis 2 at the 0.01 level with β .17 (t 1.77, p.05). In hypothesis 3, market-focused learning was predicted to positively impact marketing capability. The results support hypothesis 3 at the 0.01 level with β .66 (t 16.93, p.01). In hypothesis 4, market-focused learning was predicted to positively impact brand performance. The results do not support hypothesis 4 with β .08 (t .80, ns p). In hypothesis 5, marketing capability was predicted to positively impact brand performance. The results support hypothesis 5 at the 0.01 level with β .50 (t 5.44, p.01). Overall, the results used to evaluate the hypotheses indicate that all hypotheses (except H4) were fully supported on the basis of the indices.

5.1. Further analysis: indirect and direct effects

Additional findings can be an important component of research, and can be found in for example work by Homburg, Krohmer and Workman (2004), who undertook further analysis to examine the indirect effects of differentiation strategy on performance through market orientation. We build on this philosophy by exploring the effect of market-focused learning on brand performance through marketing capability. We analysed the indirect effects of the market-focused learning through marketing capability, which highlights the intervening role of marketing capability. This allows us to understand the role of market-focused learning in the development of marketing capability—specifically, whether the indirect effects of learning on the brand performance through marketing capability is important when compared with the direct effects of learning on performance. Further, we also examined the indirect effects in the context of marking capability as an intervening variable, the indirect effect of industry competitive intensity on brand performance through marketing capability and in the context of market-focused learning as an intervening variable, the effect of market-focused learning on brand performance, the indirect effect of Industry Competitive Intensity on brand performance through market-focused learning. Lastly, we also examined in the context of market-focused learning and marketing capability as intervening variables, the indirect effect of industry competitive intensity on brand performance.

PLS analysis is a well-established method for examining the direct and indirect effects of several variables simultaneously (Table 3). The indirect effect is determined by understanding the product of a particular variable on a second variable through its effect on a third intervening or mediating variable (Alwin & Hauser, 1975). Furthermore, the sum of the direct and indirect effect reflects the total effects of the variable on the endogenous variable. The results indicate that, firstly, in the context of marketing capability as an intervening variable, the direct effect of market-focused learning on brand performance is .08, and market-focused learning's indirect effect on brand performance is .33 and the total effects are .41. Second, in the context of marking capability as an intervening variable, the indirect effect of industry competitive intensity on brand performance through marketing capability is .085. In the context of market-focused learning as an intervening variable, the effect of market-focused learning on brand performance is .08; the indirect effect of industry competitive intensity on brand performance through market-focused learning is .034. Last, in the context of market-focused learning and marketing capability as intervening variables, the indirect effect of industry competitive intensity on brand performance is .142. Collectively these results highlight the importance of indirect effects and the intervening role of market-focused learning and marketing capability between industry competitive intensity and brand performance.

Table 3
Partial least squares results for hypothesized relationships.

Predicted variables	Predictor variables	Path weights	R^2	Critical[a] ratio
H1 market-focused learning	Industry competitive intensity	.43	.35[a]	4.84[b]
H2 marketing capabilities	Industry competitive intensity	.17		1.77[c]
H3 marketing capabilities	Market-focused learning	.66	.70[a]	16.93[b]
H4 brand performance	Market-focused learning	.08		0.80
H5 brand performance	Marketing capabilities	.50	.51[a]	5.44[b]
AVA[b]			.52	

Note:
[a] Exceeds minimum acceptable level .10.
[b] Exceeds minimum acceptable level 1.96, $p<.01$.
[c] Exceeds minimum acceptable level 1.64, $p<.05$.

5.2. Model fit

After testing the hypotheses we examined Q^2 predictive relevance of the model (i.e., predictive sample reuse technique) as outlined and originally developed by Stone (1974). Using this procedure a generalized cross-validation measure and jackknife standard deviations of parameter estimates can be produced. The blindfolding uses a block of N cases and K indicators and removes a portion of the N by K data points. With an omission distance D, points are omitted from the first data point and then every other data point D across rows and columns, where Q^2 is represented as: $Q^2 = 1 - \frac{\Sigma_D E_D}{\Sigma_D O_D}$.

Thus Q^2 represents a measure of how well the observed values are reconstructed by the model and the model parameters. $Q^2>0$ indicates the model has predictive relevance. Using this procedure and with omissions distances between 5 and 10 the Q^2 value for the model was 0.63.

We also computed the goodness-of-fit index (GoF) proposed by Amato, Vinzi and Tenenhaus (2004) to assess the fit of both outer-measurement and inner-structural models to the data simultaneously. PLS does not optimize any global scalar function, and as such there is no index for global validation of the model as is derived via LISREL with the χ^2-based indexes. The GoF acts as a global fit index for validating the PLS model. 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: $\text{GoF} = \sqrt{\overline{\text{communality}} \times \overline{R^2}}$.

Drawing upon the categorization of R^2 effect sizes by Cohen (1988) and using the cut-off value of 0.5 for commonality (Fornell & Larker, 1981), GoF criteria for small, medium, and large effect sizes are 0.1, 0.25 and 0.36 respectively (Schepers, Wetzels, & de Ruyter, 2005). The calculated GoF for model was 0.46, indicating good fit of the model to the data.

6. Discussion

The study confirms the influence of industry competitive intensity on the firms' marketing strategy. Marketing strategy was conceptualized in terms of two capabilities, namely, market-focused learning and marketing. The theoretical framework conjectured that firms perceiving their industry competitive intensity as turbulent and intense tend to build superior market-focused learning capabilities that in turn enable them to build superior marketing capabilities. Both these capabilities enabled the firms to achieve superior brand performance.

The results of the study support the hypothesized relationships. The findings of the study contribute to the debate on the role of the external environment on a firm's marketing-related capability development on brand performance. As noted at the beginning, although there is an emerging consensus among researchers that the external

environment complements a firm's internal capabilities, research has not made satisfactory progress in establishing a meaningful link between the external environment and firm-specific capabilities. In this study market learning capability emerged as an important link between the firms' external environment and their marketing capability development. In this study firms perceiving their industry environment as turbulent tended to understand customers and competitor actions better, which enabled them to develop a marketing mix to reach their target markets with superior products and services more effectively.

As noted earlier although there was no significant direct relationship between market-focused learning and brand performance, the further analysis and findings suggest an indirect effect via marketing capability. The emerging theoretical relationship between a firm's market-focused learning capability and marketing capability can be best understood by examining the indicators of the two constructs. Firms possessing a strong market-focused learning capability extensively collect information about market changes and possess extensive knowledge on market segments. This knowledge may facilitate the effective use of key marketing tools to reach the firm's target market. These marketing tools are reflected in the marketing capability of the firm. This suggests that market learning is a prerequisite for possessing strong marketing capability. Marketing capabilities cannot be built in a vacuum and the firm must possess a distinctive and meaningful level knowledge of the market, its competitive nature, its key players and segments to achieve this goal. Importantly, we contend that market-focused learning leads to brand performance through marketing capability.

The findings of this study contribute significantly to the existing literature on the role of marketing in strategic management (Day, 1992; Piercy, 1998) in several ways. Firstly, the study introduces industry competitive intensity into strategic marketing. Secondly, both market-focused learning and marketing capabilities lead to higher brand performance. Thus, the findings highlight the nexus between environmental perceptions, learning and marketing capabilities and a firm's brand level performance.

The findings specifically contribute to the literature on the 'market-driven' firm (Day, 1994a) that emphasizes the role of 'market sensing' and 'customer linking' capabilities in competitive strategy. The aspect of industry competitive intensity, a hitherto little explored factor impacting the market learning–firm performance relationship has been shown here to be a critical aspect of furthering our understanding on marketing capability development and brand performance. Supporting this view the current study finds that market learning capabilities lead a firm to develop superior marketing capabilities, which would result in superior brand performance.

The findings also contribute to the literature on competitive organizational behavior particularly, in the area of complementarities between the industrial organizational view and the firm strength-based views of competitive strategy. An important managerial implication of the study is that the knowledge of and reactions of management to their industry's competitive intensity structure and the competitive intensity faced by a firm consequently influences the strategic decisions made by the firm. Knowledge of the five forces of competitive pressure also highlights the strengths and weaknesses of a firm, and forms a useful basis for the evaluation of its position in the industry (Pecotich et al., 1999). It appears that on such a basis firm learning may occur. Firms striving to achieve higher brand performance must make a concerted effort to understand its customers and competitor actions which in turn enable them to integrate its marketing tools to reach the target market more effectively.

7. Limitations and directions for future research

A limitation of the study is the cross-sectional nature of the sample and the convenience sampling approach. Future research should examine the evolutionary processes involved in the industry competitive intensity–firm specific marketing capabilities building process. This could be achieved by focusing on a single industry or by ensuring a larger sample of firms within specific industries. This would allow the study of industry specific factors and further advance our knowledge of firm–environment interactions.

8. Conclusion

The theoretical setting for this study was that managerial perceptions of industry competitive intensity play a key role in a firm's market learning capability and marketing capabilities and together these drive brand performance. The study findings suggest that a challenging environment would trigger managers to commit their strategic resources to better understand their customers and competitors which shall enable them to use their marketing tools effectively to serve their markets. It is our view that by focusing on key environmental forces and firm-specific marketing-related capability development, marketers will be benefited in understanding the factors influencing a firm's brand performance. Such an approach brings together both external and internal determinants and in effect provides a macro (industry-wide) and micro (firm-level) basis to explore competitive marketing strategies and brand performance. The key is brand performance as it is perceived to be the primary asset for firms. Factors that impact on a brand's success are not well understood. As such, it is the market and marketing capability that form a solid basis to understand and explore the creation of a brand that performs well in the marketplace.

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