



# The relationship between business orientations and brand performance

## A cross-national perspective

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### Abstract

**Purpose** – The purpose of this paper is to adopt a customer-centric value creation perspective to provide insights into the contribution of business orientations, especially marketing orientation and innovation orientation to the creation of customer-centric value (customer equity and brand performance).

**Design/methodology/approach** – To undertake this examination, a model was developed and then tested to validate its applicability in the context of both developed and developing economies. The paper includes partial least squares.

**Findings** – The findings demonstrate that being marketing-oriented and innovation-oriented appears to be important in creating customers, keeping them, and increasing add-on selling to them and rewards the firm with greater brand performance in the marketplace. Importantly, these relationships are universally held across developed and developing business environments. Interestingly, marketing orientation was found to contribute more to the creation of customer-centric value than innovation orientation in developing business environment, whereas the opposite was found in the context of developed business environment.

**Research limitations/implications** – The data incorporate only the subjective measures of customer-centric value. Future studies can use financial measures to complement the self-reporting approach used in this paper. This dual-approach to measuring the value of customers to the firm (customer equity) and brand performance would provide additional insights into the customer-centric marketing literature.

**Practical implications** – The findings suggest that managers should strive to develop a high level of marketing orientation and innovation orientation as two efficient ways to achieve higher levels of customer equity. They are also advised that if their firms are more effective in acquiring potential customers, retaining current customers, and enhancing add-on selling, they see their brands perform better. Importantly, the findings also provide guidance for managers on how to allocate their resources to key business activities (e.g. marketing and innovation) in the context of international business (developing versus developed business environments).

**Originality/value** – This study contributes to customer-centric marketing theory by enhancing understanding of the contribution of marketing and innovation to the creation of customer-centric value in different business environments. This study also contributes to the business orientation literature by demonstrating the utility of a cultural-behavioral approach in measuring marketing orientation and innovation orientation.

**Keywords** Australia, Vietnam, Manufacturing industries, Market orientation, Marketing, Innovation, Customer relations, Cross cultural studies

**Paper type** Research paper



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## Introduction

Scholars in marketing have consistently maintained that market orientation is central to marketing thought and practice and is a key predictor of firm performance (Jaworski and Kohli, 1993; Narver and Slater, 1990; Matsuno and Mentzer, 2000; Kirca *et al.*, 2005). This long held view has come under challenge by a few marketing and innovation scholars who raise what appear to be valid concerns about the direct contribution of market orientation to firm performance (Atuahene-Gima *et al.*, 2005; Ketchen *et al.*, 2007; Greenley, 1995). In particular, some contend that too much attention has been paid to listening to the customer, and characterise this as narrow and myopic (Atuahene-Gima *et al.*, 2005). This view implies that being market oriented may detract from innovation and firms may lose their position of industry leadership (Berthon *et al.*, 1999; Christensen and Bower, 1996). Importantly, in this domain some have raised the contention that innovation orientation has the potential to create customers and is argued to be a more important contributor to firm performance than market orientation (Berthon *et al.*, 2004; Deshpande and Farley, 2004). As such, this small but important literature which raises concerns about the role of MO in firm performance versus the role of innovation orientation gives credence to further attention being paid to these constructs and their role in firm performance differentials.

Further, Moorman and Rust (1999, p. 181) contend that “marketing as a management philosophy and orientation, espoused and practiced throughout the corporation, is seen increasingly as critical to the success of any organization”. This raises the possibility of marketing orientation and not market orientation as an underdeveloped focus of marketing scholars. Unlike market orientation, which is about sensing the market through staying close to the customer (Slater and Narver, 1998), marketing orientation plays a key role in connecting the customer with the firm (Moorman and Rust, 1999; Verhoef and Leeflang, 2009). The customer-linking role of marketing addresses the extent to which marketing is able to translate customer needs into customer solutions and the extent to which it demonstrates the criticality of external customers and their needs to other functional areas in organizations (Hauser *et al.*, 1996; Verhoef and Leeflang, 2009).

In the context of market and marketing orientations, a recent meta-analysis shows that more attention should be given to marketing orientation and the corresponding performance implications of enacting a marketing orientation instead of market orientation activities, especially in developing economies (Ellis, 2005, 2006). In this sense we raise the contention that to achieve superiority in performance, firms need to simultaneously focus on marketing and innovation, two key functions as outlined by Drucker (1974) and Han *et al.* (1998), which act as a means of connecting to the customer.

Recent meta-analytical studies (Ellis, 2006; Kirca *et al.*, 2005; Grinstein, 2008; Shoham *et al.*, 2005) suggest that research on market orientation should shift its focus, moving towards the study of combinations of strategic orientations such as marketing and innovation orientations in explaining performance differentials between firms. Therefore, in this study, we seek to contribute to the literature in two ways. First, we examine how marketing and innovation together contribute to customer-centric value (e.g. customer equity and brand performance). This research issue is important as marketing managers are being required to demonstrate the profitability of their marketing activities down to the level of the individual customer, as well as on an ongoing basis (Ramani and Kumar, 2008). Indeed, on this point customers are now

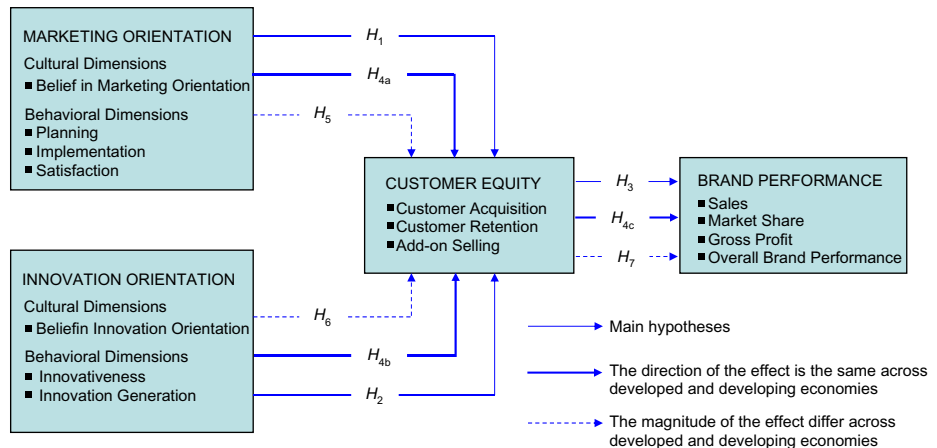
identified as one of the most important stakeholder groups and intangible assets for firms in the creation of revenue streams (Deshpande and Farley, 1998; Walsh *et al.*, 2009). On this point, the value of such assets can be seen in the claims that more than half of the value of a firm is composed of intangible assets (Hogan *et al.*, 2002; Nagar and Rajan, 2005), and as such, customer assets significantly influence financial performance (Fornell *et al.*, 2006; Aksoy *et al.*, 2008; Nagar and Rajan, 2005). Importantly, while much of the marketing literature has emphasised financial performance in the form of profit and sales we contend that customer-associated performance should be given a greater priority. Our focus on customer-centric value reflects the fact that managers are increasingly turning their attention to linking their actions to the realisation of various non-financial performance indicators such as employee satisfaction, customer satisfaction, and customer loyalty (Nagar and Rajan, 2005).

Second, despite the growing focus on customer-centric value (Ambler *et al.*, 2002; Blattberg *et al.*, 2001; Bolton *et al.*, 2004; Gupta *et al.*, 2006; Rust *et al.*, 2004), the current body of knowledge has largely been developed in the context of developed countries. Taking this point into account and heeding the calls by many academics, we pursue the cross-national validation of our theory to advance knowledge of marketing phenomena (Burgess and Steenkamp, 2006; Deshpande *et al.*, 2000; Deshpande and Farley, 2004; Ellis, 2006). Importantly, the drivers of customer equity, their relevance, importance, and benefits may vary across different business environments (e.g. developed versus developing). However, to date, there has been no study providing a direct cross-national comparison of the antecedents of customer equity and brand performance.

Addressing the above challenges, the purpose of this paper is to examine the relationship of marketing and innovation orientations with customer equity and brand performance, especially by providing empirical evidence to validate the universal applicability of our theoretical contention in regard to their relationships in the context of both developed and developing economies.

### Conceptual framework

Our conceptual model as shown in Figure 1 specifies the relationships among the two building blocks of our theory: customer-centric value drivers



**Figure 1.**  
Customer-centric value creation model with hypothesized relationships

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(marketing and innovation orientations) and customer-centric value (customer equity and brand performance). We conceptualise marketing and innovation orientations as being both firm culture and specific behaviours and relate them to customer equity and brand performance to explain how firms promote and act on marketing and innovation to create customers, keep them, and increase add-on selling to them, and gain superior brand performance. In the following sections, we discuss the two building blocks of the conceptual model and develop the hypothesised relationships.

*Customer-centric value: customer equity and brand performance*

Customer equity and brand performance are considered the two customer-centric indicators of customer-centric value. The first represents the value of the customer to the firm, while the latter refers to the performance of customer-based assets manifested in the marketplace as the firm's brand performance. These two indicators represent value outcomes that ultimately demonstrate firm success.

*Customer equity.* There exist two dominant approaches in the conceptualisation of customer equity. The first, premised on marketing action perspective, views customer equity as being made up of value equity, brand equity, and retention equity (Rust *et al.*, 2000). The second, premised on marketing process perspective, views customer equity as built around customer acquisition, customer retention, and add-on selling (Blattberg *et al.*, 2001). In this study, we adopt the second approach in conceptualising customer equity. This approach is in line with the hallmark of customer-centricity of creating customers, keeping them, and increasing add-on selling to them.

*Brand performance.* Brands are seen as the most valuable assets of many firms (Ambler *et al.*, 2002; Grace and O'Cass, 2005; MillwardBrown Optimor, 2007). We see brands as customer-based assets, in that customers buy brands and the performance of these assets in the marketplace reflects the tendency of the customer to stick with brands (e.g. how many, how often, how much customers buy). Further, brands reflect the complete experience of customers with products (Keller and Lehmann, 2006) and they value their relationships with their brands (McAlexander *et al.*, 2002).

The notion of brand performance resides in the marketplace strength of a firm's brand as evidenced by its sales, market share, sales growth, and profitability (Chaudhuri and Holbrook, 2001). As such, brand performance is defined as the relative measure of the brand's success in the marketplace. When one focuses on a specific brand and examines its market share, sales growth, and profitability, then one is perhaps focusing on a level more attuned to marketing, as opposed to firm performance which is impacted on by many factors as well as marketing and more in line with the result of creating a customer, as customers buy brands.

*Customer-centric value drivers: marketing and innovation orientations*

While acknowledging the important role of other business orientations (e.g. market, production, selling orientations, Jaworski and Kohli, 1993; Narver and Slater, 1990), we place our emphasis on marketing and innovation orientations as key drivers of customer-centric value. This proclamation is in line with, and extends the untested view by Drucker (1954), that marketing and innovation are the two key functions that help a business create a customer. With the increasing focus on creating superior customer equity, marketing and innovation behaviours have become major concerns among managers (Sheth *et al.*, 2000).

A contemporary approach to the conceptualisation of business orientations postulates that a business orientation should contain both cultural and behavioral dimensions (Gray and Hooley, 2002). For instance, in an attempt to bridge the behavioral approach (Jaworski and Kohli, 1993) and cultural approach (Narver and Slater, 1990), Zhou *et al.* (2008) conceptualise market orientation as consisting of both cultural and behavioral elements. As such, we argue that the cultural notion of business orientation manifests itself in the behavioral business orientation, and importantly both are essential components of business orientation where culture is considered as the architect, and behaviour is considered as the engineer. Cultural business orientation reflects the intangible aspect of business orientation – an important resource for organizations – while the behavioral represents the observable reality of business orientation. As such, in this study we adopt the cultural-behavioral approach to conceptualise marketing and innovation orientations as consisting of both culture-driven and behaviour-producing characteristics.

*Marketing orientation.* Marketing is identified as a key business function that provides a distinct prescription for running a business successfully (Drucker, 1954). Specifically, Moorman and Rust (1999, p. 195) claim that “marketing is best viewed as the function that manages connections between the organization and the customer”. A marketing orientation recognizes the importance of customer centricity, but it also recognizes that a firm is free and proactive in defining who its customers are. A marketing orientation refers to the organization’s willingness to adopt the marketing concept and to utilize a marketing mind set or philosophy in its business endeavours. As illustrated in Table I, over the last six decades, the marketing concept has undergone a dramatic evolution from “to-market” within 1930-1980 (distribution channels) to “market-to” within 1980-2000 (management of customers and markets), and to “market-with-and-among” within 2000-onward (collaboration with customers and third parties) (Lusch, 2007). The earliest definition of marketing indicates the producer-to-consumer practice that places the emphasis on closing the gaps between production and consumption via channels and regulations. From 1980 to 2000, marketing has been approached as a way of doing business with emphasis placed on planning and executing the four P’s to create exchanges that satisfy individual and organizational purposes (Lusch, 2007). This revised definition of marketing in 1985 reflects a marketing management focus.

However, recently the focus of marketing has shifted in response to marketplace challenges such as, globalization, marketplace turbulence, technology breakthroughs, and increasingly sophisticated and value-conscious customers. As such, marketing is argued to need further refinement, away from marketplace to the customer, from transactions to interactions, from product-centered logic to service-centered logic, and from exchanges to long-term relationships (Sheth *et al.*, 2000; Vargo and Lusch, 2004). These shifts are reflected in the AMA 2004s definition of marketing as a “function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders” (Lusch, 2007) and more recently a new definition indicating that “marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (AMA, 2007). This latest definition reflects an emphasis placed on value and value creation.

School of thought	Definition of marketing	Role of marketing
To-market (1930-1980)	Marketing refers to “those business activities involved in the flow of goods and services from production to consumption” (AMA, 1937) “Marketing is the performance of business activities that direct the flow of goods and services from producers to consumers” (AMA, 1960)	Closing the gaps between production and consumption via channels and regulations
Market-to (1980-2000)	“Marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives” (AMA, 1985)	Management of customers and markets
Market-with-and-among (2000-onward)	“Marketing is an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in way that benefit the organization and its stakeholders” (AMA, 2004) “Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (AMA, 2007)	Collaboration with customers and third parties

Source: Adapted from Lusch (2007)

**Table I.**  
The evolution of marketing definitions over the last six decades

Drawing on the above definitions of marketing by AMA in 1985, 2004, and 2007 (Lusch, 2007) and the definition of the marketing concept by Houston (1986) and taking the above discussion into account, marketing orientation is defined here as an organizational culture which holds the belief that behaviours aimed at planning and executing the marketing mix, satisfying customers and building relationships to the benefit of all stakeholders are of paramount importance[1].

*Marketing orientation – customer equity.* The extant literature has documented that marketing-related characteristics and phenomenon (e.g. market orientation, marketing resources, and marketing capabilities) are contributors to firm success (Jaworski and Kohli, 1993; Fahy *et al.*, 2000; Hooley *et al.*, 2005). For example, market orientation is positively associated with outcomes such as customer satisfaction and customer loyalty (Kirca *et al.*, 2005). However, the current state of the literature provides the basis for an examination the relationship between marketing orientation and customer equity. Marketing orientation serves as a link between the firm and the customer (Moorman and Rust, 1999) and provides the philosophical basis for the firms’ business model in this context. In particular, being marketing oriented enables the firm to develop products that suit customers. In addition, it facilitates setting prices acceptable to customers, addressing one of the most important issues that customers are concerned with (Dawar and Parker, 1994), thus enabling the firm manage its links to customers.

The firm can also use its channels of distribution as a means to support its focus on customer needs (Day, 1994), as well as, the presentation of the product to customers through attractive advertising and tailored promotion which also plays a key role in connecting the firm to customers (Moorman and Rust, 1999). With effective promotion, the firm is able to communicate the benefits of products to potential customers, as well as reminding customers about the benefits of products they already use (Vorhies *et al.*, 1999). These activities are underpinned by an appropriate business philosophy which in our terms is marketing orientation (as opposed to a production orientation). As a result, marketing-oriented firms are more likely to attract more customers, keep them, and increase add-on selling to them. Therefore:

*H1.* Marketing orientation is positively related to customer equity.

*Innovation orientation.* Along with marketing, innovation is another key business function that enables a firm to achieve its purpose: to create a customer (Drucker, 1954). Researchers who relate innovation to behavioral activities usually find new ideas as the plausible description of innovation. For example, Thompson (1965) argues that innovation orientation refers to the generation, acceptance and implementation of new ideas. The successful implementation of new ideas within an organisation refers to innovation (Amabile *et al.*, 1996; Damanpour, 1987). According to Hurley and Hult (1998), innovations can be classified into technical innovations (product and/or services, and production process technology) and administrative innovations (managerial, market, and marketing).

From the perspective of organisational culture, innovation orientation refers to innovativeness, which is the notion of openness to new ideas as an aspect of a firm's culture (Hurley and Hult, 1998). Innovativeness refers to a firm's propensity to change through adopting new technologies, resources, skills, and administrative systems (Zhou *et al.*, 2005). Innovativeness alludes to an innovation-oriented belief, which encourages and fosters the adoption of new ideas throughout the firm. Moreover, the cultural aspect of innovation orientation is also reflected as being innovative, which refers to a firm's willingness to change.

Given the preceding discussion on innovation orientation, it is suggested that innovation orientation is a combination of innovation-oriented beliefs and being innovative, which refers to the innovative-culture aspect of the firm (Hurley and Hult, 1998) and generating new ideas, which refers to a set of innovative behaviours (Amabile *et al.*, 1996; Damanpour, 1987; Thompson, 1965). Thus, we define innovation orientation as a corporate culture that holds the belief that innovativeness (generating new ideas) pertaining to technical innovations (product and/or services, and production process technology) and non-technical innovations (managerial, market, and marketing) are of paramount importance.

*Innovation orientation – customer equity.* An examination of the extant literature reveals that innovation-related characteristics (e.g. number of innovations, innovativeness, and innovation capabilities) are associated with firm performance (Damanpour, 1987; Han *et al.*, 1998; Hurley and Hult, 1998; Deshpande *et al.*, 1993). However, the current body of work in these areas provides the basis for examining the relationship between innovation orientation and customer equity. Firms that are innovation-oriented often create leaps in their market offerings, where customers seek out their products (Kim and Mauborgne, 1997). The success of innovation-oriented

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Japanese firms against US competitors in the 1980s can be explained by their heavy focus on innovation. Indeed, innovation-oriented firms continuously develop leading edge positions based on their technology breakthroughs, not only satisfying current customer needs, but also creating value offerings that go beyond customers current expectations in their efforts to keep customers and attract new ones.

Innovation-oriented firms who have a high level of innovative features in their market offerings are more likely to achieve higher levels of customer acquisition and customer retention than competitors who do not. They can provide and customise their market offerings in a manner that makes the offerings more valuable to the customer than competitors' offerings. As a result, innovation-oriented firms are more likely to attract customers at a higher rate, be able to keep them, and increase add-on selling to them. Therefore:

*H2.* Innovation orientation is positively related to customer equity.

*Customer equity – brand performance.* Prior research has identified a significant positive relationship between customer equity and firm success (Rust *et al.*, 2004). However, the current literature provides the basis with which to examine the relationship between customer equity and brand performance. Customers drive the success of brands because they serve as the tangible profit engine for brands to monetise their brand value (Leone *et al.*, 2006). As such, firms with a high level of customer equity are argued to possess strong brands. Brand performance is a relative measurement of brand success and it is often evidenced in sales growth, market share, and profitability in the marketplace (O'Cass and Ngo, 2007). Further, brands with greater purchasing loyalty (expressed in customer retention) do exhibit greater market shares according to some researchers (Ehrenberg *et al.*, 1990). Further, a high level of customer retention produces superior profitability as loyal customers are willing to pay more for the brand (Chaudhuri and Holbrook, 2001). As a result, customer equity is likely to contribute positively to brand performance. Thus:

*H3.* Customer equity is positively related to brand performance.

*Cross-national generalisability of customer-centric value drivers and customer-centric value.* Developing global generalisations of marketing knowledge has received increasing attention (Burgess and Steenkamp, 2006; Deshpande and 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. Theoretically, the generalisability of marketing knowledge can be strong or weak. Strong cross-national generalisability implies that the relation between constructs is the same across countries in terms of direction and magnitude. In contrast, weak cross-national generalisability means that while the direction of the relation between constructs is the same across countries, the magnitude of the effect may differ (Burgess and Steenkamp, 2006). We believe that weak cross-national generalisability of marketing knowledge is a realistic assumption when comparing the relationships between two constructs across developed and developing countries. This is because of the heterogeneity between developed and developing economies on institutional characteristics such as socioeconomic system (e.g. dynamics, demographics, within-country diversity), cultural system (e.g. beliefs, attitudes,



habits, norms, and behaviours), and regulative systems (e.g. rule of law and stakeholder influence on corporate governance) (Burgess and Steenkamp, 2006).

Further, in line with this stream of research, we are interested in examining whether the linkages between marketing orientation, innovation orientation, customer equity, and brand performance are consistent across developing and developed economies. In the existing small but important body of cross-national research some scholars have found that firm characteristics such as organisational culture, market orientation, and innovativeness has a pattern of consistently positive effects on performance (Deshpande and Farley, 2004; Ellis, 2006). On this point, we are interested in examining if a given level of marketing and innovation orientations provide lesser or greater benefits to firms in developing versus developed economies. Developing economies are typically characterised by rapid economic and socio-political change, while developed economies are characterised by stable growth and intense competition (Burgess and Steenkamp, 2006; Ellis, 2006). As such, in developing countries, performance may be more closely tied to the firm's management of the marketing mix (Ellis, 2006; Hooley *et al.*, 1996). Firms in developing economies need to place more attention on marketing orientation to achieve superiority in business performance (Ellis, 2005). For example, most managers in Vietnamese firms appear to have embraced the use of the marketing mix as management tool (Farley *et al.*, 2008).

Further, given the stable growth and intense competition in developed economies, marketing practices are less important than other performance-enhancing activities (e.g. innovation orientation) (Deshpande and Farley, 2004). In order to attract new customers and retain existing ones, firms in developed economies need to be innovative, being first to market with new products and services, and being at the cutting edge of technology (Deshpande and Farley, 2004). In addition, the adoption of advanced technologies, and the knowledge of managers about innovations is limited in most developing countries compared to that in developed. For example, technologies at the end of their product life cycle are often transferred to and utilized in developing countries (James, 2005). Technologies that are obsolete in developed countries (old to the industry) can be seen as advanced in developing (new to that marketplace). As firms in developing countries generally possess lower financial and technological affluence in comparison to those in developed countries, they may have limited adoption of advanced technologies to better meet the needs of customers (Malhotra *et al.*, 2005).

Based on the above view, along with the findings from past research by Deshpande and Farley (2004) and Ellis (2006) we argue that there will be a pattern of consistent and positive relationships for marketing and innovation orientations with customer equity. Importantly, we predict firms in developing countries will derive a greater contribution than those in developed countries from marketing orientation to customer equity and customer equity to brand performance and vice-versa in relation to innovation orientation. In this sense we are in line with Ellis's (2006) advice that developing countries firms can reap the benefits of marketing without necessarily being market oriented. Therefore, we suggest that the relationship of innovation orientation with customer equity is stronger in developed than in developing business settings which is also in line with the conclusion by Deshpande and Farley (2004, p. 18) that "innovativeness appears to be more important in the industrial world".

Finally, when focusing on key organisational characteristics it is important to examine the extent that a given level of customer equity provides lesser or greater

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benefits to firms in developing versus developed economies. Customers in developed business environments are potentially more sophisticated than those in developing concerning their expectation, preferences and needs. For example, customers in developing countries have often not fully satisfied lower level needs, while customers in developed countries are more likely to have satisfied those needs and seek to fulfil higher order needs (Malhotra *et al.*, 2005). Thus, firms that achieve high levels of customer equity provide more competitive advantage over rivals in developing countries than that do in developed countries in increasing the customer's cost of switching, where customers stay with the brand. Thus:

- H4.* The relationship between (a) marketing orientation and customer equity (b) innovation orientation and customer equity, and (c) customer equity and brand performance will be statistically significant in both developed and developing business environments.
- H5.* The relationship between marketing orientation and customer equity will be significantly stronger in developing countries than in developed countries.
- H6.* The relationship between innovation orientation and customer equity will be significantly stronger in developed countries than in developing countries.
- H7.* The relationship between customer equity and brand performance will be significantly stronger in developing countries than in developed countries.

## Method

### *Data collection*

*Country-sample selection.* We designed an empirical study to collect data from manufacturing firms in Australia and Vietnam. Although the selection of the two samples was based primarily on convenience, we considered differences in economic development that might affect marketing and innovation-related characteristics in building brand success as an important criterion. As such, Australia was selected as an example of a developed economy, while Vietnam was selected as a transitional and developing economy. Australia has been ranked 19th overall in the world's most competitive economies according to *The Global Competitiveness Report 2006-2007*, while Vietnam is seen as an emerging economy with a growth rate of 9 percent over the last decade placing it second in Asia, after China (World Economic Forum, 2006). As such, Vietnam represents a fascinating opportunity for Western businesses interested in investing in a country rich in economic opportunity (Ralston *et al.*, 1999) and a real life laboratory for scholars interested in marketing in emerging economies. Compared to other Asian countries such as China, India, and Thailand, Vietnam has a low per capita income and low savings rate while it has a relatively high literacy rate (Farley *et al.*, 2008). These points make it quite unique in an Asian context and one worth studying more intently.

*Control variables.* In an attempt to ensure homogeneity in respondents, we controlled for two key variables. First, we selected firms that are medium ( $\geq 21$  but  $\leq 200$  full-time employees) and large ( $\geq 201$  full-time employees) in size. Second, position titles of selected respondents were senior marketing managers because of their specific knowledge and expertise of how their brands are being managed, the business orientations and performance of the brand (Slater *et al.*, 2007).

*Australian data collection.* A convenience sample of 1,000 Australian firms was selected from the IncNet Business Database. We conducted an online survey that enabled respondents to complete the survey at their convenience. The use of online surveys have been used in marketing research in developed business environments because of their relative low cost and fast response rates (Ilieva *et al.*, 2002). The online survey was completed by 301 respondents, for an average response rate of 30 percent.

*Vietnamese data collection.* We selected a convenience sample of 400 Vietnamese firms listed in the DPI HoChiMinh City Business Directory. An online survey was not employed as it is not a favorable data collection instrument in Vietnam. Instead, we adopted a drop-and-collect survey as this technique is encouraged in developing countries such as Vietnam (Ibeh and Brock, 2004) where interpersonal interactions are widely preferred as modes of information exchange (Hofstede, 1980). Following a drop-and-collect survey administration method modified from the framework of Ibeh *et al.* (2004), the Vietnamese data sample consisted of 259 usable responses producing an effective response rate of 60 percent.

### *Measures*

*Item generation and face validity.* We adopted a two-stage procedure for measurement instrument development in this study. In stage one, an initial pool of 80 items were generated to capture marketing orientation (24 items), innovation orientation (34 items), customer equity (18 items), and brand performance (four items). These items were generated from the researchers' expertise and prior published work (Borden, 1984; Lusch, 2007; Hurley and Hult, 1998; Amabile *et al.*, 1996; Damanpour, 1987; Thompson, 1965; Blattberg *et al.*, 2001; Chaudhuri and Holbrook, 2001; O'Cass and Ngo, 2007). In stage 2, 12 expert judges from the marketing discipline were given the definition of each construct, corresponding items, and a set of instructions for judging. They were asked to rate each item as either "not representative", "somewhat representative", or "very representative" of the construct definition. Adopting decision rules for removing and/or keeping representative items developed from a synthesis of the sumscore and complete approaches (Hardesty and Bearden, 2004), we produced a refined item pool of 52 items, which were then critically examined by a highly reputed scholar in marketing to ensure the most parsimonious set of measures (Low and Lamb, 2000), resulting in the 52 items being kept. We then conducted a pretest via in-depth interviews in a similar manner to Calantone *et al.* (1996), with five marketing executives, making only minor refinements to wording, resulting in the final survey of 52 items plus firmographics.

*Measures.* The marketing orientation scale consisted of 19 items capturing the four focal components of this construct (e.g. marketing-oriented beliefs, marketing planning, marketing implementation, and marketing satisfaction). These items were developed from the earlier work of Borden (1984) and Lusch (2007). All items were measured via a seven-point scale with scale poles ranging from "strongly disagree" to "strongly agree".

Innovation orientation was measured via a 19-item scale. Building on the work of Hurley and Hult (1998), Amabile *et al.* (1996), Damanpour (1987) and Thompson (1965), items were developed to tap into three focal components of the construct (innovation-oriented beliefs, innovation propensity, and innovation generation). These components pertain to technical innovations (products and/or services, and production process technology) and non-technical innovations (managerial, market,

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and marketing). Items were measured via a seven-point “strongly disagree” to “strongly agree” scale.

The customer equity scale consisted of ten items capturing the three components of this construct (customer acquisition, customer retention, and add-on selling equity) as defined above. While the extant literature has largely measured customer equity using longitudinal data (Blattberg *et al.*, 2001; Rust *et al.*, 2000), we adopted a cross-sectional measurement approach. The central logic being that cross-sectional research focuses on the firm level and also allows greater comparability across industries, with varying standards of acceptable performance. Customer equity is defined as the firm’s subjective assessment of the value of the customer to the firm, consisting of three subcomponents: customer acquisition – the interactions that occur between the firm and the customer from the time of first contact until the time that the customer makes a repeat purchase; customer retention – customer’s tendency to stick with the firm; and add-on selling – the activity associated with selling additional products and services to current customers. The items were derived by building on the work of Blattberg *et al.* (2001), and measured with a seven-point scale anchored by “very low” and “very high”.

*Brand performance.* Brand performance was measured via perceptual measures of market share, total sales, and gross profit that have been widely used in marketing research as reliable indicators of brand success (Chaudhuri and Holbrook, 2001; O’Cass and Ngo, 2007). Respondents were asked to rate the overall perception of the performance of their identified brand, total sales, market share, and gross profit in comparison to that of competitors rating on a seven-point scale from very poor to very good for the specific brand as identified above. To increase its applicability to branding, specific instructions were provided to respondents to think about the specified marketed brand. For example, to orient the respondent the following instruction was given: please complete this questionnaire in relation to one business unit only and for one brand. A further orienting instruction was provided such as those used for brand performance measures, which instructed the respondent to: remember to think of the performance of your identified BRAND.

### Data equivalency issues

In this study, cross-cultural equivalency issues (e.g. calibration, conceptual, translation, and metric) were addressed during the research design and the preliminary analysis stages (Sin *et al.*, 1999). Regarding calibration equivalence, all items were anchored by a seven-point Likert scale; a format used successfully on Vietnamese and Australian managers as respondents on marketing- and innovation-oriented research (Ngo and O’Cass, 2009; O’Cass and Ngo, 2010). Craig and Douglas (2000) indicate that conceptual equivalence is concerned with the interpretation that respondents place on stimuli (e.g. items, objects) and whether these exist or are expressed in similar ways in different countries. We undertook a program of manager interviews in Vietnam and Australia following a procedure outlined by Hult *et al.* (2004). IN particular, we used ten marketing managers in each country and a pilot study of 30 marketing managers to assess the quality of the measures and conceptual equivalence.

To satisfy translation equivalence, a forward and backward translation was employed in this study to ensure comparable versions of the survey in English and Vietnamese. Specifically, the survey was initially developed in English. Two independent certified translation institutions were employed to conduct the forward (English to Vietnamese)

and backward (Vietnamese to English) translations. A comparison between the two translated versions was made for equivalency 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.

Variation in measure reliability is a challenge in cross-cultural marketing research and on this point Davis *et al.* (1981) suggests that what might first appear to be a cross-national difference could turn out to be solely a reflection of variation in the reliability of the underlying measurements employed in the analysis. The measurement equivalence was assessed by calculating Cronbach  $\alpha'$  and their 95 percent confidence intervals. Evidence of measurement equivalence exists when Cronbach  $\alpha'$  fall in the overlapping ranges of the two samples (Mintu-Wimsatt and Graham, 2004). As shown in Table II, the Cronbach  $\alpha'$  of all constructs (except for the innovation orientation) for both samples overlapped at 95 percent of confidence intervals, suggesting acceptable equivalence. This result is comparable to that obtained by Mintu-Wimsatt and Graham (2004) and met the criterion they adopted, but we adopted a more stringent threshold for confidence intervals[2].

**Data analysis**

We used partial least squares (PLS) (specifically PLS-GRAPH v.3.0) to assess the adequacy of measurement models and the predictive relevance of the conceptual model, and thereby test the hypothesized relationships as shown in Figure 1. We chose PLS for three reasons. First, PLS is a variance-based structural equation modelling technique that is more advantageous than covariance-based approaches when measures are not well established (Fornell and Bookstein, 1982). In this context, PLS provides measurement assessment which is essential in our study as we developed a number of new and refined measures (Dawes *et al.*, 1998). Second, as PLS focuses

*Cronbach's  $\alpha$  with 95 percent confidence interval (CI) of multi-Item measures*

	Vietnam (n = 259)		Australia (n = 301)	
	$\alpha$	95 percent CI	$\alpha$	95 percent CI
Innovation orientation	0.92	0.91-0.93	0.95	0.94-0.96
Marketing orientation	0.94	0.93-0.95	0.94	0.93-0.95
Customer equity	0.87	0.84-0.89	0.85	0.82-0.87
Brand performance	0.86	0.83-0.89	0.86	0.83-0.88

*Evidence of discriminant validity for constructs*

Constructs	1	2	3	4
Australian sample				
1. Marketing orientation	0.69 (0.95)			
2. Innovation orientation	0.65*	0.72 (0.95)		
3. Customer equity	0.45*	0.42*	0.66 (0.88)	
4. Brand performance	0.38*	0.30*	0.33*	0.84 (0.90)
Vietnamese sample				
1. Marketing orientation	0.71 (0.95)			
2. Innovation orientation	0.66*	0.65 (0.93)		
3. Customer equity	0.39*	0.29*	0.69 (0.90)	
4. Brand performance	0.30*	0.24*	0.45*	0.84 (0.91)

**Table II.**  
Reliabilities and  
discriminant validity

**Notes:** \* $p < 0.01$ ; diagonal entries are square root of AVE and composite reliabilities in bracket; others are correlation coefficients

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on the explanation of variance using ordinal least square, this technique is better suited for the investigation of relationships in a predictive rather than a confirmatory fashion (Fornell and Bookstein, 1982). In this study the primary concern is with maximizing the prediction of dependent endogenous constructs including customer equity and brand performance. Finally, as PLS allows the examination of measures and theory simultaneously (Fornell and Bookstein, 1982), it was used for examining the measurement properties and hypotheses which provides specification through two sets of linear equations namely outer-measurement model and inner-structural model. The outer-measurement model specifies the relationships between observed indicators and their respective constructs, while the inner-structural model specifies the relationships between constructs (Falk and Miller, 1992; Hulland, 1999). In addition, we used bootstrapping with replacement, as the estimation procedure to assess the significance of the factor loadings of the scales and the significance of path coefficients (parameter estimates) in the research model (Li *et al.*, 2010).

#### *Outer-measurement models*

We used individual indicator loadings, composite reliability, and average variance explained (AVE) to assess the adequacy of each outer-measurement model. As shown in Table III, all the reflective indicators in the outer-measurement models have loadings ranging between 0.59 and 0.93 in the Australian sample and 0.53 and 0.91 in the Vietnamese sample. All indicator loadings are greater than the recommended 0.5 (Hulland, 1999), except for MARKO-6 and IO-7 in the Vietnamese sample, which demonstrate marginal but useable loadings of 0.45 and 0.48, respectively. These results indicate that the reflective indicators have satisfactory explanatory power to the measurement models in both samples. In addition, all composite reliabilities, ranging from 0.81 to 0.95 in Australian sample and 0.84 to 0.95 in Vietnamese sample, fall within generally accepted limits (Nunnally, 1978).

#### *The significance of outer-measurement models*

We first assessed the significance of outer-measurement models by computing bootstrapped *t*-values. In this study, bootstrap *t*-values were computed on the basis of 500 bootstrapping runs, with sub-samples set at 70 percent of the number of cases in each dataset[3]. The reflective outer-measurement models have acceptable bootstrap critical ratios (CRs) ( $> 1.96$ ), except for item MARKO-6 in the Vietnamese sample with a bootstrap *t*-value of 0.69.

The convergent validity of the outer-measurement models was computed by calculating the composite reliability and AVE. The assessment of convergent validity using composite reliability follows Nunnally's (1978) 0.7 threshold, while Fornell and Lacker's (1981) criteria for a satisfactory convergent validity is that the AVE should exceed 0.50. As reported in Table III, results of the analysis for convergent validity indicate that the four reflective outer-measurement models meet the Nunnally (1978) criteria of higher than 0.70 and Fornell and Lacker (1981) criteria of higher than 0.50, exhibiting satisfactory convergent validity. Constructs including marketing orientation (Australian sample), innovation orientation (Vietnamese sample), and customer equity (both samples) demonstrate a marginal but acceptable AVE values of 0.48, 0.42, 0.43, and 0.47, respectively, which are higher than a benchmark of 0.4 which

Components and manifest variables	Australian model		Vietnamese model	
	Loading	CR	Loading	CR
<i>Marketing orientation (MARKO)</i>	AVE: 0.48, reliability: 0.95		AVE: 0.51, reliability: 0.95	
MARKO belief	AVE: 0.64, reliability: 0.88		AVE = 0.69, reliability = 0.90	
MARKO-1 our business holds the belief that planning the marketing mix is of paramount importance	0.89	67.11	0.86	39.39
MARKO-2 our business holds the belief that executing the marketing mix is of paramount importance	0.90	85.49	0.87	54.64
MARKO-3 our business holds the belief that satisfying customers is of paramount importance	0.69	16.10	0.82	37.73
MARKO-4 our business holds the belief that building exchange relationships is of paramount important	0.71	14.88	0.77	25.81
MARKO planning	AVE: 0.70, reliability: 0.92		AVE: 0.54, reliability: 0.84	
MARKO-5 our business endeavors to plan its product lines strategy (quantities, design, etc.)	0.81	23.62	0.76	21.77
MARKO-6 our business endeavors to plan its target market strategy (whom, where, when, and in what quantity)	0.88	53.68	0.45	0.97
MARKO-7 our business endeavors to plan its pricing strategy (price level and specific prices)	0.83	29.08	0.83	47.36
MARKO-8 our business endeavors to plan its distribution channels strategy	0.88	51.26	0.84	35.09
MARKO-9 our business endeavors to plan its marketing communication strategy	0.77	22.88	0.77	23.44
MARKO implementation	AVE: 0.70, reliability: 0.92		AVE: 0.69, reliability: 0.92	
MARKO-10 our business has implemented its product lines strategy (quantities, design, etc.)	0.85	31.31	0.75	17.88
MARKO-11 our business has implemented its target market strategy (whom, where, when, and in what quantity)	0.86	40.07	0.85	43.34
MARKO-12 our business has implemented its pricing strategy (price level and specific prices)	0.83	28.25	0.85	44.81
MARKO-13 our business has implemented its distribution channels strategy	0.85	34.72	0.86	26.41
MARKO-14 our business has implemented its marketing communication strategy	0.80	24.67	0.80	33.02
MARKO satisfaction	AVE: 0.55, reliability: 0.86		AVE: 0.64, reliability: 0.90	
MARKO-15 our business endeavors to satisfy customers via our products and/or services	0.64	14.41	0.72	19.64
MARKO-16 our business endeavors to satisfy customers via our pricing strategy	0.70	16.97	0.85	43.88
MARKO-17 our business endeavors to satisfy customers via our distribution channels strategy	0.80	33.17	0.88	58.17

(continued)

**Table III.**  
Measurement model results

Components and manifest variables	Australian model		Vietnamese model	
	Loading	CR	Loading	CR
MARKO-18 our business endeavors to satisfy customers via our marketing communication strategy	0.79	33.75	0.76	20.00
MARKO-19 our business endeavors to build exchange relationships based on mutual benefits to/with our stakeholders	0.75	24.09	0.78	26.99
<i>Innovation orientation (IO)</i>	AVE: 0.52, reliability: 0.95		AVE: 0.42, reliability: 0.93	
IO belief	AVE: 0.71, reliability: 0.92		AVE: 0.60, reliability: 0.88	
IO-1 our business holds the belief that technical innovations are of paramount importance	0.74	21.90	0.59	8.80
IO-2 our business holds the belief that non-technical innovations are of paramount importance	0.69	19.87	0.73	15.82
IO-3 our business holds the belief that innovativeness is of paramount importance	0.93	88.09	0.87	39.75
IO-4 our business holds the belief that being innovative is of paramount importance	0.90	43.18	0.81	23.25
IO-5 our business holds the belief that generating new ideas is of paramount importance	0.91	94.70	0.86	31.08
<i>Innovation propensity</i>	AVE: 0.57, reliability: 0.90		AVE: 0.47, reliability: 0.86	
IO-6 our business endeavors to be innovative in product and/or service development	0.73	21.12	0.68	16.12
IO-7 our business endeavors to be innovative in production process development	0.59	10.98	0.48	6.04
IO-8 our business endeavors to be innovative in managerial practices	0.80	25.32	0.77	22.50
IO-9 our business endeavors to be innovative in market development	0.82	31.42	0.78	25.46
IO-10 our business endeavors to be innovative in marketing system	0.86	57.66	0.74	17.04
IO-11 our business endeavors to be innovative in technical activities	0.65	13.33	0.61	8.63
IO-12 our business endeavors to be innovative in non-technical activities	0.80	31.67	0.71	14.41
<i>Innovation generation</i>	AVE: 0.59, reliability: 0.91		AVE: 0.54, reliability: 0.89	
IO-13 generating new ideas pertaining to the development of new products/services	0.68	15.52	0.79	30.99
IO-14 generating new ideas pertaining to production processes	0.65	13.11	0.53	6.68
IO-15 generating new ideas pertaining to managerial practices	0.82	32.17	0.83	38.94
IO-16 generating new ideas pertaining to market development	0.86	35.44	0.82	27.48
IO-17 generating new ideas pertaining to marketing system	0.85	51.28	0.74	18.30

(continued)

Table III.



Components and manifest variables	Australian model		Vietnamese model	
	Loading	CR	Loading	CR
IO-18 generating new ideas pertaining to technical innovations	0.68	14.68	0.66	11.09
IO-19 generating new ideas pertaining to non-technical innovation	0.81	33.55	0.70	13.70
<i>Customer equity (CE)</i>	AVE: 0.43, reliability: 0.88		AVE: 0.47, reliability: 0.90	
Customer acquisition	AVE: 0.64, reliability: 0.84		AVE: 0.57, reliability: 0.80	
CE-1 acquisition margin (the profit on first purchase by customers)	0.84	31.08	0.78	18.35
CE-2 acquisition expenditure (costs of customer acquisition activities)	0.65	7.53	0.65	12.99
CE-3 customer acquisition equity (the difference between acquisition margin and acquisition expenditure)	0.89	43.32	0.81	20.08
Customer retention	AVE: 0.51, reliability: 0.81		AVE: 0.59, reliability: 0.85	
CE-4 average customer retention rate	0.68	11.92	0.80	21.60
CE-5 average margin on customer retention (the profit on customer retention)	0.74	12.99	0.87	53.32
CE-6 average expenditure on customer retention	0.63	10.25	0.59	7.67
CE-7 average customer retention equity (the difference between average margin and average expenditure on customer retention)	0.81	31.15	0.78	11.50
Add-on selling	AVE: 0.77, reliability: 0.91		AVE: 0.67, reliability: 0.85	
CE-8 average margin on add-on selling (the profit on add-on selling)	0.90	60.73	0.90	58.44
CE-9 average expenditure on add-on selling	0.79	19.61	0.61	7.89
CE-10 average add-on selling equity (the difference between average margin and average expenditure on add-on selling)	0.92	79.19	0.91	82.17
<i>Brand performance (BP)</i>	AVE: 0.70, reliability: 0.91		AVE: 0.71, reliability: 0.91	
BP-1 total sales	0.85	26.96	0.78	22.02
BP-2 market share	0.74	17.27	0.82	29.67
BP-3 gross profit	0.84	39.24	0.89	49.29
BP-4 overall brand performance	0.90	66.12	0.88	41.41

Table III.

has been reported and used in marketing literature (Green *et al.*, 1995; Menguc and Auh, 2006; Zhou *et al.*, 2005; Cadogan *et al.*, 2008).

The discriminant validity of the measures was examined in two ways. First, the discriminant validity is exhibited if the square root of the AVE is greater than all corresponding correlations (Fornell and Larcker, 1981). As shown in Table II, these values are consistently greater than the off-diagonal correlations, suggesting discriminant validity although some constructs exhibited correlations that are marginally higher than their respective square root of AVE (e.g. marketing orientation, customer equity in the Australian sample and innovation orientation,

customer equity in the Vietnamese sample). Second, Gaski and Nevin (1985) and O’Cass and Ngo (2007) suggest that satisfactory discriminant validity among constructs is obtained when the correlation between two constructs is not higher than their respective reliability estimates. An examination of Table II demonstrates that no individual correlations (ranged from 0.24 to 0.66) are higher than their respective reliabilities (ranging from 0.88 to 0.95), indicating satisfactory discriminant validity.

*Structural model and hypothesis testing*

With respect to the predictive relevance of individual paths, we computed the strength and significance of individual paths for testing the proposed hypotheses. Particularly, beta coefficients, *t*-values, individual path variance, along with *R*<sup>2</sup> for each endogenous construct were calculated and are reported in Table IV[4]. The results indicate that the majority path weights (ranging between 0.01 and 0.47), are significant, with the exception of the path between innovation orientation and customer equity in the Vietnamese sample. Specifically, the bootstrap CRs (*t*-values) and path variances, ranging between 0.13 and 7.94 and 0.003 and 0.224, respectively, are of magnitudes

*Results for theoretical model*

<i>Predicted variables</i>	<i>Predictor variables</i>	<i>Path weights</i>	<i>Variance due to path</i>	<i>R<sup>2</sup></i>	<i>CR</i>
<i>Australian sample</i>					
<i>H1</i> customer equity	Marketing orientation	0.30	0.134 <sup>a</sup>	0.23	3.95 <sup>b</sup>
<i>H2</i>	Innovation orientation	0.23	0.097 <sup>a</sup>		3.29 <sup>b</sup>
<i>H3</i> brand performance AVA	Customer equity	0.36	0.128 <sup>a</sup>	0.13 0.18	5.77 <sup>b</sup>
<i>Vietnamese sample</i>					
<i>H1</i> customer equity	Marketing orientation	0.42	0.176 <sup>a</sup>	0.18	4.91 <sup>b</sup>
<i>H2</i>	Innovation orientation	0.01	0.003		0.13
<i>H3</i> brand performance AVA	Customer equity	0.47	0.224 <sup>a</sup>	0.22 0.20	7.94 <sup>b</sup>
<i>Results of cross-national comparability of Australian and Vietnamese models</i>					
<i>H4</i> customer equity	Marketing orientation	Developed	Supported	Developing	Supported
<i>H4</i>	Innovation orientation	Developed	Supported	Developing	Not supported
<i>H4</i> brand performance	Customer equity	Developed	Supported	Developing	Supported
<i>Results of cross-national variations between Australian and Vietnamese models</i>					
<i>Hypotheses and paths</i>	<i>Australian model</i> <i>Path weights</i>	<i>SE</i>	<i>Vietnamese model</i> <i>Path weights</i>	<i>SE</i>	<i>t-value</i>
<i>H5</i> marketing orientation – customer equity	0.30	0.0754	0.42	0.0847	17.44 <sup>b</sup>
<i>H6</i> innovation orientation – customer equity	0.23	0.0696	0.01	0.0861	33.12 <sup>b</sup>
<i>H7</i> customer equity – brand performance	0.36	0.0621	0.47	0.0596	22.26 <sup>b</sup>

**Note:** Exceeds minimum acceptable levels <sup>a</sup>0.015 and <sup>b</sup>1.96

**Table IV.**  
PLS results

above the acceptable benchmarks for all the paths, except for innovation orientation – customer equity in the Vietnamese sample ( $t$ -value = 0.13; path variance = 0.003). The  $R^2$  values, ranging between 0.13 and 0.23, are greater than the recommended 0.10 (Falk and Miller, 1992) for all of the predicted constructs in both samples.

In *H1*, marketing orientation was predicted to positively impact customer equity in both developed (i.e. Australian) and developing (i.e. Vietnamese) environments. The results support *H1* at the 0.01 level with path weight<sub>Australian</sub> = 0.30 ( $t$ -value = 3.95; path variance = 0.134) and path weight<sub>Vietnamese</sub> = 0.42 ( $t$ -value = 4.91; path variance = 0.176). For *H2*, we predicted that innovation orientation has a positive impact on customer equity in both developed (i.e. Australian) and developing (i.e. Vietnamese) environments. Results provide evidence supporting *H2* in the Australian sample (path weight = 0.23;  $t$ -value = 3.29; path variance = 0.097), but not in the Vietnamese sample (path weight = 0.01;  $t$ -value = 0.13; path variance = 0.003). Regarding the explanatory power, marketing and innovation orientations explain 23 and 18 percent of variance of customer equity in the Australian and Vietnamese samples, respectively, which are above the benchmark of 0.10. In *H3*, we predicted that customer equity has a positive impact on brand performance. In Table IV the results support this hypothesis in both developed (i.e. Australian) environment (path weight = 0.36;  $t$ -value = 5.77; path variance = 0.128) and developing (i.e. Vietnamese) environment (path weight = 0.47;  $t$ -value = 7.94; path variance = 0.224). Customer equity explains 13 and 22 percent of variance of brand performance in Australian and Vietnamese samples, respectively. Given the evidence supporting *H1-H3* (except for *H2* in Vietnam) in both developed and developing business environments (e.g. Australia and Vietnam), these findings also support *H4* that theorizes the universal applicability of theory across business environments.

In *H5-H7*, we argue that the strengths (i.e. magnitudes) of the relationships would differ across developing and developed countries. We predicted that marketing orientation-customer equity and customer equity-brand performance would be statistically stronger in developing business environments (Vietnam) than in developed business environment (Australia). Further, we predicted the opposite in relation to innovation orientation-customer equity, with the relationship being statistically stronger in developed business environments than in developing business environments. Using the procedure outlined by Grace and O’Cass (2005) the estimates of the re-sampling are treated in a parametric sense, through  $t$ -tests. A parametric assumption was made and the standard errors were taken for the structural paths provided by the PLS analysis from the re-sampling output. The  $t$ -tests were then calculated to determine the differences in paths between Australian and Vietnamese samples[5].

The results shown in Table IV provide evidence to support *H5* ( $t$ -value = 17.44), *H6* ( $t$ -value = 33.12), and *H7* (22.26). The predictive relevance of the structural model was assessed via the average variance accounted for (AVA). The AVA is simply the mean  $R^2$  of the structural model, representing the predictive power of the structural model without regard to the measurement model (Fornell and Bookstein, 1982). As presented in Table IV, the AVA values are of acceptable magnitudes for the developed environment (i.e. Australian based) and developing environment (i.e. Vietnamese based) inner-structural models at 0.18 and 0.20, respectively. Given the acceptable indices for predictive relevance of the structural model are higher than the recommended 0.10, the predictive power of individual paths and of the structural models are satisfactory, supporting the theoretical soundness of the conceptual model.

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### *Model fit*

Having assessed the adequacy of the measurement models and the predictive power of the inner-structural models, we now use the goodness-of-fit index (GoF) proposed by Amato *et al.* (2004) to assess the fit of both outer-measurement and inner-structural models to the data simultaneously[6]. Drawing upon the categorization of  $R^2$  effect sizes by Cohen (1988) and using the cut-off value of 0.5 for commonality (Fornell and Larcker, 1981), GoF criteria for small, medium, and large effect sizes are 0.1, 0.25 and 0.36, respectively (Schepers *et al.*, 2005). The computed GoF for the models are 0.32 (Australian) and 0.34 (Vietnamese), indicating good fit to the data. Further, we also examined  $Q^2$  predictive relevance (i.e. predictive sample reuse technique) as developed by Stone (1974) and Geisser (1975)[7]. Using this procedure and with omissions distances between 5 and 15 the  $Q^2$  value for the models were; combined model = 0.52, Australian model = 0.54, and the Vietnamese model = 0.39 indicating excellent predictive relevance of the model.

## **Discussions, implications and limitations**

### *Theoretical contributions*

Our study advances customer-centric marketing theory by examining the structural relationships among marketing orientation, innovation orientation, customer equity, and brand performance via an integrated customer-centric value model in different business environments. Overall, the findings suggest that marketing and innovation orientations are customer-centric value drivers of customer equity, which in turn enhances brand performance. Importantly, these relationships are universally applicable across countries (developed versus developing business settings). This finding is in line with cross-national research by Deshpande and Farley (2004) and Ellis (2006) where it was shown that firm characteristics such as organizational culture, market orientation, and innovativeness had a pattern of consistently positive effects on performance, thus supporting our assumption of weak generalizability of marketing knowledge (Burgess and Steenkamp, 2006). Importantly, consistent with our predictions, firms in developing countries derived a greater contribution than those in developed from marketing orientation to customer equity and customer equity to brand performance. This finding supports Ellis's (2006) advice that developing countries firms can reap the benefits of marketing without necessarily being market oriented. Findings also suggest that the contribution of innovation orientation to customer equity is stronger in developed than in developing business settings. This finding extends and supports the conclusion by Deshpande and Farley (2004, p. 18) that "innovativeness appears to be more important in the industrial world".

Our findings contribute insights into the relationships between marketing orientation, innovation orientation, and customer equity. While the extant literature places substantial emphasis on market orientation as a major contributor to firm performance, this study is the first to examine the contribution of marketing orientation to customer equity, a reasonable proxy for firm success (Gupta *et al.*, 2006). Our findings suggest that marketing and innovation orientations are significant drivers of customer equity. Thus, linking marketing orientation to customer-centric value makes marketing accountable for its ability to attract, keep, and sell more to customers. By examining the relationships between marketing orientation, innovation orientation, and customer equity, our study extends the interpretation of primary business purpose advocated by Drucker (1954), who places priority on customer centeredness, assigning considerations to "creating customers" via marketing and innovation.

Our findings support a theoretical proposition that firms that create a high level of customer equity possess strong brands. To the best of our knowledge ours is the first study to examine from a managerial perspective, the impact of customer equity on brand performance. Establishing this linkage is noteworthy as customer equity has taken on increased prominence in marketing recently and research is needed to understand how customer equity relates to firm performance (Hogan *et al.*, 2002). We argue that marketing can contribute to this at the micro (brand level). Further, our findings suggest that customers are sources of revenue, thus customer equity and brand performance cannot be isolated in examining the ultimate outcomes of customer-centric value creation processes. Customer equity and brand performance should go hand in hand and in effect are two key components of customer-centric value.

From a measurement perspective, our study contributes to the measurement of customer equity, marketing, and innovation orientations. First, our measurement of customer equity at the firm level using a cross-sectional approach allows for greater comparability across industries. This complements existing objective approaches that calculate and project customer equity at the individual customer level via econometric models (Blattberg *et al.*, 2001; Gupta *et al.*, 2006). Second, our study provides further insights into marketing and innovation orientations by advancing the measurement of these constructs, thus contributing to the business orientation literature. Specifically, our study demonstrates the utility of a cultural-behavioral approach in measuring business orientations. By integrating both cultural and behavioral perspectives into the operationalisation of marketing orientation, our study indicates that marketing orientation can be captured by marketing-oriented beliefs (cultural facet), marketing-based planning, marketing-based implementation, and marketing-based satisfaction (behavioral facets). This conceptualisation is a response to calls to combine the behavioral perspective (Jaworski and Kohli, 1993) and cultural perspective (Deshpande *et al.*, 1993) in conceptualisations of business orientation (Gray and Hooley, 2002).

With respect to innovation orientation, previous research has identified shortcomings in conceptualisations, including the inconsistency in conceptualising innovation orientation as an organizational culture (Deshpande *et al.*, 1993; Hurley and Hult, 1998) or organizational behaviours (Amabile *et al.*, 1996; Damanpour, 1987) and overlap between organizational learning and innovation (Hurley and Hult, 1998). This study goes some way to help resolve these shortcomings, suggesting an innovation orientation scale founded on a conceptualisation having three underlying dimensions of innovation-oriented belief, the propensity to innovate and the generation of new ideas in relation to non-technical and technical systems (i.e. culture-behaviour).

#### *Managerial implications*

From a managerial perspective, our findings highlight a number of issues for managers. First, the implication for managers in relation to being marketing oriented and innovation oriented as two efficient approaches to achieve superiority in attracting, retaining, and cross-selling to customers. As such, managers should place emphasis on improving marketing and innovation orientations of their firms in their efforts to achieve superiority in customer-centric performance. Managers should develop positive attitudes toward marketing and innovation orientations and communicate their commitment to their employees. Second, managers may also give some attention to the point that if their firms are more effective in acquiring potential customers, retaining current customers,

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and enhancing cross-selling, they see their brands perform better. This finding validates the role of customer equity as a missing link between key business activities (e.g. marketing and innovation) and business success (e.g. brand performance). In this sense, our study confirms and supports Rust *et al.*'s (2004) recommendation that focusing on customer equity makes the firm truly customer centered.

Third, this study highlights important implications for managers in relation to the measurement scales of business orientations (e.g. marketing and innovation orientations). For example, as the business orientations measures were based on the cultural-behavioral approach, where each business orientation was measured to encompass both cultural and behavioral facets, the business orientation scale allow managers to evaluate the consistency of their organisational culture (e.g. innovation-oriented belief) and corresponding organisational behaviours (e.g. innovativeness and innovation generation). This practical implication is of paramount importance as it has long been accepted in the marketing literature that culture necessarily manifests behaviours (Narver and Slater, 1990) and it is described as "why things happen the way they do" (Deshpande *et al.*, 1993, p. 24). In addition, the marketing and innovation orientations scales could also be used to observe their implications on other performance criteria such as product quality, customer satisfaction, employee satisfaction and social acceptance.

Finally, our findings on the relationship of marketing and innovation orientations to customer equity in developed countries (e.g. Australia) and developing countries (e.g. Vietnam) provides guidance for managers on the relative importance of marketing and innovation in achieving superior business performance. Specifically, for managers in developed countries, investment should be placed on innovation. On the contrary, marketing appears more important for managers of firms in developing countries.

#### *Limitations and future research*

The findings of this study are limited to some extent in relation to the sampling frame. Specifically, while the data were collected from a variety of industries, and thereby reached a greater source of variance, the generalisability of the findings is still limited, as other types of organizations, such as non-profit organizations are not represented. Further, our study is limited by the use of only senior marketing managers which may introduce some possibility of bias in the assessment of the firms marketing and innovation orientations. Future studies may focus on different managerial positions and multiple informants per firm. Furthermore, because firms from a variety of industries are included, possible industry differences in the constructs in the theoretical model could have confounded the findings. Future studies concerning testing the measures and model predictions against real market outcomes are warranted. That is, objective measures can be used to complement the self-reporting approach used in this study in measuring brand performance. Future studies may incorporate financial market outcomes of brands by using Tobin's Q (the market value of assets divided by their replacement value as estimated by book value) (Lindenberg and Ross, 1981), calculating the residual market value after other sources of firm value are accounted for (Simon and Sullivan, 1993), assessing the financial value of a brand involves taking customer mindset measures and relating them to stock market values (Aaker and Jacobson, 1994), and optimizing brand value chain (Keller and Lehmann, 2003). This dual approach to measuring the value of customers to the firm (customer equity) would provide additional insights into the customer-centric marketing literature.

Notes

1. Being considered as the hallmark of the current American Marketing Association's definition of marketing (AMA, 2007), the notion of value has been understood in different ways (Ulaga, 2001), including customer-perceived value from within the customer perspective (Woodruff, 1997), co-creation value within the customer-firm perspective (Prahalad and Ramaswamy, 2004), and customer equity and value proposition within the firm's perspective (Blattberg *et al.*, 2001; Rust *et al.*, 2004; Vargo and Lusch, 2004). In this study, we place our emphasis on customer equity as a significant part of the research on value and value creation within the firm perspective.
2. Further, as single sources of information can introduce spurious relationships among variables, the suggestion by Podsakof and Organ (1986) was adopted via Harman's one-factor test. In the Vietnamese data, 11 factors were extracted with eigenvalues > 1; with 72 percent variance was explained. The first factor accounted for 32 percent of the variance, the second factor accounting for 9 percent and the remaining nine factors sharing 31 percent of the variance. In the Australian data, ten factors were extracted with eigenvalues > 1, with 72 percent variance explained. The first factor accounted for 34 percent of the variance, the second factor accounted for 8 percent and the remaining eight factors sharing 30 percent of the variance. One factor was not present in either dataset.
3. Australian sample 301 cases at 70 percent = 211 cases per subsample, Vietnam sample 259 cases at 70 percent = 181 cases per subsample for 500 bootstrapped samples.
4. While only the individual model results are shown in Table IV, an aggregate model combining the Australian and Vietnamese data was computed also. All paths were significant and thus hypotheses were supported.
5. The *t*-test were calculated using the formula:

$$S_{pooled} = \sqrt{\left\{ [(N_1 - 1)/(N_1 + N_2 - 2)] \times SE_1^2 + [(N_2 - 1)/(N_1 + N_2 - 2)] \times SE_2^2 \right\}}$$

Then:

$$t = (PC_1 - PC_2) / [S_{pooled} \times \sqrt{(1/N_1 + 1/N_2)}]$$

Where:  $S_{pooled}$  – pooled estimator for the variance;  $t$  – *t*-statistic with  $N_1 + N_2 - 2$  degrees of freedom;  $N_i$  – sample size of dataset for sample *i*;  $SE_i$  – standard error of path in structural model of sample *i*;  $PC_i$  – path coefficient in structural model of sample *i*.

6. Differently to covariance-based SEM techniques (e.g. LISREL), PLS does not optimize any global scalar function, leading to a lack of an index for global validation of the model as in LISREL with the  $\chi^2$ -based indexes. The GoF represents an operational solution to this problem and acts as a global fit index for validating a PLS 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:

$$GoF = \sqrt{\overline{communality} \times \overline{R^2}}$$

7. Using this procedure a generalized cross-validation measure and jackknife standard deviations of parameter estimates can be produced. The blindfolding takes a block of N cases

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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, thus  $Q^2$  is represented as:  $Q^2 = 1 - (\sum_D E_D / \sum_D O_D)$ . 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.

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